

UNIVERSITY GRANTS COMMISSION

ANNUAL REPORT FOR THE YEAR 1988-89

NUEPA DC



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**Presented to the Government of India
in compliance with Section 18
of the UGC Act, 1956
New Delhi**

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5. Electron Microscope, Department of Microbiology, M.S. University, Baroda.
6. Gas Liquid Chromatograph, Department of Zoology, Delhi University.
7. Photomicroscope Model Microphot-FX, Centre of Advanced Study, Department of Zoology, Banaras Hindu University.
8. Zeiss Axiophot Research Microscope with Fluorescence Attachment, Department of Zoology, Gujarat University.
9. 70 Lit. Fermentor, Department of Microbiology, M.S. University Baroda.
10. Lyophilizer, Department of Botany, Bhagalpur University.
11. Measurement of Virus Bound Metal ions by Atomic Absorbtiometer. Molecular Biology Unit, Institute of Medical Sciences, Banaras Hindu University.
12. Atomic Absorption Spectrophotometer, Department of Geological Sciences, Gauhati University.
13. SLM-SPF AMINCO Scanning Spectrophotometer with IBM Model PS 2 Computer System, Centre of Advanced Study in Botany, Madras University.
14. Electron-probe Micro-analyser, Centre of Advanced Study in Economic Geology, Jadavpur University.
15. Microtorr-Vacumm Arc Remelting Unit Department of Metallurgy, Indian Institute of Science, Bangalore.
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(1988-89)

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UNIVERSITY GRANTS COMMISSION

ANNUAL REPORT

April 1988-March 1989

In compliance with Section 18 of the UGC Act, 1956 (No.3 of 1956)* we have the honour to present to the Central Government the Annual Report of the University Grants Commission for the year 1988-89 to be laid before both the Houses of Parliament.

SECTION 1 - PART I

QUANTITATIVE GROWTH OF INSTITUTIONS, ENROLMENT AND STAFF STRENGTH

1.01 In recent years; higher education system in India has had to meet the onerous responsibility of satisfying the demand of increasing numbers on the one hand and maintaining the quality of education on the other. This is because, with growing population, higher education has been looked upon, particularly by the weaker sections, as the only means to vertical, social and economic mobility. In this context, the National Policy on Education (1986) rightly emphasises that institutions of higher education are expected to possess a certain minimum of facilities by way of physical infrastructure, technical and research support and resources for purchase of equipment, books etc. The Commission has been striving to provide the necessary facilities so as to strike a balance between the demands of quality versus quantity in the education system. This section of the report presents in numerical terms the

* The University Grants Commission Act 1956 (Act No.3 of 1956) as amended upto 1st October, 1984.

higher education scenario of the country over the past decade as reflected by the growth in enrolment, staff and the number of institutions.

1.02 **New Universities**

During the year, one new university viz. Dr. M.G.R. Medical University (Madras) was set up while the Jamia Millia Islamia, which was earlier an institution deemed to be university, became a university through a Central Act. With these, the total number of universities in the country rose to 144 as on 31st March, 1989.

1.03 **Universities declared fit to receive Central Assistance**

The following universities were declared fit to receive Central assistance including assistance for institutional development in terms of the rules framed under Section 12(B) of the UGC Act:

<u>S.No.</u>	<u>Name of the State</u>	<u>Name of the University</u>
1.	Bihar	L.N. Mithila University, Darbhanga.
2.	Gujarat	Bhavnagar University, Bhavnagar.
3.	Kerala	Mahatma Gandhi University Kottayam.
4.	Rajasthan	Kota Open University, Kota.

In addition, the following universities were declared fit to receive Central assistance for all approved schemes

except for institutional development in terms of the rules framed under Section 12(B) of the UGC Act.

1. Guru Ghasidas University, Bilaspur (MP)
2. Kuvempu University, B.R. Project, Shimoga.
(For P.G. Centres only)
3. Tripura University, Agartala (For P.G. Centre only)

The question of declaring these universities as institutions fit for assistance for institutional development will be considered after the Acts of these universities have been amended as per the suggestions of the UGC and all the other requirements stipulated in the rules framed under Section 12(B) of the UGC Act are fulfilled by the State Governments/Universities concerned.

1.04 New Institutions Deemed to be Universities under Section 3 of the UGC Act

During the year, the Government of India, on the recommendations of the UGC, declared the following institutions as institutions deemed to be universities under Section 3 of the UGC Act.

1. Central Institute of Higher Tibetan Studies, Sarnath, Varanasi (UP).
2. Sri Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
3. Central Institute of Fisheries Education, Varsova, Bombay.
4. National Dairy Research Institute, Karnal.

The Jamia Millia Islamia, New Delhi, which was an institution deemed to be university till 1987-88 was accorded the status of a university during 1988-89. Thus, the total number of institutions deemed to be universities was 25 as on 31st March, 1989.

The Commission also recommended to the Government of India (Ministry of Human Resource Development) that deemed to be university status may be conferred upon Jain Vishwa Bharati, Ladnun (Rajasthan).

A chronological list of universities and institutions deemed to be universities during 1988-89 is given in Appendix-I.

.05 Colleges under Section 2(f):

At the end of 1988-89, 4005 Colleges including postgraduate colleges had been included in the list maintained under Section 2 (f) of the UGC Act.

.06 Student Enrolment:

In terms of absolute numbers, there has been a consistent increase in enrolment as well as institutions over the years as reflected in table 1.1 below. It will be seen that in 1979-80, the number of students enrolled was 26.48 lakhs spread over 108 universities, 11 institutions deemed to be Universities and 4558 Colleges whereas in 1988-89 there were as many as 39.48 lakh students enrolled in 144 Universities, 25 institutions deemed to be Universities and 6912 Colleges.

TABLE 1.1

Year	Number of universities	Number of Colleges	Number of Students
1979-80	108+11 institutions deemed to be universities	4,558	26,48,579
1980-81	112+11 institutions deemed to be universities	4,722	27,52,437
1981-82	118+13 institutions deemed to be universities	4,886	29,52,066
1982-83	120+13 institutions deemed to be universities	5,039	31,33,093
1983-84	124+15 institutions deemed to be universities	5,246	33,22,939
1984-85	125+15 institutions deemed to be universities	5,590	34,04,096
1985-86	132+17 institutions deemed to be universities	5,816	35,70,897*
1986-87	136+19 institutions deemed to be universities	6,512	36,81,870*
1987-88	142+22 institutions deemed to be universities	6,647 **	38,14,417*
1988-89	144+25 institutions deemed to be universities	6,912 **	39,47,922*

Note: 1. The number of colleges given above excludes junior colleges and those offering diploma/certificate courses.

* Estimated

** Provisional

1.07 Growth Rate of Enrolment:

The growth of student enrolment in the University System over a 20-year period from 1969-70 to 1988-89 is given in Appendix-II. The average decadal growth rate of enrolment during 1979-80 to 1988-89 was 4.2 percent as compared to 5.3 percent recorded in the earlier period viz. 1969-70 to 1978-79. A look at the year-wise growth rates of enrolment during the ten-year period 1979-80 to 1988-89 also brings out the fact that there was no definite trend in the growth rate, which rose in one year and fell in another. While the lowest growth rate recorded during this period was 1.2 per cent in 1979-80, the highest was 7.3 per cent in 1981-82. In 1988-89, the growth rate was 3.5 per cent.

The all-India average annual compound rate of growth of enrolment during the five year period 1984-85 to 1988-89 was 3.6 per cent as indicated in Appendix-III. It will also be seen from the appendix that there were wide deviations from this average growth rate among different States. Himachal Pradesh, for instance, recorded an average annual compound rate of growth of enrolment of 7.1 per cent during the period while Bihar recorded a mere 2.5 per cent growth rate. As many as 10 States had average growth rates lower than the all-India average of 3.6 per cent.

1.08 Stage-wise Enrolment:

Stage-wise enrolment at the graduate, post-graduate, research and diploma/certificate levels during 1984-85 to 1988-89 given in Appendix-IV shows that percentage enrolment at these different levels in 1988-89 was the same as it was in 1987-88.

Over the five-year period also, percentage of enrolment at the graduate, postgraduate/research and diploma/certificate levels has remained the same in each year viz. 88 per cent, 10.6 per cent and 1.4 per cent respectively.

Appendix-V gives stage-wise enrolment separately in the university departments/university colleges and affiliated colleges during the four year period from 1985-86 to 1988-89. It will be seen that enrolment in the affiliated colleges as percentage of total enrolment for all the stages taken together remained in the vicinity of 83 per cent in each of these years. Stage-wise enrolment in the affiliated colleges accounted for 87.8 per cent of the total enrolment at the graduate level, 56.6 per cent at the post-graduate level, 15.0 per cent at the research level and 43.4 per cent at the diploma/certificate level during 1988-89. The remaining enrolment at these different levels was accounted for by the University departments/University Colleges. The position in the earlier years was almost similar.

1.09 **Faculty-wise Enrolment:**

Faculty-wise distribution of student enrolment for the five-year period 1984-85 to 1988-89 given in Appendix-VI shows enrolment in each faculty as a percentage of total enrolment in all the faculties taken together. It will be seen that enrolment in the faculty of Arts (including Oriental Learning) has been the highest as percentage of total enrolment in each year, followed by the faculty of Commerce, Science and Law in that order. Year to year variations in the percentage of enrolment in each faculty to total enrolment in all the faculties taken together have been of a very marginal nature. For example, enrolment in the faculty of Arts has been 40.3 per cent in each

of the five years from 1984-85 to 1988-89. Similarly, in the faculty of Commerce, the enrolment percentage was 21.5 from 1985-86 to 1988-89 and 21.7 in 1984-85. Percentage share of the faculty of Science remained 19.7 during 1984-85 to 1988-89. Enrolment trends in other faculties present a similar picture except that percentage shares of these faculties in total enrolment have been far too small as compared to the faculties of Arts, Commerce and Science.

1.10 **Establishment of New Colleges:**

The number of new colleges set up during 1988-89 was 265, thus raising the total number of affiliated colleges to 6912 in 1988-89 as compared to 6647 colleges in 1987-88 (Appendix-VII). Of the 265 newly established colleges, 114 were arts/science/commerce colleges and 108 belonged to the faculty of Oriental learning. The remaining were professional colleges belonging to different faculties as follows:

Medicine/Pharmacy/ Ayurveda/Nursing/ Dentistry/ Homoeopathic (14), Engineering/ Technology (9), Law (9), Physical Education & Education (9), Agriculture (1) and Veterinary Science (1). The number of colleges in the faculties of Music/Fine Arts remained the same as it was in 1987-88.

1.11 **State-wise Growth of Colleges:**

State-wise distribution of the newly established colleges during the period 1984-85 to 1988-89 is given in Appendix-VIII. The number of colleges in the country increased by 1322 during this period. The highest increase during this period was recorded in the State of U.P.(507). Other states where the increase was

substantial were Bihar (160), Karnataka (142), Madhya Pradesh (85), Maharashtra (79) and Andhra Pradesh (76).

These six States among them accounted for nearly 80 per cent of the increase in the total number of colleges during the period. Increase in the number of colleges in some of the other states was negligible while in some it was not substantial. Noticeably, there was no increase in the number of colleges in Delhi while in Manipur the number increased by just one over this period. It will also be seen (Appendix IX) that out of a total increase of 1322 in the number of colleges during 1984-85 to 1988-89, increase in the number of arts/science/commerce colleges was 699.

1.12 Staff Strength:

Appendix-X shows the strength and distribution of teaching staff in the university departments/university colleges during the period 1984-85 to 1988-89. In 1988-89, there were 54,973 teachers in the university departments/university colleges. Out of these, 6432 were professors, 13468 readers, 32764 lecturers and 2309 tutors and demonstrators. The percentage of senior teachers viz. professors and readers to the total teaching staff was comparatively lower (36.2) in 1988-89 as compared to the years 1984-85 (37.0), 1985-86 (36.3) and 1987-88 (36.4). Teaching staff in the university departments/university colleges increased by 1808 in the year 1988-89 as compared to an increase of 2015 in 1987-88 over the preceding year. Teaching staff in the affiliated colleges (Appendix-XI) totalled 1,94,095 in 1988-89 which included 25,815 senior teachers, 1,59,546 lecturers and 8,734 tutors and demonstrators. There was an increase of 5,287 in the total staff strength in the affiliated colleges in 1988-89 over the year 1987-88 as compared to an increase of 5,570 in 1987-88 over 1986-87.

1.13 Doctorate Degrees Awarded:

The faculty-wise position of doctorate degrees awarded during 1983-84 to 1987-88 is given in Appendix-XII. During this five year period the number of doctorate degrees awarded was the highest (viz.7346) during 1985-86. It declined slightly to 7295 in 1986-87 and to 7275 in 1987-88. In terms of faculty-wise position, the faculty of arts had the highest number of doctorate degrees awarded in 1987-88 viz., 2933, followed by the faculty of Science (2842).

A striking feature of the position among professional faculties was that while the faculty of agriculture continued to have the highest number of doctorate degrees (557), the second position was for the first time occupied by the faculty of engineering/ technology (236). The faculties of commerce and education were thus relegated to third and fourth positions with 225 and 205 degrees respectively. The position in other faculties was as follows: Medicine (93), Veterinary Science (74), Law (51) and 59 in 'others'.

SECTION 1 - PART II

NEW EDUCATION POLICY

1.14 New Education Policy:

The Commission continued to give high priority to the implementation of the NPE (1986) as elaborated in the Programme of Action (POA) approved by the Parliament. Some of the major thrust areas of the NPE which were pursued with vigour during the year were:

- a) Autonomous Colleges
- b) Redesigning of courses
- c) State Councils of Higher Education
- d) Accreditation and Assessment Councils
- e) Alternative Models of Management in Universities.
- f) National Qualifying Test for recruitment of teachers
- g) Making research and development broad-based
- h) Training/Orientation of teachers
- i) Improvement of efficiency
- j) Youth and Sports
- k) Education for the Minorities, Scheduled Castes/
Scheduled Tribes, Handicapped and Women.

The Commission made concerted efforts in promoting awareness and acceptance of the ideas of the NPE through discussions at appropriate levels with State/Central governments, university authorities, teaching community etc. besides constituting expert groups to formulate action plans, guidelines, and financial patterns. Simultaneously, organization of seminars, workshops, meetings with academics and follow up action with universities were the strategies adopted by the Commission during the year to accelerate the process of appreciation of the NPE - POA by the university community.

National Institute of Educational Planning & Administration (NIEPA) and the Association of Indian Universities organised workshops/seminars on behalf of the UGC for the academic community, state government representatives etc. for better understanding and appreciation of the NPE with a view to expedite its implementation.

1.15 While details of the various schemes emerging out of the NPE-POA have been given in the relevant chapters, a brief outline of the progress of implementation of New Education Policy is given in the following paragraphs:

- i) Proposals of all eligible universities have been finalised as per new guidelines for the universities during the 7th Plan period.
- ii) New guidelines for colleges as per NPE-POA have been formulated and widely circulated. Development grants to most of the colleges have been approved as per these guidelines.
- iii) Guidelines for granting affiliation to new colleges were approved by the Commission and circulated to the Universities/State Governments.
- iv) A Committee is working on the management pattern of various university bodies in the light of the new demands on the university system. The report of the Committee is in the final stages.
- v) Computer facilities have been provided to universities/institutions. In addition, colleges have also been provided with PC/XT computers and other systems. 104 Universities/Institutions were

sanctioned computer facilities while 481 colleges were provided PC/XT computers upto the year's end. In addition, Delhi University and Jawaharlal Nehru University have been provided separate computers to develop softwares.

- vi) Regulations for minimum standards of instructions for the grant of first degree were framed and circulated to the universities.
- vii) Proposals of several new colleges have been approved for grant of autonomous status raising the total number of autonomous colleges to 95 as on 31st March, 1989.
- viii) The Commission has constituted a Committee of experts to frame guidelines with a view to develop university departments/centres as autonomous within the university frame work.
- ix) Curriculum Development Centres were established with a view to meeting the growing demands of specialisation and provide flexibility in the combination of courses.
- x) A scheme for improvement of salary and service conditions of university and college teachers was announced in June, 1987 as one of the measures for improvement in the quality and standards of teaching and research in the universities and colleges. The scheme was modified in July, 1988.
- xi) The Commission has approved a scheme for establishment of Academic Staff Colleges (ASC) for the orientation of newly appointed college and university lecturers. 48 universities have been

identified to set up ASCs. Of these, 43 ASCs have started organising orientation courses.

- xii) The Commission constituted a Task Force to evolve performance appraisal and code of professional ethics for teachers in consultation with AIFUCTO representatives. The Task Force has since completed its reports viz. (i) Performance appraisal of teachers and (ii) code of professional ethics for teachers. Both the reports were considered and approved by the Commission and have since been circulated to the universities/institutions and colleges.
- xiii) Modern Computer-based Information Centres have been set up at the Indian Institute of Science, Bangalore (Science), S.N.D.T. Women's University, Bombay (Humanities) and M.S. University, Baroda (Social Sciences).
- xiv) A Nuclear Science Centre has been established at the Jawaharlal Nehru University, New Delhi as an Inter-University Centre. Another Inter-University Centre in Astrophysics and Astronomy has been established at Poona University Campus. Both the centres have been registered under the Societies Act and have been working as autonomous institutions.
- xv) The revised guidelines on State Councils of Higher Education have been formulated and circulated to the State governments and universities. A State Council for Higher Education has since been set up in Andhra Pradesh. Bills for such councils are under the active consideration of a few other State governments.

- xvi) A concept paper on Accreditation and Assessment Council has since been issued for wider debate through regional seminars.
- xvii) The Commission has taken steps for supply of colour T.V. sets to about 2000 selected colleges in phases during the 7th Plan period.
- xviii) 15 subjects have been selected for which syllabus-oriented video course material is to be produced with the help of best available teachers. Eight centres have been identified for production of such video course material. Workshops in different disciplines have been held and recording has started in some of these.
- xix) The Commission has taken the initiative to utilise the time slot given for higher education and televising the TV programme on higher education entitled 'Country-wide Class Room'. It has set up four Educational Media Research Centres and nine Audio Visual Research Centres in Universities/Colleges for training and production of TV software.
- xx) The Commission has entered into co-production arrangements with WGBH Boston for a ten-part TV series 'State of the world' that will explore the human dimension of international environmental issues and reveal an emerging understanding of the complex relationship between mankind and the world's natural resources and processes. The Ministry of Finance (Deptt. of Economic Affairs), Govt. of India has agreed to release necessary foreign exchange for the project.

SECTION 2 - PART I

INTER - UNIVERSITY CENTRES

2.01 The University Grants Commission has recently brought in a new innovation in the education scene of India. Taking a cue from the National Policy on Education (1986) and the Programme of Action which says that 'National research facilities should be set up within the university system', the Commission has decided to set up a number of Inter-University Centres in different areas. In the beginning, the Commission is concentrating on establishing these centres next to major experimental facilities. The idea is to have an autonomous institution in a university environment where scientists and graduate students from universities will be able to spend extended periods of their time inter-acting with each other, the core staff of the Centre and other visitors and using the special facilities available there. This is an organisational technology to promote inter-action within the university community as also to be able to provide them facilities which the University Grants Commission cannot afford for various universities individually.

The Commission is now empowered to establish autonomous institutions for providing common facilities to the universities in terms of Section 12 (ccc) of the UGC Act.

2.02 **Nuclear Science Centre at JNU Campus, New Delhi**

An Inter-University Centre for research in nuclear sciences using an accelerator was started in Jawaharlal Nehru University in December, 1984 with the understanding that the Centre will become autonomous by registering under the

Society Registration Act. The formal registration was obtained on September 30, 1988. The Centre is working as an autonomous institute since December 20, 1988.

The Nuclear Science Centre is to provide a system, facilitating accelerator oriented research in various fields. There are possibilities of research in areas such as Atomic Physics, Condensed Matter Physics, Nuclear Chemistry, Bio-Sciences and various other allied areas besides the fundamental Nuclear Physics. It will be connected with the universities and other teaching institutions to provide a balanced man-power growth, both scientific and technical. The main facility in this Centre in its first phase will be a 15 million volt tandem accelerator, being fabricated by the National Electrostatic Corporation of USA. Equipped with a 380 KV injector with three changeable ion sources and nano - second light and heavy ion pulsing system, 15 UD Pelletron provides a versatile ion accelerator capable of accelerating almost any ion across the periodic table from proton to uranium to energies upto 200 mev.

The construction work started on December 11, 1986. The pelletron accelerator tank 5.49 m diameter and 26.54 m high, in which the accelerator will be installed and run after filling it with SF6 gas was made on the site. It is complete, installed and aligned at its permanent location which is at 12 m from the ground level. The accelerator fabrication at National Electrostatic Corporation is nearing completion. The personnel have participated in testing of components etc. before shipment. The last consignment was received in January, 1989.

The tower to house, the accelerator, the ion source room at the top of the tank, the beam hall and the lab structure are nearing completion. Finishing and painting is being

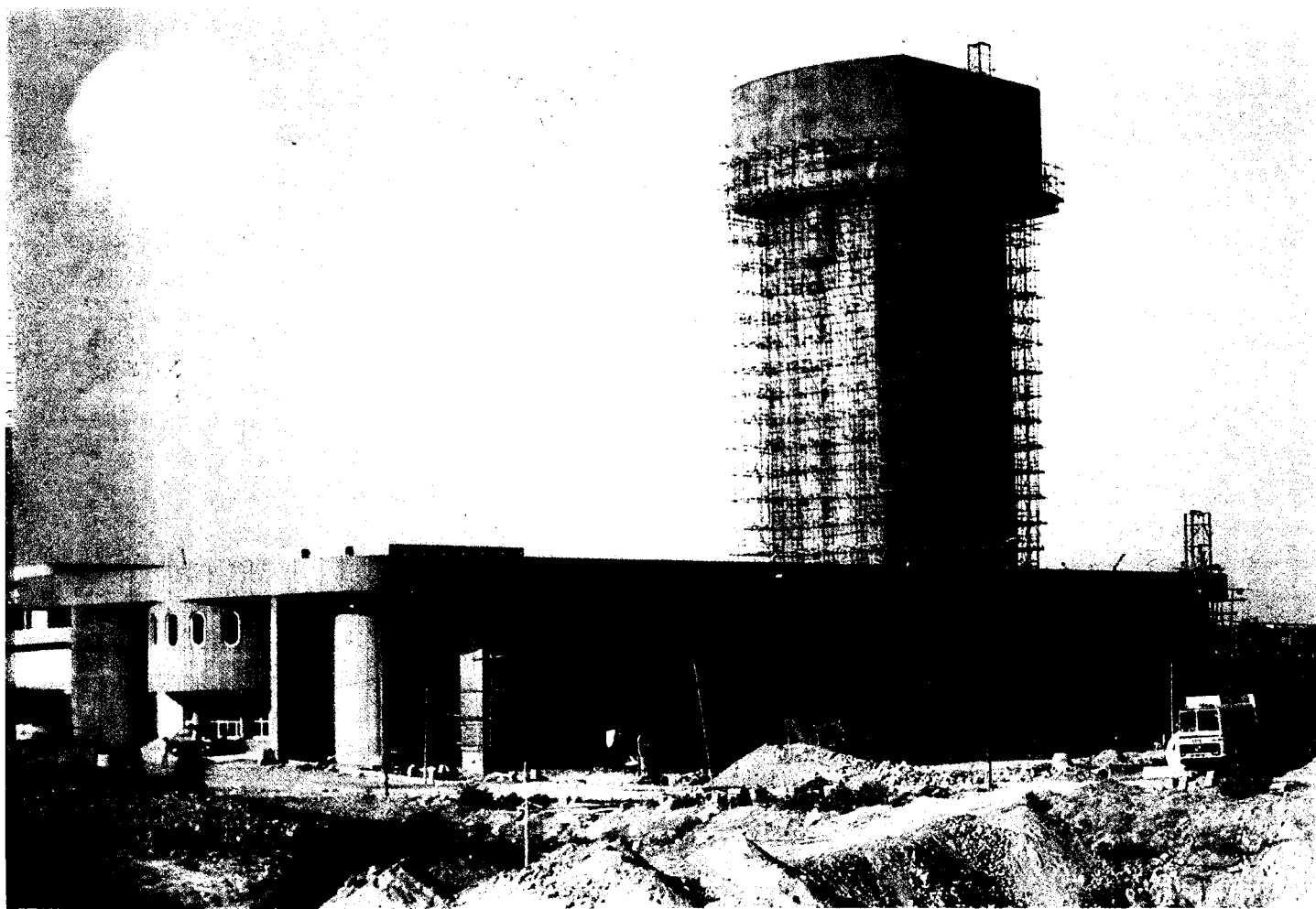
done in most areas. The elevator tower is complete and the elevator has been installed. The Gas Storage Tanks have been received and installed at their final location. Most of the Installation work of the gas handling system has been completed. The compressed air lines have been laid and air-conditioning ducts have been installed. Most of the work of the air-conditioning plant, water system and cooling water system have been completed. Generating sets for emergency power are being installed. The utility building which has been completed houses a small workshop having machines which are commonly needed for a laboratory.

The work on the two projects HIRA (Heavy Ion Reaction Analyser) and the GDA (Gamma Detector Array) has started. Coordination committees have been appointed and working groups have been formed. Major design of the HIRA has been completed and orders for fabrication have been sent. Procurement of the detectors and electronics of the GDA project has also been started. The Department of Electronics has given permission for importing micro-vax II for the Data Acquisition part. The electronics for the acquisition system using the micro vax II has been ordered and is expected to arrive in the middle of 1989. Primary design for a general purpose scattering chamber has been done and an indigenous manufacturer is being contacted for its fabrication.

2.03 Inter - University Centre in Astronomy and Astro - Physics at Poona University Campus

The University Grants Commission has agreed to the setting up of an Inter-University Centre in Astronomy and Astro-Physics (IUCAA) at the campus of Poona University.

The main objectives of IUCAA are to provide a Centre of excellence within the university sector for teaching,



1. Laboratory Building and Tower, Nuclear Science Centre, an Inter-University Research Facility, JNU Campus, New Delhi.

research and development in astronomy and astrophysics as well as to promote nucleation and growth of active groups in this area in university. Besides conducting a vigorous research programme of its own, the Centre will enable workers from universities, teachers as well as students, to visit it for various durations for participating in research work and executing developmental projects. The aim will be to provide workers from university departments access to state of the art astronomical instrumentation, theoretical know-how, well equipped electronics laboratories, an excellent library, data centre and high quality computing facilities. The Centre will actively cooperate with universities in initiating and strengthening teaching and research in Astronomy and Astro-physics in the universities.

To achieve these objectives IUCAA will function on several different fronts. The IUCAA faculty will participate in teaching at the M.Sc. level in Physics and Astrophysics, and provide guidance to research students for Ph.D. degree in Astronomy and Astro-physics in collaboration with various universities. Further, it will coordinate participation of university academic community in major programmes in this field. The Centre will arrange refresher courses as well as advanced level schools and workshops in topics of current research. This activity will involve experts from India as well as (in the latter case) from abroad, along the lines of the International Centre for Theoretical Physics (ICTP), Trieste, Italy. In addition, the Centre will take up programmes for Science popularization. It will also foster collaborative research projects between groups in universities, IITs and other similar groups in India and abroad.

The observational programme will be taken up on the national facilities like GMRT and also on the international

facilities by the participating university teachers and students in collaboration with the IUCAA and GMRT faculty. The Centre will have necessary laboratory facilities and different kinds of focal plane instruments and back-up equipment would be procured, maintained and used effectively. The electronic lab/optical bench etc. as well as trained electronics engineers will be provided.

The Centre was registered as a society on November 22, 1988 and has been functioning as an autonomous institution since 30th December, 1988. The Government of Maharashtra has allotted 7.4 hectares of land to the Centre on the Poona University Campus which is in close proximity of the GMRT.

2.04 Centre in Astronomy, Osmania University, Hyderabad

The University Grants Commission agreed to the proposal made by Osmania University for setting up of a National Centre for Astronomy at Rangapur near Hyderabad. -

The primary objective of the centre is to provide within the university system high class facility for observational astronomy, primarily in optical and infrared wavelength regions, which cannot be obtained or managed within the resources and framework of individual universities. This facility will be made available to astronomers from various universities and institutes. It is expected to attract young talented persons to the field of observational astronomy and provide them training for making them competent astronomers. In achieving this goal, the Centre will continuously interact with other astronomers of the country and upgrade the existing facilities.

The UGC had taken steps to modernize the Nizamiah Observatory located at the campus of the Osmania University out of the funds received under India US Wheat Loan

Educational Programme for purchase of 48" telescope with a Baker Corrector System and a number of auxiliary equipment. Another Observatory known as Japal - Rangapur Observatory was also established by the University at Rangapur which has a workshop, building, observers lodge and staff quarters. This observatory has sophisticated equipment i.e. Dual Channel Photometer, a Meinel spectroscope etc. Apart from the UGC support for development of Observatory, the university received substantial assistance through research grant from US Air Force and National Science Foundation of USA.

The aforesaid facilities available both at Nizamiah and Japal - Rangapur Observatories are useful for photometry and spectroscopy of eclipsing binaries and other variable stars and are eventually to be transferred to the National Centre. It is envisaged that the Centre would inter alia undertake design and development of optical and auxiliary instrument for research work in astronomy and astrophysics.

The project document for the Centre is under consideration of the Commission.

2.05 Science Information Centre, Indian Institute of Science, Bangalore.

The University Grants Commission accepted the proposal made by I.I.Sc., Bangalore for the establishment of National Science Information Centre in 1983. The Centre is functioning under the guidance of a Programme Committee.

The Centre would create current awareness in the Scientists working in Universities/colleges by providing an authentic and up-to-date abstracting service in the areas of physics, Biological Sciences, Chemistry, Mathematics, Earth Sciences and Engineering. The working of the Centre has been

reviewed by a Committee and the report of the Committee has been accepted.

The Centre provides to the users, on request, full length photo-copies of current papers and educates them in generating queries for their needs for an optimal utilisation of the information services.

The Centre has obtained two computer systems DEC - 1090 and WIPRO. DEC System is used on time sharing basis whereas WIPRO system is dedicated to the Centre's activities. Construction of the building is being taken up and up-to-dating of the existing system is contemplated.

A total number of 287328 profiles and abstracts has been generated by the Centre. The total number of users is 3795.

A computerised management system has been implemented to streamline the journal procurement, followup, renewal, receipt etc. for journals received in the centre.

The Centre also runs a training programme of one year duration.

4.96 Information Centres in Humanities and Social Sciences at M.S. University, Baroda and S.N.D.T., Bombay

The Commission has set up two Information Centres in the field of humanities and social sciences - one at the S.N.D.T. Women's University, Bombay and the other at the M.S. University, Baroda. The S.N.D.T. Centre covers disciplines like Sociology, Gujarati, Women's Studies, Home Science, Library Science and Special Education while the Centre at the M.S. University of Baroda covers Economics, Political Science, Education and Psychology.

The objectives of the centres are to improve the information access to teachers and students and to provide for bibliographic support as also to make available the latest documentation available in the respective disciplines.

The Centres have already started functioning and they are providing current awareness services and information and reference services. Resources available in university library and other local libraries are optimally utilised and services developed on a computational data base built up by scanning hundreds of Indian and foreign journals.

2.07 INFLIBNET Programme

The cost of books & journals published both in India and abroad is rising day-by-day and it becomes extremely difficult for a university/college to maintain the current level of subscription inspite of increase in the allocation for books & journals by the funding agencies. While it is ideal to equip all the libraries in the country so that they are self - sufficient to cater to the needs of the academic community, in view of the huge expenditure involved, it is not feasible. The only alternative, therefore, is to inter-link the libraries so that they could optimally utilise their resources. While there have been recommendations in this regard by the library professionals and other academicians, no blue- print for establishing such a network had been evolved. In order to work out the necessary details, the Commission constituted in April, 1988 a committee on Library Network to advise the Commission on preparing a blue print for setting up a network for inter linking libraries. The Committee had its first meeting in April, 1988 and decided that there was a strong need for developing a network to inter - connect the libraries not only among the universities but also to

include the libraries of R&D institutions. Since this job could be accomplished with the help of experts from disciplines like computer, communication, library science, etc., an inter-agency working group called Information Library Network (INFLIBNET) was constituted which was assigned the task of submitting the project report to the Commission on the ways and means of establishing a network in India and also providing gateways to the Network abroad.

The proposed network would cater to the needs of the academic community not only from the library point of view but also facilitate them to communicate with each other, even though they are separated geographically. The working group started its work in June, 1988 and completed it in August, 1988. A general framework of the project was evolved by the working group and this was discussed with the librarians, academics and experts in the field so that vital decisions on standards of the record, classification systems to be used, catalogue system to be used etc. could be taken. The Project Report was edited by late Mr. T.S. Rajagopalan, former Director of INSDOC and the edited report was submitted to the Commission in December, 1988. The project report was endorsed by the Commission at its meeting held in December, 1988 and was sent to the Planning Commission with a request to allocate some funds to the University Grants Commission to carry out some of the preproject activities as listed out in the project report. The Planning Commission has also been requested to arrange for a meeting of heads of the various departments like DG, ICMR, NIC, ICAR, CSIR and Secretary of the department of Electronics, Education, Science and Technology, Space, Communication, Defence Research, Environment, etc. to consider the report and collectively pool up resources to set up this network which could be used by all the participating organisations.

Objectives of INFLIBNET

The INFLIBNET is to be a computer communication network for linking libraries and information centres in universities, deemed universities, institutions of national importance, UGC information Centres, R & D institutions and colleges. The main objectives of INFLIBNET would be:

- (i) To evolve a national network, interconnecting various libraries and information Centres in the Country and to improve capability in information handling and service;
- (ii) To provide reliable access to document collection of libraries by creating online union catalogue of monographs, serials and nonbook materials (manuscripts, audio-visuals, computer media, etc.) in various libraries in India;
- (iii) To provide better access to worthwhile bibliographic information sources, with citations and abstracts, such as periodicals articles, conference papers, preprints, technical reports, standards and specifications, patents, monographs, etc. through indigenously created databases of the Sectoral Information Centres of NISSAT and UGC Information Centres and such others and by establishing gateways for online accessing of international databases held by international information networks and centres;
- (iv) To provide document delivery service by establishing resource centres around libraries having a rich collection of documents;

- (v) To optimise information resource utilisation through shared cataloguing, interlibrary loan service, catalogue production, collection development and avoiding duplication in acquisition to the extent possible;
- (vi) To implement computerisation of operations and services in the libraries and information centres of the country, following a uniform standard;
- (vii) To facilitates scientific communication amongst scientists, engineers, researchers, social scientists, academics, faculties and students through electronic mail, bulletin board, file transfer, computer/audio/video conferencing, etc.;
- (viii) To enable the users disbursed all over the country, irrespective of location and distance, to have access to information regarding books, monographs, serials and non-book materials by locating the sources where these are available and to obtain it through the facilities of new communication technologies and union catalogue of documents;
- (xi) To create database of projects, institutions and specialists for providing online information service;
- (x) To encourage cooperation among libraries, documentation centres and information centres in the country, so that the resources can be pooled for the benefit of helping the weaker resource centres by stronger ones;

- (xi) To develop suitable professional manpower of appropriate quality to establish, manage and sustain the INFLIBNET; and

- (xii) To evolve standards and uniform guidelines in techniques, methods, procedures, hardwares and softwares, services and so on and promote adoption in actual practice by all libraries, in order to facilitate pooling, sharing and exchanging resources and facilities towards optimisation.

Cost Implication

It is estimated that a sum of Rs.55 crores will be required in the first phase of the implementation of the INFLIBNET project from April 1990 to March, 1992. In the second Phase (from April, 1992 to March, 1994) a sum of Rs.96 crores will be required.

SECTION 2 - PART II

HI-TECH AREAS AND R&D EFFORTS

2.08 UGC Programme on Superconductivity

The programme was initiated in June, 1987 after the exciting results in this field came to light the world over. 27 departments/universities merited support under the programme in the year 1987-88. The Commission supported four more institutions under the programme in the year 1988-89. Also three institutions which were given seed money earlier were provided additional support during the year.

Two group monitoring meetings consisting of coordinators of the programme and some eminent scientists were arranged by the Commission during 1988-89 to evaluate the work done by the departments/universities engaged in the programme. During the group monitoring meetings it was observed that the programme had been successful in infusing a new sense of purpose and direction among both the students as well as the faculty members. The mental horizon of many of the participating members had broadened considerably in respect of a number of experimental techniques, sophisticated data recording and data handling systems, the new physics pertaining to superconductivity in particular and various possibilities in the field of condensed matter physics in general. It was observed that universities were in a position to contribute substantially to the national effort. The most important aspect of the programme is that it has given an opportunity for intra and inter-departmental collaboration with other laboratories/institutions. This has created a new sense of group activity.

The infrastructure developed through COSIST and Special Assistance Programme has proved quite useful in the wake of the discovery of the new high temperature superconductors. As a result science research in India has not remained confined merely to a measurement of the transition temperature but comprehensive studies of many important properties have also been made which have raised India's contribution to this area. Some of the institutions and universities such as IISc., Bangalore, BHU, Poona, Rajasthan, Madras etc. are doing good work in basic as well as applied aspects of superconductivity.

The development, production and ultimate use of materials involves several stages. Discovery of new materials and its understanding requires creative research endeavours in multi-farious disciplines like solid state physics, solid state chemistry, material science etc. The discovery of mixed oxide superconductors is the latest instance of such an inter-disciplinary research effort. However, the actual application of a material has a device component. The structure requires the development and adoption of processing technologies without which a material with unusual properties may actually remain just a curiosity. Current world wide effort to develop appropriate processing technologies for confronting brittle ceramic oxides into shapes for service applications without deterioration in superconducting properties associated with the original materials illustrate the need for technologies in materials processing. Such processing technologies have not only to be amenable to shaping the materials into the required form without deterioration of its intrinsic physical, chemical and mechanical properties but also be amenable to large-scale and often cost-effective manufacturing.

The Commission feels that efforts should be concentrated on the development of a firm technology base for indigenous production of an advance material and components based on such materials. The essential requirements for these are:

1. A deliberate decision by a major user agency to adopt the indigenous product.
2. A strong and self-confident technical will.
3. Cooperative linkages among relevant high technology laboratories/universities/institutions.
4. Equipment availability through procurement, indigenous development or manufacture.
5. Fiscal supportive measures for indigenous materials development and applications.

There are a couple of examples of successful university ventures developed during the past few years.

The universities have the scope to mobilise experts in Physics, Chemistry, Material Science & Technology to undertake research on Solid State Chemistry or Structural Crystal Chemistry for preparation and studies of the Crystal Chemistry of oxides, nitrites, halides and borides. The standing committee on Superconductivity has observed that universities should concentrate on the following:

1. Material development with different oxides.
2. Thermodynamic studies covering specific heat, critical fields, penetration depth etc.

3. Magnetic studies, susceptibility starting from H_e temperature to LN_2 of higher temperature, EPR and NMR studies.
4. Transport measurement including frequency dependent infrared and microwave conductivity, thermopower etc.
5. Structure determination.
6. Standardization and characterisation (X-ray, neutron) of the material, ultrasonic propagation, electron microscope etc.
7. Electron tunneling and Nuclear Quadruple Resonance (NQR)
8. Superconducting electronics thin film mechanism.
9. Determination of critical field, critical current and penetration depth.
10. Theoretical explanation of the high T_c superconducting phenomenon.

2.09 **National Accelerator User's Committee**

The following facilities at the variable Energy Cyclotron, Bhabha Atomic Research Centre (BARC), Calcutta are being utilised by university scientists for some years now:

- i. Target Laboratory
- ii. Detector Laboratory
- iii. Scattering Chambers
- iv. Electronics Facility

- v. On-line data acquisition and processor system and
- vi. Magnetic Neutron Facilities.

An expert committee constituted by the Commission has been co-ordinating the activity. The research projects which require experiments to be done with the assistance of the Cyclotron are considered by the Committee. On its recommendations the Commission provides assistance to the university scientists for research staff, contingencies, T.A./D.A. to visit VEC (Calcutta) and for procurement of targets.

Twenty research projects undertaken by the university scientists were under implementation as on 31st March, 1989.

2.10 Development of Multi-disciplinary teaching and training in Bio-technology (Deptt. of Biotechnology-UGC Collaborative Programme):

A collaborative programme has been in operation since 1985-86 between the Department of Bio-Technology (Govt. of India) and the UGC for strengthening teaching and training in Bio-technology on a selective basis in universities which have active research groups in the field. Six universities identified for the purpose have been conducting M.Sc./M.Tech. courses in Bio-technology since 1985-86.

The DBT is providing financial assistance for equipment, books and journals, contingencies, academic staff salaries and studentships. The Commission is paying the salaries of administrative and technical staff and a part of building construction cost. The Commission has also been providing two junior research fellowships since last year at each centre for pursuing Ph.D. in Biotechnology.

Assistance is also provided to the universities for organising workshops/seminars in biotechnology. During 1988-89, workshops have been organised at the Jawaharlal Nehru University and the Indian Institute of Science, Bangalore.

2.11 Development of Ocean Science and Technology:

The Commission has been collaborating with the Department of Ocean Development (DOD) for promoting Ocean Science and Technology in the university sector. The need for this collaboration and joint funding arises particularly for those universities located in coastal areas which have developed facilities and expertise to train the necessary manpower for the user agencies and to advance the learning of marine sciences. Formulation of perspective plan in teaching, training and research with other institutions has also been taken up as part of this programme.

2.12 Atmospheric Sciences:

With a view to promote Meteorological and Atmospheric Sciences and to provide employment opportunities for trained persons at the computer systems being set up by the Council of Meteorological & Earth Sciences for medium range forecasting, the Commission launched a programme in 1987-88 to start post-M.Sc. course in Atmospheric Sciences in seven universities/institutions viz., Cochin, Andhra, Calcutta, Gujarat, Poona, Roorkee and the Indian Institute of Science, Bangalore. The course has been introduced in all these universities except Roorkee.

2.13 Career Awards:

Under this scheme, financial assistance is provided to outstanding young scientists (under 40 years of age) who

have established competence in their areas of specialisation with a view to enhance their potential for advanced research and encourage them to take up research as a career. Out of 20 awards available annually in science and engineering, seven awards were given during 1988-89. In humanities and social sciences, 15 awards were made during 1988-89 against as many positions available annually.

2.14 Indian Middle Atmospheric Programme (IMAP):

The Commission has been providing financial assistance to university scientists for undertaking multi-department/agency, co-operative and coordinated national programme to study the middle atmosphere over the Indian Sub-Continent. Under the programme, considerable progress has been achieved in initiating new projects, development of new instruments and operation of cooperative research. Research projects submitted by university scientists are processed by the IMAP-Co-ordinating Committee and on their recommendations, funded by the UGC. The progress of this programme was evaluated at an Inter-agency meeting and it was decided that the participation of university scientists in the Indian Middle Atmospheric Programme be continued upto March, 1990 to keep in line with the International Middle Atmosphere Cooperation (IMAC). The Commission has also agreed to contribute towards the establishment of a data centre to be established under IMAP.

2.15 Mass Communication and Educational Technology

Communication infrastructure in the country has undergone a rapid expansion. The massive expansion of the television infrastructure has made it possible to take TV programmes to almost any location in the country, if

appropriate reception equipment is installed. The UGC is aware of the vital role that a powerful medium like TV can play in the field of education. Recognising this potential of TV, the UGC, through the Country-wide Classroom project, seeks to use the TV network to take high-quality university-level education to even the remotest parts of the country. Thus, college students (and others) in small towns or remote places will have through TV, access to the best teachers and high-quality audio-visual material.

The broadcasts aim to upgrade and enrich the quality of education, while extending its reach. They attempt to overcome the obsolescence of the syllabus and present the latest advances in all fields, including the newly/emerging ones. The programmes seek to arouse the interest of the viewers, whet their appetite and broaden their horizons. The aim is to stimulate and not to satiate.

The programmes are telecast daily for two hours through INSAT 1B and the Doordarshan network. These are in English for the present and meant for undergraduate students. Greater stress is laid on the processes of converting information into knowledge and knowledge into wisdom by adopting a multi-disciplinary approach. 'Omnipresence' is an inherent component of the programmes which means taking the viewers to 'where the action is' viz., a research laboratory, a hospital, a village or a conference. There are also special programmes for teachers in higher education to enable them to handle their job more effectively. The Commission has provided colour TV sets to a number of colleges in order to enable both the students as well as teachers to view these programmes.

Sub. National Systems Unit,
National Institute of Educational
Planning and Administration
B-15, Anandapuri Marg, New Delhi-110016
DOC No. D-14405
Date: 21/11/83

During the year, the Commission set up two more Audio Visual Research Centres (AVRCs), one at Manipur University, Imphal and the other at Panjabi University, Patiala. With this, the total number of AVRCs set up by the Commission has gone up to nine. Six of these are fully operational at Anna, Madurai Kamraj, Osmania, Roorkee and Jodhpur Universities and at St. Xavier's College, Calcutta while three AVRCs at Kashmir, Panjabi and Manipur Universities are yet to become operational. The four Educational Media Research Centres (EMRCs) already set up by the Commission at the Jamia Millia Islamia, Poona University, Gujarat University and the Central Institute of English and Foreign Languages are fully operational. The Commission also invites proposals from universities and colleges to participate by producing TV programmes with the help of private production agencies on contractual basis. A map indicating the location of EMRC's and AVRCs is given at the end of the report.

Imported programmes telecast during the first few months of inception have been gradually replaced by Indian ones, largely due to the efforts of the EMRCs', AVRCs and the UGC-INSAT Project Co-ordination Cell with the result that now as much as 70% of the programme content is Indian.

Manpower development and training is an important component in the use of educational media. The Educational Media Research Centres have organised workshops to expose the academics and persons associated with the Media Centres for programme production, use of equipment, effective utilisation of the broadcasting medium as well as to motivate them in software making.

As part of periodical training programmes, the following workshops were held during the year:

- (i) Technical workshop for training of Media Centre technical personnel in operation, maintenance and servicing of VCRs equivalent to type 4500P, 5850P, remote edit control RM-40 and Digital time base correction principles held at EMRC, CIEFL, Hyderabad in January, 1989 in which 16 persons participated.
- (ii) A three-week workshop on Education TV Programme Production Techniques (with American Experts) held at the EMRC, Central Institute of English & Foreign Languages, Hyderabad during March-April, 1989 in which 20 persons participated.

As envisaged in the Programme of Action (POA) on the National Policy of Education (1986), distance learning is sought to be made more effective through the production of model course material. To begin with, such material is to be produced in 15 subjects in the form of audio/video cassettes, which could be used for self instruction and put out as video/TV broadcast. In this connection the Commission has taken up a project on 'Non-broadcast Mode Education Material'. The Committee constituted by the Commission to advise on matters relating to the preparation of model video course material for undergraduate students has identified 15 subjects and eight production centres for production of model video course material. Workshops in different disciplines have been held and recording has started in some of these.

With a view to create the interest of the public in general and the academic community in particular, as also to encourage a healthy competition in the production of educational video programmes, the Commission organised two

video festivals in Delhi during the year, the first in October, and the Second in December, 1988. The Chief Guests at the IInd Festival were Phyls and Philip Morrison who also gave a lecture demonstration on the making of an Educational Video Programme Series.

The Media Centres of the UGC sent their entries to be considered for different awards. A jury headed by Prof. E.V. Chitnis was constituted having representation from various fields like academic, educational film making, media, media critic etc. The Jury gave away cash awards and commendation certificates in various categories like best programme of the festival, best programme in various fields, individual excellence in different fields etc. An important aspect of the Jury was that student representation was encouraged and after a rigorous selection process, one student was chosen as a full member of the Jury and another was invited as an observer to the meetings of the Jury. The festival had a very good response and was also well received by the press.

2.16 Major Research Projects (Humanities and Social Sciences)

The Commission provides assistance to teachers, both in service as well as superannuated, in universities and colleges for undertaking research or learned works in their fields of specialisation. Research projects under the scheme may be undertaken by an individual teacher or a group of teachers or by a department as a whole. Priority is accorded to such topics of research which have an inter-disciplinary approach specially in fields which have hitherto remained neglected but which are of immense value from a socio-economic point of view. Commission's assistance is available for appointment of junior research fellows, research associates, visits for the fieldwork, apparatus, equipment, postage, stationery, computation

work, books & journals, printing of questionnaires, contingencies and such other items needed for the project.

During the period under report the Commission approved 136 major research projects in different disciplines of humanities and social sciences.

2.17 Minor Research Projects (Humanities and Social Sciences)

Under this programme, a university or college teacher intending to undertake a short-term research project or an investigation for a doctoral degree under approved supervision, is provided financial assistance upto a ceiling of Rs.15,000/- by the Commission. The assistance is available for purchase of books and journals, field work, preparation of questionnaires, computation work, equipment and contingencies which are specially needed for the proposed project but are not normally available in the institution where the teacher is employed.

During the year under report, the Commission approved 237 minor research projects in humanities and social sciences.

2.18 Major Research Projects in Science

The Commission has been encouraging teachers in the universities/colleges to undertake well defined time bound projects in different disciplines. The basic objective has been, interalia, to promote the culture of research in the university system and enable the teacher to keep abreast of the latest developments in their subject areas. The Commission approves research projects on the recommendations made by experts and on the advice given to it by the Subject Panels/Standing Committee. There is an inbuilt mechanism of monitoring the projects annually with the help of a monitor for each project.

The Commission has decided to organise group monitoring for all projects in different disciplines. During the year, the Commission approved 199 projects in different branches of science.

2.19 **Minor Research Projects in Science**

During the year under report, the Commission approved 906 minor research projects in Science subjects.

SECTION 3

COSIST PROGRAMME

3.01 Objectives & Progress

On the recommendations of the Science Advisory Committee to the Cabinet (SACC), the Commission launched a scheme on Strengthening of Infrastructure in Science and Technology on a highly selective basis so as to get the best out of the already available academics in the country. This scheme is being executed in consultation with a high power standing Committee for Strengthening of Infrastructure in Science & Technology (COSIST). The basic objective of the scheme is to help selected science and technology departments in universities/institutions which have already achieved high standards, to do even better and to raise their standards comparable to their counter parts elsewhere in the developed countries by providing them with such infrastructural inputs which are crucial for strengthening the teaching and research activities. Till the end of the year 1988-89, 98 departments have merited support under this scheme.

It is worthwhile to mention that many of the departments supported through this scheme have taken positive steps to modernise their curriculum by enriching the scope and contents. Attempt has also been made to improve the experimental work of the students by introducing new experiments which have direct bearing on the ongoing research programmes or are related to contemporary issues. Project and field work, home assignments have also been introduced as an integral part of the course work. There are positive indications that emphasis is shifted from conventional method of 'teaching' to a method of 'student learning'.

These departments have contributed significantly in the area of research as evinced from the research publications and in terms of Ph.D. output. In many of the COSIST supported departments the faculty members have bagged prestigious national and international awards. As anticipated, with the provision of adequate infrastructural support these departments have been able to attract research projects from various other funding agencies like DST, DAE, DRDO, CSIR, DOE, etc.

It is hoped that the COSIST departments will be able to serve as nodal agencies for other departments of the region and in course of time will establish linkages with other departments in appropriate disciplines from anywhere in India and will give necessary expertise to them as well as motivate them for upgrading teaching and research activities.

Since a major portion of the COSIST support is earmarked for procurement of sophisticated equipment, adequate measures have been taken to ensure that these equipments are maintained properly and remain functional. For this purpose an amount equivalent to 5% of the cost of the equipment is being provided to these departments.

A list of the COSIST supported departments is given at Appendix-XIII.

3.02 **Monitoring & Evaluation:**

The process of concurrent monitoring and evaluation is an integral part of the scheme. The departments are visited after about one year from the date of providing the assistance initially.

The number of departments supported during the last five years along with those monitored/evaluated by expert Committees during the same period is given below:

Year	No. of deptts. supported under the programme	No. of deptts. monitored/evaluated by expert committees
Upto March, 1985	38	3
Upto March, 1986)	58	41
)		
Upto March, 1987))	93	57
)		
Upto March, 1988)	98	68
)		
Upto March, 1989)		

3.03 Recommendations of the Sub-group

The sub-group on higher education for 8th Plan period discussed the programme of strengthening of the infrastructure in science and technology. The salient features of the recommendations made by the sub-group are as follows:

(i) On-going Programme:

The on-going programme of COSIST should continue as such with the modification that wherever necessary staff and building may also be provided. At present, building grant is given to house the equipment which are purchased in the COSIST

programme and usually technical staff are provided to maintain the equipment.

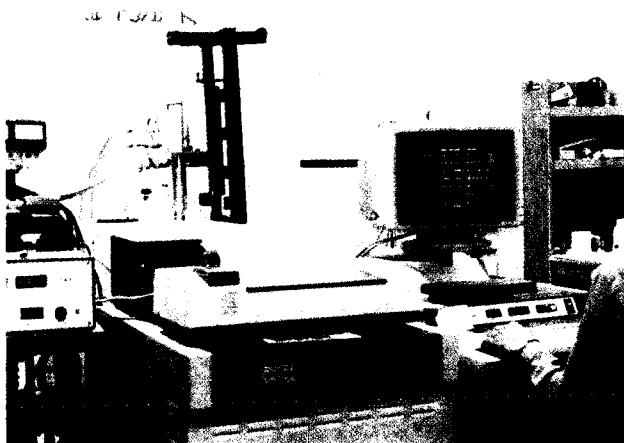
(ii) **Linkages:**

(a) For link activities for the departments which are not covered either under COSIST or SAP, funds may be provided so that the COSIST supported departments may invite other departments to raise their standards of teaching and research. Each COSIST department may identify certain institutions/ universities for this linkage programme so as to raise the general standard of teaching and research in the country.

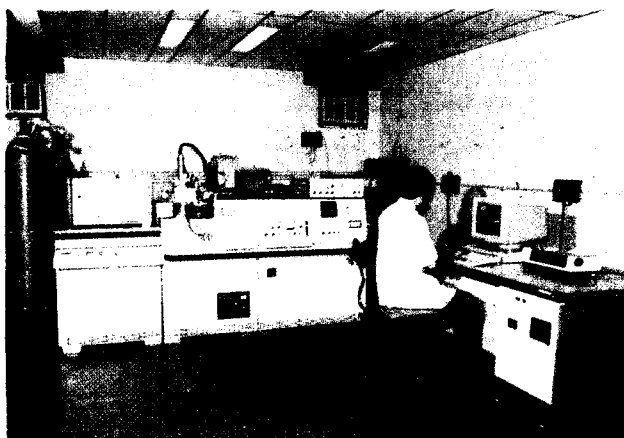
(b) Common facilities and national facilities accessible to the science & technology system is an important requirement for optimum utilisation of any investments in the R&D sector. There may be some elements which would require funding under COSIST in order that these common facilities would be used effectively. There may be small funds for travel, hiring charges or consumable products but the availability of resources for these minor items under COSIST may make a major difference to the utilisation of the common facilities.

(iii) **Funding New Departments:**

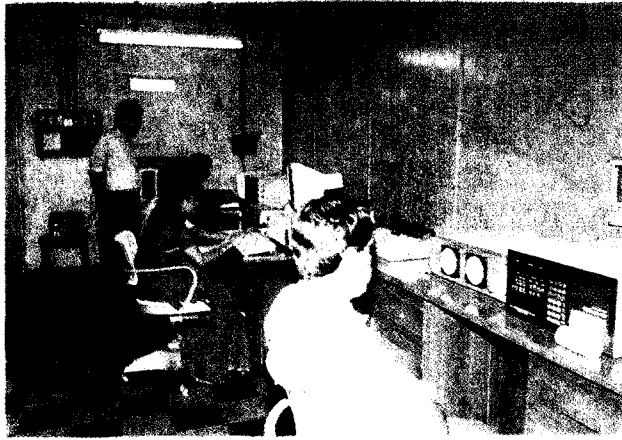
COSIST support has to be provided on a highly selective basis as this is the key concept of the scheme. However, the yard-stick used to judge the status of the departments supported so far may not



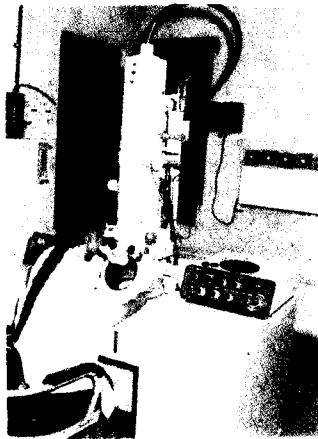
2. Bruker IFS 113 v Fourier Transform Infrared Spectrometer,
Solid State and Structural Chemistry Unit, Centre of Advanced Study,
Indian Institute of Science, Bangalore.



3. JEOL Model JMS-DX 303 GC-Mass Spectrometer System
Department of Organic Chemistry, Indian Institute of Science, Bangalore.



4. Meteorological Instrumentation Laboratory,
Cochin University of Science & Technology.



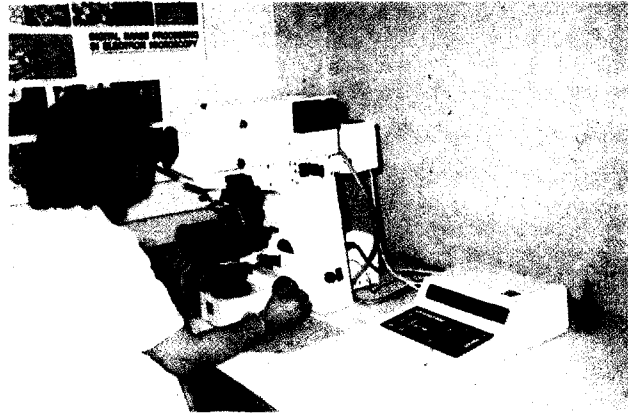
5. Electron Microscope, Department of Microbiology, M.S. University, Baroda.



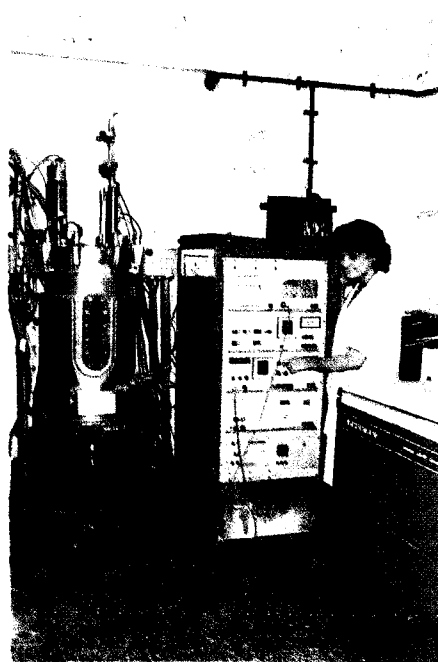
6. Gas Liquid Chromatograph, Department of Zoology, Delhi University.



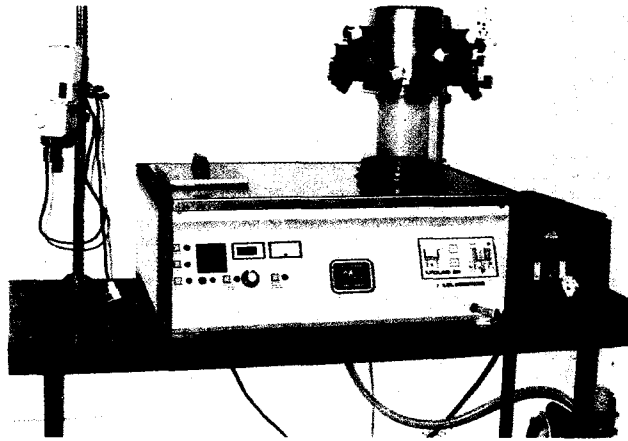
7. Photomicroscope Model Microphot-FX, Centre of Advanced Study,
Department of Zoology, Banaras Hindu University.



8. Zeiss Axiophot Research Microscope with Fluorescence Attachment,
Department of Zoology, Gujarat University.



9. 70 Lit. Fermentor, Department of Microbiology, M.S. University Baroda.



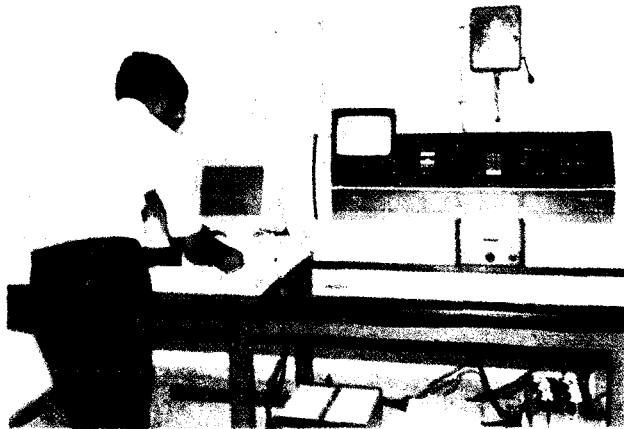
10. Lyophilizer, Department of Botany, Bhagalpur University.



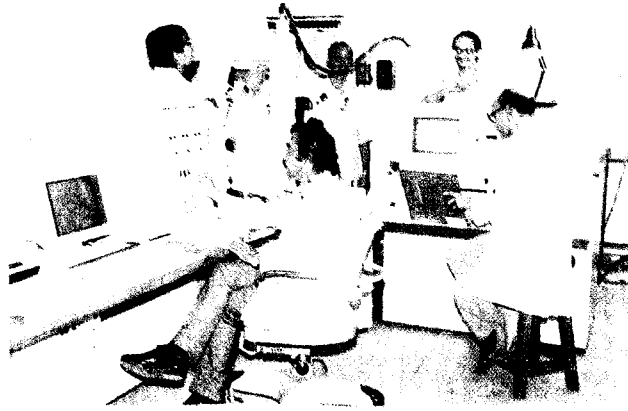
11. Measurement of Virus Bound Metal ions by Atomic Absorbtiometer. Molecular Biology Unit, Institute of Medical Sciences, Banaras Hindu University.



12. Atomic Absorption Spectrophotometer,
Department of Geological Sciences, Gauhati University.



13. SLM-SPF AMINCO Scanning Spectrophotometer with IBM Model PS/2
Computer System, Centre of Advanced Study in Botany, Madras University.



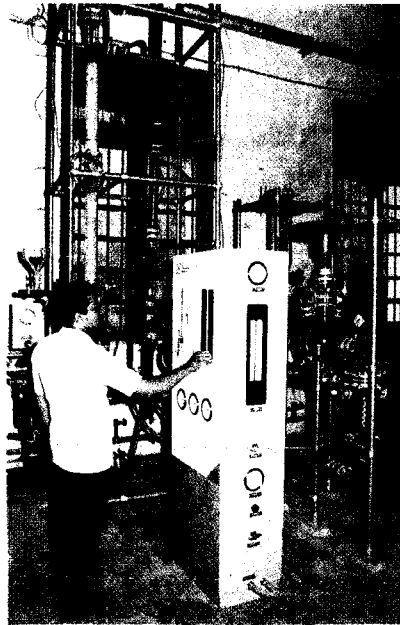
14. Electron-probe Micro-analyser,
Centre of Advanced Study in Economic Geology, Jadavpur University.



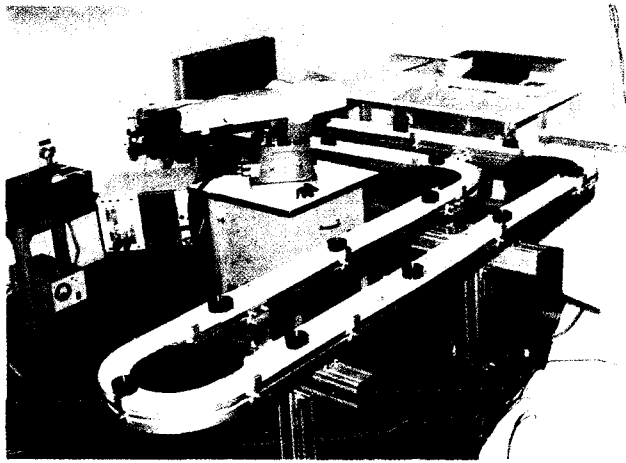
15. Microtorr-Vacuum Arc Remelting Unit Department of Metallurgy,
Indian Institute of Science, Bangalore.



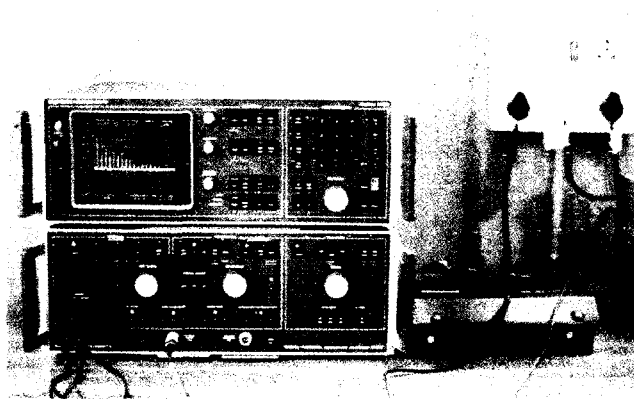
16. Liquid Nitrogen Plant , Department of Chemical Technology,
Bombay University.



17. Corning Distillation, Reaction, Absorption Teaching/Research Modules,
Department of Chemical Engineering, Anna University, Madras.



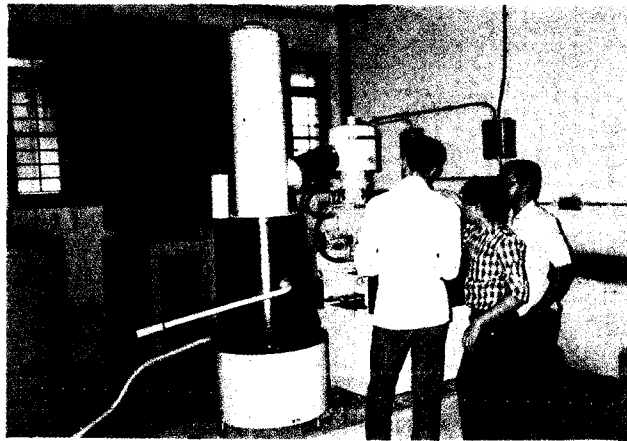
18. Flexible Manufacturing System,
Department of Mechanical and Industrial Engineering, Roorkee University.



19. Spectrum Analyser and Display,
Department of Electronics and Computer Engineering, Roorkee University.



20. Robotic Arm with PC Interface for Control Systems Laboratory,
Indian Institute of Science, Bangalore.



21. Liquid Nitrogen Plant, UDC, Bombay University.

be valid to assess the performance of the remaining departments which have not been supported. Keeping this in view, it is envisaged that during the 8th Plan while selectivity would continue to dominate for identifying departments, the norms followed earlier to assess the quality of a department may have to be moderated so that some good departments can also get a fillip through this scheme. This would help to bridge the gap between the highly developed departments and the developing ones.

(iv) **Extension of support to viable research groups:**

There are certain departments in the country which can not be considered as excellent ones in terms of overall performance in teaching or research or both taken together. However, in many such departments there are a few talented teachers who have the potentialities to undertake good quality research and in fact many of them through individual/ group efforts have made significant contributions in their areas of specialisations. It has been decided by the Standing Committee on Strengthening of Infrastructure in Science and Technology that such research groups of individuals may be identified and their performance may be assessed with a view to provide them adequate infrastructural facilities whenever there is a good reason to do so. Similarly, when suitable inter-departmental groups can come up with research/teaching proposals of inter-disciplinary nature which are of high quality, their cases may also be considered for support under this scheme.

(v) **Interfacing and Infrastructural Development with National Facilities:**

It may not be possible to build up high quality research infrastructure in all areas within the educational system. Therefore, the laboratory and infrastructure as available in the R & D system outside the education sector, such as various national laboratories and R & D laboratories of industries should be linked with COSIST departments for joint research venture as well as for imparting training in specialised areas.

SECTION 4

MAINTENANCE AND COORDINATION OF STANDARDS

4.01 Coordination and maintenance of standards in teaching and research are the statutory responsibilities of the University Grants Commission under Section 12 of the UGC Act and in this connection it consults the Universities as well as experts on its various panels. The Commission has taken a number of decisions to foster better standards of education - for example by framing the regulation regarding the qualification of teachers at the time of recruitment or providing guidelines for minimum examination reform, or advice to the Universities that the number of days on which classes are held should not be less than 180 in a year. The Commission has also been pressing for modernisation and relevance of curricula and methods of teaching which require students to do assignments, tutorials, projects or field work exercising their initiative and creativity. A number of journals have been started particularly to help teachers to improve their professional performance. The National Policy on Education (1986) has reinforced the need on the part of the UGC to maintain quality through proper consolidation of the existing facilities in order to meet the development requirements of the country, especially the need for trained personnel produced by the University system.

4.02 **National Educational Testing**

During the year 1988-89, Junior Research Fellowship (JRF) examination was held in various subjects falling under the faculties of humanities and social sciences (including languages). A list of these subjects is given

at Appendices XIV (a) and (b). A total number of 18,556 candidates registered for this examination out of which 12,708 appeared. The Committee appointed by the Commission decided to declare 888 candidates eligible for the award of Junior Research Fellowships. Subject-wise break-up of the number of successful candidates is given at Appendix-XV. Out of the 888 candidates declared eligible, the results of those candidates were withheld whose final post-graduate examination results were yet to be declared by the Universities. Such candidates should be declared successful only after they qualified the post-graduate examination securing at least a second class.

The JRF Examination in Science subjects was conducted jointly by the UGC and the Council of Scientific and Industrial Research (CSIR) in January 1989. A list of the subjects in which the examination was conducted is given at Appendix XVI. The results of this examination were being finalised.

Restructuring of Courses

The scheme of restructuring of courses was initiated by the Commission during the 7th Plan period with a view to making the first degree courses more relevant to environment and to the developmental needs of the Community and to link education with work/field/practical experience and productivity.

Restructuring of Courses has been conceived as a major programme for reform of higher education at the undergraduate level. The programme aims at imparting to every

undergraduate student grounding in the following important areas:

- i. A set of foundation courses designed to create an awareness of areas such as Indian history and Culture, History of the Freedom Struggle in India and other parts of the world, social and economic life in India including concepts and processes of development, the scientific method including the role of science and technology in development, alternative value systems and societies bases thereon, cultures of Asia and Africa (selected countries) and Gandhian thought.
- ii. A set of core courses to give an opportunity to students to acquire broad familiarity with some chosen disciplines, including study of one or more of them in depth.
- . Some applied studies/projects/field activity to form an integral activity of the course and to be carried out in the final year and

Involvement in a programme of national or social service for the first two years.

on 31-3-1989, 9 Universities and 136 colleges had introduced restructured courses under the scheme

College Humanities and Social Science Improvement Programme (COHSSIP):

College Humanities and Social Science Improvement Programme was introduced in 1974-75 to bring about qualitative improvements in teaching humanities and social science subjects at the Undergraduate level in the

affiliated colleges in various universities with particular reference to (a) adoption of new teaching methods (b) extension of library services, (c) introduction of special courses, (d) inter-disciplinary programmes, (e) adoption of various measures of examination reforms, (f) remedial teaching and (g) field/project work etc. COHSSIP thus provides an opportunity to colleges to make new experiments for the improvement of teaching, learning, curriculum and examinations. The total number of colleges assisted under this programme upto 31st March, 1989 was 595 in the first phase and 99 in the second phase.

4.05 University Leadership Project (ULP)

The University Leadership Project is aimed at improvement of instruction in selectred subjects in all the colleges affiliated to a university. The department concerned in the selected university provides necessary gtuidance, advice and assistance to the college departments regarding curricular reforms, methods of instructions, syllabi and courses of study. The Project aims at improving instruction in the subject within the existing framework of the prescribed syllabi and the examination procedures. During the year, the subject panels identified some more departments for participation under the programme.

4.06 Panels in Humanities and Social Sciences

The Commission has panels of experts which advise it on matters related to the maintenance and improvement of quality of teaching and research in various subjects in the Humanities and social sciences in the Universities. These panels are reconstituted once every two years.

Some of the important recommendations made during 1988-89 by each of the 16 panels operating under the scheme are given below:

4.07 POLITICAL SCIENCE

The panel recommended the following themes and also identified universities for organising seminars on these themes as follows:

Theme -----	University -----
1. Philosophy of Social Sciences in relation to the study of Politics.	Kota Open University
2. Theoretical Enterprise in the study of International Relations:- The evaded dimensions in social sciences research in India.	M.S. Univ. of Baroda
3. Understanding Indian society and Politics.	Panjab University

The Panel recommended the department of political science at the University of Burdwan for participation under the ULP. It also reiterated its recommendations made earlier that Visiting Committees be sent to Universities of Andhra and Gauhati for ULP.

It was also decided by the Panel that the departments of Political Science in the following two Universities may be included under the Special Assistance Programme and

Visting Committees be sent there for assessing their requirements.

1. Hyderabad University, Hyderabad.
2. Centre for International Politics & Organisations, School of International Studies, JNU, New Delhi.

4.08 Sociology

The Panel recommended six seminars on the following topics in Sociology to be organised in different Universities.

1. Scheduled Castes and Scheduled Tribes - their Social and Economic Conditions.
2. Urban Growth.
3. Sociology of Educational Institutions.
4. Population problems of Demography.
5. Social movements and Social changes.
6. Youth and Society.

An International seminar on 'Humanities and Social Sciences in the age of Science and Technology' was also recommended by the panel.

The Panel was of the view that wherever in a department of sociology there are courses on Social Pathology/Social Disorganisation, Criminology and Deviance, topics relating to drug abuses may be incorporated in such courses.

4.09. Psychology

The Panel recommended that the departments of Psychology at the Universities of Bangalore and Sri Venkateswara may be considered for participation under the Special Assistance Programme.

The Panel recommended that the following persons may be invited to author books on specific projects as follows:

Author -----	Title of the Projects. -----
1. Prof.A.K.Sen, Deptt., of Psychology University of Delhi, Delhi.	Multivariate techniques in the Social Science.
2. Prof.Girishwar Mishra, Bhopal University and Prof.A.K.Mohanty, Utkal University.	Developmental Psychology
3. Dr.N.Y.Reddy, Osmania U;niversity Hyderabad.	Social Disability.

4.10 COMMERCE

The Panel recommended that wider publicity be given to Special Assistance Programme/ULP by sending a circular in this regard to all the Universities having Commerce departments. The Panel also recommended that a Special Committee be constituted for preparing a status report in Commerce.

The following themes and Universities were also identified by the Panel for organising seminars:-

<u>Theme</u>	<u>University</u>
1. Human Resource Development and Accounting.	Burdwan University
2. Lease, Finance and Accounting.	Osmania University
3. Financial Future Market in India.	Bombay University
4. Export Prospects and Promotion.	Kerala University

4.11 Education

The Panel recommended that the B.Ed., course through correspondence be banned. It also recommended the introduction of drug abuse as a topic at the B.Ed., level.

4.12 Economics

The Panel recommended the departments of Economics at the Madurai Kamraj University and Bangalore University for participation under the Special Assistance Programme. It also recommended that Krishnadevaraya University may be requested to send a specific proposal under this programme for consideration of the panel.

The Panel identified the following courses for support under the scheme of Restructuring of Courses:-

- i. Computer Application

- ii. Environment and Resources
- iii. Agricultural Banking
- iv. Manpower Planning
- v. District Planning
- vi. Energy Economics
- vii. Project Formulation

The Panel felt that it was important to modernise libraries and develop a network system for a better and effective utilisation of the books and journals available in different institutions of higher learning and in various national laboratories. It was emphasised that apart from the costs, there was need to work out the details of the scheme for identifying various components of the network system and methods for bringing these components together for a self-sustaining mechanism. The Panel also suggested the setting up of one or two inter-university centres for Economics.

4.13 Social Work Education

The Panel recommended the following themes and also identified universities for organising seminars on Social Work Education:

<u>Theme</u>	<u>University</u>
1. Formulation and Implementation of Experimental Field work Training Projects	Tata Institute of Social Sciences, Bombay
2. Land Alienation and Social Work.	Delhi School of Social Work and Jamia Millia School of Social work.

The Panel recommended that the following priority areas in Social Work Education may be listed in the UGC brochure 'Support for Research Projects' as eligible for financial assistance

- i. Issues relating to Women
- ii. Problems of Youth
- iii. Issues relating to Children including Child Exploitation.

- iv. Issues in Rural Development
- v. Issues and Problems in Urban Development.
- vi. Changes in Family Structure and its Implications for Social Services.
- vii. Social Tensions and Violence.
- viii. Social Issues in Health.

4.14. Anthropology:

The Panel recommended that the department of Anthropology, Panjabi University, Patiala may be considered for participation under the Special Assistance Programme.

It also recommended themes and identified universities as follows for organising seminars in Anthropology:-

<u>Theme</u>	<u>Univeristy</u>
1. Anthropology of Ageing	Ranchi University
2. Dental Anthropology	S.V.University, Tirupati
3. Anthropology Techniques and Methods.	Delhi University

- | | |
|---|--------------------------|
| 4. Ethno Sciences and New
Ethnography | Calcutta University |
| 5. Rising Trends in Palio-
Anthropology. | Deccan College,
Poona |

4.15 English & Western Languages

The Panel recommended that the departments of English of Ranchi and Kerala Universities be included under ULP. It also recommended a workshop in English Language Teaching at the department of English, Gujarat University for the orientation and training of teachers.

4.16 Classical Languages

The Panel recommended some priority areas where, it felt, there was urgent need for preparation of University level books. The Panel also suggested the creation of a faculty of Vedic Science and Technology at the Banaras Hindu University.

The Panel identified the following themes and universities for organising workshops/seminars:

- | | |
|--|---|
| 1. Methods of Sanskrit Teaching | Kashmir University |
| 2. Manuscriptology | Poona University |
| 3. Research & Teaching
Methodology in Classical
Languages. | Delhi University |
| 4. Vaishnavism | Kendriya Sanskrit
Vidyapith, Tirupati. |

- | | |
|---|--|
| 5. Shankar Vedanta | Sampurnanand Vishva-
vidyalaya, Varanasi. |
| 6. Pali and Buddhism | Calcutta University,
Calcutta. |
| 7. Tantra (Shaiva, Shakta,
Vaishnava and Boddhatantra) | Gauhati University |

4.17 Oriental and African Languages and Literature

The Panel identified the following themes and Universities for organising seminars:

<u>Theme</u>	<u>Universities/Institutions</u>
1. Birth Centenary Seminars of Jai Shankar Prasad	i. Centre of Indian Languages, JNU, New Delhi. ii. Hindi Department, Marathwada University, Aurangabad. iii. Hindi Department, Banaras Hindu University, Varanasi. iv. Hindi Department, University of Hyderabad, Hyderabad.
2. Indianness in Urdu Literature	Urdu Department, Jamia Millia Islamia, New Delhi.
3. Dalit Literature in Marathi.	Marathi Department, Nagpur University, Nagpur.

- | | | |
|--|-------------|---|
| 4. Modernity in Modern
Assamese Poetry. |)
)
) | i. Gauhati University |
| 5. Indianness in Assamese
Literature |)
)
) | |
| 6. Mongoloid and Non-Aryan
elements in Asamese
language. |)
)
) | ii. Dibrugarh University |
| 7. Women poets of Assamese
poetry. |)
) | |
| 8. Dalit Literature in
Punjabi. | | Guru Nanak Dev University,
Amritsar (School of
Punjabi Studies) |

4.18 Linguistics

The panel recommended the following themes for holding seminars:

- | | |
|--|-------------------------|
| 1. Experimental phonetics and
Computation Linguistics | - Deccan College, Poona |
| 2. Research Methodology in
Linguistics. | - Delhi University |
| 3. Tribal Linguistics | - Tamil University |
| 4. Language, Literature and
culture. | - CIEFL, Hyderabad. |
| 5. Indian Gramatical Tradition | - Annamalai University |

6. Linguistics and Adult Education. - Tamil University

It also identified the following areas in which books may be written:-

1. General Linguistics
2. Morphology
3. Phonetics

The Panel felt that there was an urgent need for interdisciplinary studies in Linguistics. In order to take up this task, the following pilot survey studies should be conducted in the first instance:

1. A socio-Linguistic survey of all the languages and dialects that are spoken as mother tongue and used as second language.
2. Systematic collection and analysis of folklore in the region and its comparative study.
3. Exploring affinities, shared themes and contrasts between the various traditions in the area concerned.
4. Exploring affinities with the neighbouring areas.

4.19 **Law**

The panel recommended the organisation of seminars on the following themes:

1. Intellectual and Individual Property Law - Delhi University
2. Law and the Press - National Law School of India, Bangalore.

The Panel was of the view that 'Police Sciences' and 'Criminology' may be included as optional subjects at the undergraduate and postgraduate levels.

The Panel identified 'Criminal Law' and 'Constitutional Law' as priority areas in which books may be written.

4.20 **History**

The Panel recommended the following departments for inclusion under the Special Assistance Programme:-

1. Department of History, Gujarat University.
2. Department of History, Gorakhpur University.
3. Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University.

4.21 **College Science Improvement Programme (COSIP)**

The Programme aims at bringing about qualitative improvement in the teaching of science subjects at the undergraduate level. It strives to accelerate the capabilities of undergraduate science students and initiate a process of continuous self-renewal. The programme has brought about awareness of the importance of science education both at college/University level. As on 31st March 1989, COSIP was being implemented in 303 colleges and 40 University departments by way of ULP.

4.22 PANELS IN SCIENCE SUBJECTS

Panels of experts in Science subjects are also reconstituted, as these are in humanities and Social Sciences once in every two or three years to advise the Commission on matters relating to the present status of teaching and research in the concerned subjects and or measures to bring about qualitative improvements in the standards of teaching and research.

The Commission takes appropriate measures on the advice given by various subject panels. Important recommendations made by various Science Panels during 1988-89 are given below:

4.23 Mathematics

The Panel recommended the department of Mathematics, Jabalpur University for support under the Special Assistance Programme. It also identified the following priority areas for organising international/national Conferences, Seminars, Symposia, Summer institutes etc.

- (i) Differential geometry and topology.
- (ii) Mathematical foundations of computer science.

4.24 Chemistry

The panel identified the Chemistry departments of the following four universities for support under the Special Assistance Programme:

- (i) Madurai Kamraj University
- (ii) Burdwan University
- (iii) Bharathidasan University
- (iv) Roorkee University

4.25 Bio-Sciences

The Panel recommended the following measures for bringing about qualitative improvement of research in the field of Bio-Sciences.

- (i) Creation of honorary professorships in Universities for inviting Scientists from industry, national laboratories etc. The expenditure for the purpose may be met out of funds made available by the Commission for appointment of staff.
- (ii) Introduction of a four or five-year integrated programme of study in Bio-Sciences leading to M.Sc., degree.
- (iii) Simplification of procedure for import of equipment on priority basis.
- (iv) Introduction of a scheme for identifying talented students after + 2 stage for pursuing further studies in Bio-sciences.

The Panel recommended the award of National Lectureship to six scientists and Visiting Associateship to 25 candidates working in the field of Bio-Sciences.

The Panel identified three departments for inclusion under the Special Assistance Programme and two for Departmental Research Support. The Panel also recommended that a workshop on redesigning of courses be organised at the department of Zoology, Poona University.

4.26 Home Science

The Panel felt the need for coordinated research in Universities and colleges in the priority areas for strengthening of manpower and infrastructure in Home Science departments. It was also of the view that financial assistance may be provided to colleges of Home Science to set up media laboratories, exhibition rooms with models, animal houses etc. The Panel recommended that refresher courses of two week duration in the identified thrust areas be organised in the following universities/colleges and each of these may organise five refresher courses covering one thrust area each time.

<u>University/College</u>	<u>Thrust Area</u>
1. Lady Irwin College, Delhi	Child Development
2. M.S. University of Baroda, Baroda.	Clothing & Textile
3. S.N.D.T. Women's University, Bombay.	Home Management
4. Sri Avinashlingam Home Science College, Coimbatore.	Food & Nutrition
5. Biharilal college of Home Science, Calcutta.	Extension Education

4.27 Electronics and Instrumentation

On the recommendations of the Panel, orientation courses in Electronics and Instrumentation were organised for teachers at selected universities for strengthening of teaching and research in this field.

The M.Sc. Electronics Science Course is likely to be started in Kurukshetra and Cochin universities during 1989-90 as recommended by the panel. This course is already being offered in the Universities of Delhi, Calcutta and Poona. It is contemplated that by the close of the year 1990 some more university departments would be able to start this course. This programme is being jointly financed by the Department of Electronics (Govt. of India) and the University Grants Commission - the former contributing towards equipment and books and the latter towards building and staff.

4.28 Geo-Sciences

The Panel recommended a symposium on 'Autacogens and Rift Valleys' to be organised by the Geology departments of Banaras Hindu University and Roorkee University.

4.29 Relativity and Cosmology

The national coordinating committee constituted by the Commission to promote teaching and research in the areas of Relativity and Cosmology recommended the organisation of schools in Relativity and Cosmology for university and college teachers. It also recommended that standard books on topics like 'General Relativity' and 'Unification' be written by Indian authors as there was a dearth of good books in Relativity and Cosmology.

The report of the expert group constituted for working out a modern syllabus on Relativity and Cosmology at the post-graduate level for Physics and Mathematics was awaited. There is also a proposal to organise 'Graduate Schools' every year for improving and establishing the background knowledge of General Relativity and Differential Geometry.

4.30 **Gandhian Studies**

The Commission continued to support the Universities for various programmes of Gandhian Studies and Values and strengthening of Gandhi Bhavans. The Commission also continued the approved positions of research associates in Gandhian Studies.

A national seminar under the Gandhian Studies programme titled 'Conflict Resolution through National Violence : Role of Universities' was organised by the Delhi University in February, 1989. The recommendations made at the seminar were being processed for follow-up action.

There are 11 universities which run academic programmes leading to the award of degree/diploma in Gandhian Thought. The Commission has desired to review these programmes and action in this regard has been initiated.

4.31 **Buddhist Studies:**

The Commission has been providing assistance to selected Universities on cent per cent basis outside the plan allocation for the promotion of Buddhist Studies. Assistance is provided mainly for the appointment of staff and purchase of books with a view to strengthening teaching and research related to Buddhist Studies.

4.32 **Nehru Studies:**

A meeting of the Committee on Nehru Studies was held in August, 1988. The Committee was of the view that, initially, Nehru Study Centres may be set up in a few Central universities and detailed proposals may be invited from these universities for the purpose.

4.33 **Centres of Advanced Study**

The Commission has been providing special assistance since 1963 to some promising departments in humanities, social sciences, and science and technology subjects in the universities, carefully selected on the basis of their work, reputation, existing facilities, and potentiality for further development to function as centres of advanced study (CAS). These centres are intended to encourage 'the pursuit of excellence', and to improve quality and raise standards at the postgraduate and research levels. They provide adequate facilities to scholars of outstanding ability for advanced study and research and function on an all-India basis, and wherever practicable, in close collaboration with the national laboratories and other similar institutions. In addition to a nucleus of permanent staff they have a substantial number of outstanding workers on deputation from other universities and some visiting scholars from abroad. Each such department or centre is a part of university where it is located.

The recognition as CAS is a privilege that has to be continually earned and deserved. The continuance of this privilege would depend on the quality of work done, the performance and the achievement of the centre.

4.34 **Special Assistance to selected Departments**

The programme of special assistance to selected departments (DSA) in the universities was initiated in 1973 as a support to quality programme in some selected departments which can strengthen and consolidate their teaching and research programmes. This special assistance will also help them in identifying areas of specialisation in which they could ultimately strive to achieve excellence and be

recognised as centres of advanced study in that particular field.

Similarly in 1978, the scheme of Departmental Research Support (DRS) was started to enable promising university departments/institutions to develop to the level of DSA.

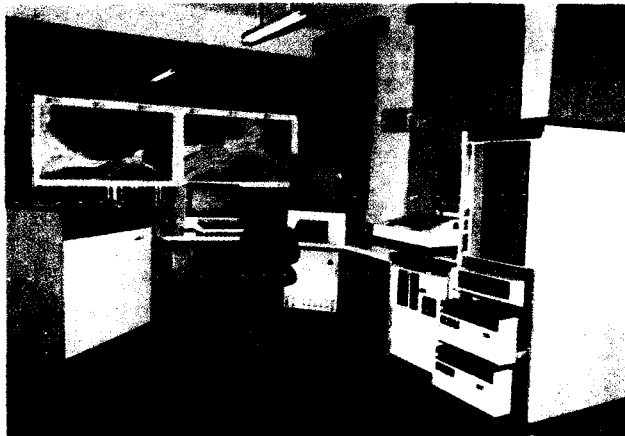
There is an inbuilt mechanism of selection, monitoring and evaluation of the Programme. The Panels, the Advisory Committee and the Standing Committee are mainly looking after the functioning of the programme.

A list of the departments participating in the scheme of CAS/DSA/DRS in Humanities and Social Sciences as on 31.3.1989 is given at Appendices-XVII, XVIII and XIX. It will be seen that there were 15 CAS, 73 DSA and 14 DRS in Humanities and Social Sciences as on 31.3.1989. Similarly, in Science subjects, 26 departments were participating as Centres of Advanced Study, 96 departments as Departments of Special Assistance and 58 under the Departmental Research Support Programme as on 31st March, 1989. A list of these is given at Appendices-XX, XXI and XXII.

The Standing Committee on CAS/DSA at its meeting held in March, 1988 considered the issue of financial support to the departments (DSA/CAS) which have been supported for 15 years or more by the Commission and was of the view that such departments/centres have already received considerable support and developed their infrastructure in terms of facility, equipment and space. These departments should be in a position to maintain on their own by funds from various agencies on departmental, individual research projects, etc. However, the Committee felt that some provision may be made by the UGC for maintenance of equipment on service contracts as well as for books and journals for each centre.



22. Metalloplan III Digitised Microscope for Photometric Measurements and Track Study, High Energy Physics (Experimental) (DSÁ Funds) Physics-Punjab University.



23. Multispectral Interactive Data Analysis System (MIDAS) Anna University.



24. Students understanding the description of charts, Avinashlingam Institute of Home Science, Coimbatore.



25. Visual Communication 1988, Centre for Developmental Communication, Gujarat University.

This recommendation of the Committee was accepted by the Commission at its meeting held in November, 1988 and it was decided that the Commission may continue to provide assistance to such DSA/CAS which have completed 15 years or more on selective basis after thorough evaluation for items like library, books and journals and equipments (ensuring that there is no duplication in items), working expenses, fellowships etc. as at the present level.

4.35 Curriculum Development Centres:

It was a long felt need to prepare a model curriculum in different subjects to maintain uniform standards of education in this country. Keeping this objective in view the Commission initiated in 1986 the scheme of Curriculum Development Centres to be set up in different disciplines. The major task of such centres is to undertake a thorough review of the existing syllabi and courses of different Universities at various levels of higher education and to suggest measures for modernising and restructuring them to unit courses, besides developing alternative models emphasising the different aspects of study of the subject concerned.

The main thrust of the proposed curriculum is aimed at shifting emphasis from teaching to learning which is an important element in the new approach to education as laid down by the National Policy on Education (1986). This has necessitated the re-organisation of the curriculum packages possibly in a modular form and greater emphasis to be given to the student's motivation to learning than to teacher's lectures. Further, the curriculum is to be so designed that it would make education socially relevant and more meaningful to the needs of its beneficiaries. Students are to be given

home assignments, tutorial work etc. so that they may make use of library and laboratory facilities.

Also, lectures have to be supplemented by tutorials and problem-solving sessions (which is about 20% of the lecture work-load), term papers, project work and field work which will form a constituent part of the curriculum,. Such a curriculum will enable greater mobility of students from one region to another. The curricula are being developed by groups of experts in the concerned subjects. These experts have been selected from different universities, laboratories and other bodies. In case of under-graduate curriculum, the experts have been chosen from colleges as well.

As on 31st March, 1989, 27 CDCs had been set up in various subjects (10 in Science subjects & 17 in humanities and social sciences subjects). A list of these centres is given at Appendices-XXIII (a) and (b).

The Commission has so far received model curricula in 20 disciplines which are indicated by an asterisk mark in the list of centres. Out of these 20 disciplines, 12 have been discussed at national level workshops for circulation to universities.

4.36 Preparation of University Level Books by Indian Authors:

Under the scheme, the commission provides financial assistance to outstanding academics and scholars in universities, colleges and other institutions of higher learning and research for preparation of high quality books, monographs and reference material for use in universities and colleges.

The progress of the scheme upto 31st March, 1989 was as under:

- (a) Projects accepted : 1035
- (b) Projects cancelled due to non-implementation : 98
- (c) Projects where the manuscripts have been completed : 352
- (d) Projects in different stages of implementation : 585

The operation of the scheme in its present form has been suspended since July 18, 1986 and the scheme is under review. However, proposals received upto 17th July, 1986 were being considered.

4.37 Examination Reforms:

The commission has been laying special emphasis on the implementation of various measures of examination reform, with particular focus on continuous internal evaluation, development of question banks, introduction of grade system and the semester system. In addition to these, the commission has also impressed upon all universities that:

- (i) Syllabus in each paper should be demarcated into well-defined units/areas of contents alongwith a topic-wise breakdown.
- (ii) Examiners should be free to repeat questions set in previous examinations.

- (iii) Choice given to students for answering questions may be provided by alternate questions in each unit of the syllabus rather than by restricting it to a specified number of questions to be attempted out of the total number of questions for all the units of the syllabus put together.
- (iv) No examination should be held without fulfilling the requirement of a minimum number of lectures/tutorials/laboratory sessions etc. which should be clearly laid down by the university.
- (v) Universities must take all steps for the proper conduct of examination such as effective security measures, proper supervision and invigilation, cordoning off the examination centres from the range of loudspeakers and other interference, flying squads and strenuous action in all cases involving copying and use of unfair means.

The present position of implementation of the measures suggested above is summarised below:-

- (i) Continuous internal evaluation at different levels has been introduced by 52 universities, 18 institutions deemed to be universities and 23 Agricultural/Technological Universities;
- (ii) Question banks have been or are being developed in 18 universities, eight institutions deemed to be universities and five agricultural universities;
- (iii) Grading system is in operation in 23 universities, 12 Institutions deemed to be Universities and 22 Agricultural/Technological Universities;

- (iv) Semester system is in operation in 51 universities, 13 Institutions deemed to be Universities and 19 Agricultural/Technological Universities;
- (v) 89 Universities/Institutions have taken or are taking steps to demarcate the syllabus in each paper into well-defined units/areas of content alongwith a topic-wise break-down;
- (vi) 85 Universities/Institutions have decided that examiners should be free to repeat questions set in the previous examinations;
- (vii) 84 Universities/Institutions have decided that the choice should be restricted to each unit of syllabus instead of giving wide choice to students for answering of questions;
- (viii) 81 Universities have supported the view that no examination should be held without fulfilling the requirements of a minimum number of lectures/tutorials/laboratory sessions; and
- (ix) 86 Universities/Institutions have informed that they are taking steps to ensure the smooth conduct of examinations such as effective security measures, proper supervision and invigilation, and stern action in all cases involving copying and use of unfair means.

2. Universities/deemed to be universities with ceiling below Rs.100 lakhs Rs.7 lakhs each
3. Colleges Rs.25,000 each

5.04 Special Assistance to Universities for Equipment:

In view of the emphasis laid in the National Policy on Education (1986) on removal of obsolescence of equipment in universities and colleges, the Commission has been providing assistance to universities and colleges since 1987-88. For this purpose, universities have been grouped into three categories as detailed below:

I. (i) Science Departments Category	Amount Sanctioned (in Rupees)
A	30 lakhs
B	25 lakhs
C	20 lakhs
(ii) Humanities and Social Science Departments	
A	10 lakhs
B	7 lakhs
C	5 lakhs
II. Colleges:	
UG Programmes only	2 lakhs
PG Programmes only	5 lakhs
UG/PG Programmes	7 lakhs

Grants have already been allocated to the universities on the pattern indicated above. A detailed scheme for the college sector is worked out.

5.05 Campus Development in Central Universities and Institutions deemed to be Universities:

The Commission continued to provide assistance for campus development of central universities and institutions deemed to be universities. During the year 1988-89, grants amounting to Rs.153.28 lakhs were released by the Commission for the purpose.

5.06 Grants under Plan Development Schemes to Medical Colleges and Hospitals of Central Universities:

The Commission continued to provide grants under plan development schemes to Aligarh Muslim University, Banaras Hindu University and Delhi University for medical education. The 7th Plan development proposals of the medical faculties of the AMU and BHU and the University College of Medical Sciences, Delhi University were examined by an expert committee and schemes involving a total allocation of Rs.724 lakhs were approved by the Committee for the 7th Plan period (1985-90). Against this allocation, the Commission released during 1988-89 grants to the tune of Rs.82.77 lakhs for medical colleges and Rs.14.00 lakhs for the attached hospitals of the universities mentioned above. University-wise breakup of the total allocation for the 7th Plan and the grants released during 1988-89 is given in Table 5.1 below:-

Table 5.1

University	Allocation for 7th Plan (Rs. in lakhs)	Grants released 1987-88	
		Medical Colleges	Hospitals
Aligarh Muslim University	263	10.02	10.00

Banaras Hindu University	261	17.75	4.00
University College of Medical Sciences (Delhi University)	200	55.00	-
Total	724	82.77	14.00

5.07 Sub-plan for Development Schemes of Central Universities

The Commission is making separate allocation under the Sub-Plan for the development of central universities, medical colleges of central universities and hospitals attached to them and the Delhi colleges buildings under the annual budget of the UGC. During the year 1988-89, grants released/sanctioned to the central universities for various schemes under the Sub-Plan amounted to Rs.1429.44 lakhs as per details given below:-

Table 5.2

Scheme	Grants released/ Sanctioned during 1988-89 (Rupees in lakhs)
General Development in Humanities and Social Sciences	465.54
General Development in Sciences	128.31
Medical Colleges	82.77
Hospitals	4.00

Campus Development	149.23
Delhi Colleges Buildings	87.18
New Central Universities	105.00
Faculty Housing/Guest Houses	9.50
Students Hostels	79.52
Physical Education including sports	15.50
Miscellaneous	302.89
	<hr/>
	1429.44
	<hr/>

5.08 Grants for the Development of Science:

Grants given to the universities for science education and research during 1984-85 to 1988-89 are shown in Table 5.3.

5.09 Grants for the Development of Humanities and Social Sciences:

Grants paid to the universities during 1984-85 to 1988-89 for the development of humanities and social sciences are indicated in Table 5.4.

Table-5.3

GRANTS FOR THE DEVELOPMENT OF SCIENCE

Sl. No.	Item of Expenditure	1984-85	%	1985-86	%	1986-87	%	1987-88	%	1988-89	%	Total
1.	Staff	88.62	6	76.24	4	148.58	8	265.19	13	127.45	6	705.08
2.	Equipment	357.29	25	330.57	17	312.90	16	124.25	6	129.37	7	1254.38
3.	Books & Journals	145.12	10	141.84	7	109.50	6	91.26	5	87.85	4	575.57
4.	Buildings	88.68	6	105.40	5	233.04	12	84.44	4	206.63	10	614.33
5.	Centres of Advanced Study*	176.03	12	271.85	14	106.99	5	89.85	5	55.35	3	700.07
6.	Special Assistance to selected departments	224.22	15	442.02	22	193.90	10	325.56	16	225.74	11	1411.44
7.	Nuclear Science Centres	-	-	393.00	20	456.00	23	529.60	26	766.50	38	2145.10
8.	Inter-University Centres	-	-	-	-	-	-	-	-	34.00	2	34.00
9.	Other Schemes**	378.00	26	221.99	11	398.61	20	515.08	25	378.03	19	1891.71
Total***		1457.96	100	1982.91	100	1959.52	100	2025.23	100	2010.92	100	9331.68

* Including staff, buildings, books, equipment etc.

** Includes projects support, departmental/Institutional Support, Career awards, research scientists, meritorious scholarships for B.Sc. students and other miscellaneous schemes.

*** Includes payment made by adjustment.

Note: A statement showing grants paid to universities during 1988-89 (major Head-wise) under Plan and Section III is given in Appendix-XXIV.

Table-5.4

GRANTS FOR THE DEVELOPMENT OF HUMAN AND SOCIAL SCIENCES

Sl. No.	Item of Expenditure	1984-85	%	1985-86	%	1986-87	%	1987-88	%	1988-89	%	Total
1.	Staff	103.05	15	120.80	14	207.20	19	342.84	27	189.90	22	963.79
2.	Equipment	83.16	12	129.33	15	240.19	22	193.17	15	158.71	19	804.56
3.	Buildings	209.29	30	187.48	22	199.17	18	273.87	22	158.12	19	1027.93
4.	Books & Journals	138.78	19	242.00	29	227.39	21	153.25	12	108.50	13	869.92
5.	Centres of Advanced Study*	24.71	4	13.05	2	35.87	3	14.13	1	22.12	3	109.88
6.	Special Assistance to selected departments	51.07	7	63.42	2	57.65	5	97.93	8	33.89	4	303.96
7.	Area Studies	11.38	1	12.32	1	20.06	2	51.28	4	22.15	3	117.19
8.	Other Schemes**	82.91	12	74.69	9	113.91	10	146.57	11	151.03	17	569.11
Total***		704.35	100	843.09	100	1101.44	100	1273.04	100	844.42	100	4766.34

* Including staff, buildings, books, equipment etc.

** Includes projects support, research scientists, departmental/Institutional support, Career awards, and other miscellaneous schemes.

*** Includes payment made by adjustment.

5.10 Development of Engineering & Technology:

The Commission has been providing financial assistance to university maintained departments in Engineering and Technology. During the year 1988-89, 35 universities were provided assistance by the Commission for promoting higher education and research in the field of Engineering and Technology.

The Commission has also been providing assistance for the award of PG Scholarships/Senior Research Fellowships for the students of Engineering & Technology in university departments.

Grants amounting to about Rs.13 crores were sanctioned by the Commission to various universities/institutions for this purpose during 1988-89. The Commission also approved the introduction of the following courses in Engineering/Technology in selected universities during the year under report.

<u>Course</u>	<u>University</u>
i. Master of Engineering in Computer - Aided Design	Roorkee
ii. B.Tech in (a) Electronics Engineering (b) Computer Engineering (c) Bio-Medical Engineering and (d) Environmental Engineering	S.N.D.T.Women's
iii. M. Tech. in Opto-Electronics	Cochin

5.11 Management Courses:

The Commission has also been providing assistance to universities/institutions for conducting programmes in Management Studies. Under this scheme, 39 universities/institutions were assisted and an amount of Rs.95 lakhs was sanctioned for the purpose during 1988-89. This

amount is a part of the overall grant of about Rs.13 crores released for the development of Engineering/Technology as indicated in para 5.09 above.

The Commission also approved the introduction of the M.B.A. Course in three universities viz. Vikram, Kashmir and Delhi (South Campus) during 1988-89.

5.12 Development of Computer Facilities and Computer Education for Manpower Training:

The Commission has been providing financial assistance to universities for setting up computer facilities and computer centres. As many as 104 Universities were covered under the scheme for installation of computer systems upto 1988-89.

The Commission provides PC/XT computer system to colleges also. It selected 481 colleges upto 1988-89 for providing PC/XT system withn stabilizer & AC Unit. In order to make up the shortage of trained manpower in this field, the Commission has also been assisting universities under the UGC-DOE Joint Programme for running several manpower training courses viz. (a) one year Diploma Course in Computer Application (DCA) (b) Three - year Master of computer Application (MCA) course and (c) B.Tech. and M.Tech courses in Computer Science.

The M.C.A. course and B.Tech. course in computer science were approved by the Commission for introduction at the following universities/institutions during 1988-89.

<u>Course</u>	<u>University</u>
Master of Computer Application	i. Gujarat
	ii. S.N.D.T. Women's
	iii. Birla Institute of Technology and Science.
B. Tech. in Computer Science	Osmania

5.13 **Three year Degree Course in Physical Education, Health Education and Sports in Universities and Multi-Faculty colleges:**

During the year 1988-89, proposals of seven universities and ten colleges were approved by the Commission for the introduction of a three year degree course in Physical Education, Health Education and Sports. A list of these universities/colleges is given at Appendix-XXV. These were in addition to the 11 universities and 22 colleges whose proposals were accepted during 1987-88. Thus, at the end of 1988-89, proposals of 18 universities and 32 colleges were approved under the scheme.

5.14 **Jubilee Grants:**

The Commission has agreed to the following norms for providing assistance to colleges to commemorate their centenary and jubilee years as under:

<u>Category</u>	<u>Ceiling of assistance</u>
1. Colleges which have completed 25 years	Upto Rs.5.00 lakhs
2. Colleges which have completed 50 years	Upto Rs.20.00 lakhs
3. Colleges which have completed 100 years	Upto Rs.25.00 lakhs
4. Colleges which have completed 150 years	Upto Rs.30.00 lakhs

The Commission's assistance will be provided for meaningful programme of capital nature. While providing grant-in-aid under this scheme, each proposal will be evaluated by the Commission on its merit.

5.15 Unassigned Grants:

The Commission has been operating the scheme of 'Unassigned Grants' for providing assistance for the following items:

- i. Travel grant to teachers/scientific and technical officers of the universities for participation in international conferences/seminars/symposia held abroad.
- ii. Travel grant to Vice Chancellors for attending commonwealth Vice-Chancellors' Conference.
- iii. Travel grant to teachers/research scholars/scientific and technical officers for visiting centres of research or to attend academic conferences/seminars within India.
- iv. Exchange of teachers.

The above scheme has been reviewed and it has been decided that w.e.f. 1988-89, assistance will also be available for the following additional items;

- i. Travel grant to the teachers selected under the International Collaboration Exchange Programme by national agencies, CSIR, INSA and others.
- ii. Organisation of Seminars/Symposia and International/National/Regional/State level conferences.

Teachers working in the university teaching departments/ correspondence courses/ distance education/ adult education and extension programmes as on 15th August of the preceding year would only be taken into account for determining the quantum of assistance under the 'unassigned grant' during the succeeding year (Teachers working in colleges and institutions would not be taken into account).

For purposes of assistance, the following six items will be grouped together as Group 'A' :

- i. Travel grant to teachers/scientific and technical officers for participation in international conferences/ symposia held abroad.
- ii. Travel grant to Vice-Chancellors for attending Commonwealth Vice-Chancellors' Conference.
- iii. Travel grant to teachers/research scholars / scientific/ technical officers for visiting centres of research or to attend academic conferences/ seminars within India.
- iv. Exchange of teachers.
- v. Travel grant to teachers selected under the international collaboration exchange programme by CSIR, INSA and other agencies.
- vi. Organisation of Model Parliament in Universities.

The quantum of assistance per annum for Group 'A' would be determined on the following basis:-

<u>Number of Teachers etc.</u>	<u>Grants admissible</u>
(a) upto 20	Rs.20,000/-
(b) upto 21-50	Rs.40,000/-
(c) 51-100	Rs.1 lakh
(d) 101-200	Rs.2 lakh
(e) 201-300	Rs.3 lakh
(f) 301 and above	Rs.5 lakh

The eligibility conditions, procedure, pattern of assistance and other conditions in respect of the scheme of 'unassigned grant' under group 'A' are detailed below:

(i) **Eligibility**

- (a) University teachers including teachers working under the scheme of Career Awards and Scientific and Technical Officers working in a scale of not less than Rs.700-1300/- (pre-revised) at an international academic conference/seminar/symposia will only be considered.
- (b) The cases of teachers who are invited to chair a session (not jointly with another), give a key note address or lead a seminar/discussion group at the international conference will receive particular attention.

(ii) **Procedure, Pattern of Assistance etc:**

- (a) Expenditure on providing assistance to teachers/Scientific/Technical Officers for participation in International Conference held abroad should not be less than 40% and should not exceed 60% of the 'unassigned grant' allocated for the year. If, in a particular year, a university does not utilise at least 40% of the 'unassigned grant' on this account, the amount falling short of 40% will have to be refunded to the University Grants Commission, or will be adjusted against the grant for the succeeding year.
- (b) Assistance be not provided to a teacher under this scheme for more than once in three years.
- (c) The 'unassigned grant' is also not to be utilised for teachers in affiliated colleges.

Organisation of seminars/symposia and international/national/regional/ state level conference will come under Group 'B' for purpose of assistance. The quantum of assistance per annum for group 'B' will be determined on the following basis:

<u>No. of teachers</u>	<u>Grant admissible</u>
i. 150	Rs. 1 lakh
ii. 151-250	Rs. 2 lakhs
iii. 251 - above	Rs. 3 lakhs

5.16 Development of Performing Arts:

The Commission has been supporting selected departments of Performing and Visual Arts in the Universities. As on 31.3.1989, the Performing Arts departments of the following universities were being assisted under the programme viz; Rabindra Bharati, Rajasthan, Delhi, Visva Bharati, Calicut, SNDT Women's, M.S. University of Baroda, Madras, Tamil and Poona.

5.17 Museums:

The Commission has been supporting the museums run by Universities/Colleges. As on 31.3.1989, as many as 35 universities/colleges were being assisted under the programme.

5.18 Centre for Third World Studies:

The Commission has been providing assistance since 1987-88 to the the Jamia Millia Islamia for setting up a Centre for Socio-Economic Studies of the Third World countries. The assistance is for a period of five years and includes assistance for staff, space, seminars, contingencies, books and journals. The main objectives of the Centre are :

- a. to promote research studies in strategies of planning

and socio - economic development in developing countries.

- b. to investigate and document case studies of economic and social development.
- c. to examine institutional infrastructure set up for the planning and development process.
- d. to develop alternative models of development suited for the environmental conditions in different countries.
- e. to organise international seminars, workshops etc. to study socio-economic development in developing countries.

5.19 Centre for Scientific Socialism:

The Commission is providing assistance to the Centre for Scientific Socialism set up by the Nagarjuna University last year. Assistance is provided for items such as teaching staff, research staff, books and journals, seminars, conferences, publication, additional space, contingency etc.

5.20 Centre for Vedic Studies & Tagore Cell:

The Commission has identified the department of Sanskrit, Rabindra Bharati University for carrying out research on Vedic Studies and the department of Bengali of this University for the establishment of a Tagore Cell.

5.21 Special Education to Teachers for Teaching Handicapped Children:

The Commission has been providing assistance to universities/ institutions for offering courses in Special Education for teachers teaching handicapped children. As on 31.3.1989, seven universities and two colleges were being assisted under the programme.

5.22 Area Studies Centres:

Under this programme the Commission has been providing assistance to selected universities for undertaking indepth studies relating to various aspects of different countries & regions of the world particularly of those with which India has had close and direct contacts. The objectives of this programme are three-fold:-

1. To train a body of Scholars for specialised studies on problems & culture of a given area.
2. To develop interdisciplinary research and
3. To develop teaching and research in social science disciplines introducing a comparative & interdisciplinary dimension.

The Commission's assistance to the Centre of Area Studies covers additional academic staff, fellowships/scholarships, strengthening of library facilities, field grant for research scholars to enable them to visit areas of their interest and for collection of source materials, assistance for inviting scholars to the centres etc. The working of the centres is reviewed periodically.

The Commission is providing financial assistance to the following 14 universities for development of 16 Area Studies Centres:-

1. Aligarh Muslim University - Centre of West Asian Studies
2. Banaras Hindu University - Centre for Studies on Nepal
3. Delhi University - Chinese & Japanese Studies
4. Calcutta University - Centre for South East Asian Studies.

- | | |
|--|---|
| 5. Bombay University | - (1) Centre of African Studies
(2) Centre of Soviet Studies |
| 6. Madras University | - Centre for south & South east Asian studies. |
| 7. Osmania University | - Centre for Urban Development & Regional Planning. |
| 8. Gokhale Institute of Politics & Economics | - Centre for Economics of East European Studies. |
| 9. Rajasthan University | - South Asia Studies Centre |
| 10. Sri Venkateswara University | - Centre for Studies on Indo-China. |
| 11. Jawaharlal Nehru University | - (1) Centre for Gulf Studies
(2) Centre for Soviet Studies |
| 12. Goa University | - Latin American Studies |
| 13. Andhra University | - SAARC Studies |
| 14. Kashmir University | - Centre for Central Asian Studies. |

Financial Assistance from the UGC was available for the Area Studies Centres upto 31.3.1988.

The Commission appointed expert Committees to assess the development proposals of the Area Studies Centres for the next five year period beginning 1988-89. The Committees visited the Centres and submitted their reports. The reports are under consideration of the Commission.

5.23 **Science Education Journals:**

The Commission continued to support publication of quarterly journals in Physics Education, Mathematics Education, Biology Education and Chemistry Education. The journals provide a forum for exchange of ideas on innovation in teaching, new curricula and educational technology, both software and hardware.

5.24 **University Science Instrumentation Centres (USIC) and Regional Instrumentation Centres (RIC):**

A meeting of the Committee on USICs was held in December 1988. The Committee considered the report of the sub-group on (a) guidelines on USICs and (b) pay scales of USIC staff and agreed to the following:

- (i) There should be now three levels of USICs i.e. USIC level-I, USIC Level-II and USIC Level-III. Normally there should be one USIC level-III in a state or a region. Upgradation of USIC level-I to Level-II and II to III will be based on the potential of the university and the work done by a USIC based on assessment.
- (ii) In order to ensure that USICs get integrated into the system and that brighter persons are inducted and retained in the USICs, it would be essential to have parity between the pay scales of USIC, Scientific staff like PSOs, SSOs and SOs with Professors, Readers and Lecturers. It was felt that such parity was all the more desirable in view of the parity in the pay scales of Librarians, Directors of Physical Education and Administrative Officers with those of the teachers.
- (iii) A package for carrer development be formulated for the USIC staff on the lines of the career

development scheme approved by the Government of India for teachers in the universities.

- (iv) Such of the scientific staff who, in addition to their USIC obligations, partake in well-defined teaching & research at USIC or in other departments and possess required qualifications may be designated as Professors, Readers and Lecturers and others as Technical Officers.
- (v) USIC staff, whether Technical Officers or Professors, Readers or Lectures be treated as non-vacation academic staff.
- (vi) Technicians etc. in USICs will be in the pay scales corresponding to the pay scales existing for such posts in the laboratories of the CSIR.
- (vii) The administrative staff of USICs be in the pay scales prevailing in the universities for the corresponding staff.
- (viii) The staff of the USIC will be entitled to all other allowances etc. as per rules for similar staff in the university.
- (ix) The functioning of each USIC be monitored by an Advisory Committee and that of the USIC in the country by a Central Committee at the UGC level.
- (x) The USICs should be adequately funded to provide appropriate manpower equipment and other infrastructural facilities commensurate with other objectives.
- (xi) UGC may assist a USIC initially for a period of five years and later the recurring liability of USIC i.e. staff and running expenditure be taken over by the state governments just like any

other university department. UGC may provide developmental grants for USIC like other university departments.

- (xii) A sub-group of the committee may meet at Bombay to finalise (a) training programmes and (b) self appraisal mechanism for USIC staff. While doing this the Committee may keep in view the appraisal proforma finalised by the Commission for the teachers. The above recommendations of the Committee were under consideration of the Commission.

The Committee also considered the review reports of the following USICs and agreed as follows:

- a) USIC at Burdwan University Level-I be upgraded to Level-II
- b) USIC at North Bengal University be visited by a Committee in the first instance.
- c) USIC at Rani Durgavati Vishwavidyalaya may continue to function at its present level.
- d) USICs in the following universities be upgraded from Level-II to Level-III;
 - 1. Madurai Kamraj University.
 - 2. Cochin University.
 - 3. Andhra University.
 - 4. Karnataka University.
 - 5. Roorkee University.
 - 6. Kurukshetra University.
 - 7. Sardar Patel University.

During the year, the Commission approved the setting up of the following USICs:

Ranchi University

Level-II

Saurashtra University	Level-II
Garhwal Unviversity	-do-
Rohtak University	-do-
Agra University	-do-
Sri Krishnadevaraya	-do-

With these, the Commission has approved the proposals of 64 universities for setting up of USICs as on 31.3.1989.

5.25 UGC Film Study Centres

The Commission has set up Film Study Centres in selected universities and colleges.

Twenty two universities/colleges have been selected for the establishment of Film Study Centres in the first instance. A UGC Central Cell is set up at the National Film Archives of India, Pune to ensure constant supply of suitable film classics and ancillary support material and also undertake training and retraining programmes for the teacher Co-ordinators. The UGC and WGBH, Boston have entered into a Co-production arrangement for the production of a TV series titled °State of the World°. It is a ten-part series that would explore the critical environmental questions facing the world today, ranging from deforestation to population pressures, from soil erosion to the disposal of hazardous wastes, and so on. A steering Committee has been constituted to oversee the co-production process of the series from the Indian side.

5.26 Value Oriented Education

The University Grants Commission has given high priority to value-oriented education. Value

orientation, as a major concern of education, has been a subject of discussion from time to time. It is also felt that value orientation should be a focus of education and that teachers should be given necessary training in the effective methods of development of values among students. Value orientation covers the entire domain of the human personality and its integrated development. Specific values correspond to different capacities: there are values of physical education, aesthetic education, mental education, spiritual education and so on. The imparting of these values should therefore become an integral part of the teaching-learning process. Value oriented education also figured in the discussions on the formulation of National Policy on Education (1986). The Policy points out that the growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values. According to the Policy, value education has a profound positive content, based on our heritage, national goals and universal perceptions. The Policy also visualises a positive role for education in the development of new values through redesigning curriculum, textbooks, training and orientation of teachers, etc., in the empowerment of women and bringing about changes in their status. The UGC has sanctioned a project for undertaking studies relating to value-oriented education to be implemented at the Gujarat Vidyapith, Ahmedabad.

5.27 **Support for publications of Journals in Humanities and Social Sciences**

The University Grants Commission is providing assistance for the publication of Journals in humanities and social sciences. The grant is given for the publication of research journals in English or regional languages brought out by a department/institute in a particular

discipline or on inter-disciplinary basis. The object of the scheme is to help the university/department to improve the quality of their journals and to ensure regularity of their publication.

The grant under this scheme is given to meet the annual deficit subject to a maximum of Rs.5,000/- per year for a period of five years. A grant of Rs.1.6 lakhs was paid to the universities for this purpose during 1988-89.

5.28 Development of Sports Infrastructure in Universities and Colleges:

During the year 1988-89, the Commission with the help of Expert Committees examined and approved in principle proposals of twenty universities involving a financial implication of Rs.372.26 lakhs under NSO programme. The proposals of Colleges will be considered separately by a Committee constituted by the Commission.

SECTION 6

DEVELOPMENT OF COLLEGES

6.01 Development of colleges which are responsible in a major way for undergraduate education and to a great extent even for post-graduate education is an important area in higher education from the points of view of maintenance of proper standards, ensuring optimum utilisation of facilities, promoting innovation and change, relating education to emerging occupational pattern, viability and equalisation of educational opportunities for weaker sections of society particularly scheduled castes and scheduled tribes and educationally backward areas of the country. The Commission has laid down guidelines for the development of colleges during the 7th Plan period keeping in view their importance as mentioned above.

6.02 Assistance to Single-Faculty Colleges:

(a) Colleges teaching Classical Languages

The Commission has prescribed guidelines for providing assistance to single faculty colleges teaching classical languages viz. Sanskrit/Pali/Prakrit/Arabic/Persian provided such colleges come within the purview of Section 2(f) of the UGC Act 1956 and are declared fit to receive central assistance under Section 12-B of the Act. The following minimum eligibility conditions have been prescribed for providing assistance to such colleges during VII Plan period:

i) Under-graduate Course (Three Year duration)

1. Number of students	75
2. Number of Permanent teachers	7

3. Quantum of assistance during a Plan period. Rs.3 lakhs

ii) Post-graduate Course (Two year duration)

1. Number of students 20
2. Number of Permanent teachers 4
3. Quantum of assistance during a Plan period. Rs.1 lakh

iii) Both Under-graduate and Post-graduate Course

1. Number of students 100
2. Number of Permanent teachers 10
3. Quantum of assistance during a Plan period. Rs.4 lakhs

Single faculty colleges teaching classical languages are not eligible for basic grant separately.

The items and pattern of assistance for the development of the above colleges are the same as for Arts, Science, Commerce and Multi-faculty colleges.

(b) **Colleges of Social Work:**

The Commission has enhanced the ceiling of developmental assistance to colleges of social work from Rs.2.00 lakhs to Rs.3.00 lakhs during VII Plan period. The other terms & conditions of grant will be

the same as are prescribed for assistance to single-faculty colleges.

6.03 New Model of an Affiliating University:

The Commission has felt the need for a new approach to the structure of the university system to meet the needs of colleges in the country with regard to curriculum development, examination reform, teachers' training, extension services etc. With this end in view, the Commission constituted a Committee to study various aspects of a new model of an affiliating university and to lay down suitable guidelines for the purpose. The new model seeks to concentrate on the development of the colleges with a view to promoting excellence in standards of education in the colleges including the autonomous colleges. The Committee has since submitted its report which is under consideration of the Commission.

6.04 College Development Councils:

On the basis of the revised guidelines circulated to the Universities in the first year of the Seventh Plan, the scheme of College Development Councils was extended upto 31st March, 1990 on the condition that the state governments would take over the responsibility thereafter. Grants amounting to Rs.10.17 lakhs were released under the scheme during 1988-89.

6.05 Grants for General Development:

Grants paid to colleges for general development and other schemes during the period 1984-85 to 1988-89 are detailed in table 6.1 below:

Table 6.1

Grants paid to Colleges for General Development and other Schemes*

(Rs. in lakhs)

Sl. No.	Name of the Scheme	1984-85	1985-86	1986-87	1987-88	1988-89
1.	Development of affiliated colleges	1,778.59	1,159.28	2670.39#	2808.58#	3334.10
2.	College Science Improvement Programme	22.52	50.15**	40.00**	56.00**	38.60
3.	College Humanities & Social Sciences Improvement Programme.	87.87	76.91	189.97**	161.15**	116.25
4.	Centenary Grants	0.50	1.75	20.57	50.00	--

* A statement of development grants paid to colleges(Statewise) during 1988-89 is given in Appendix XXVI.

Includes assistance to UG/PG Colleges, Teacher's Training Colleges and Basic Assistance.

** includes ULP also

6.06 Autonomous Colleges:

The Commission continued its efforts to promote and encourage the concept of autonomy through its scheme of autonomous colleges. As a result of continuous follow-up, 27 more colleges were granted autonomous status during the year under report, thus bringing the total number of such colleges to 95 as on 31st March, 1989. The following steps were taken during the year to extend the coverage of autonomous colleges:

- i. Assistance was provided for a number of seminars at universities and the NIEPA to create awareness;
- ii. Dialogue was continued with state governments to amend the Acts of the universities to enable them to allow autonomy to colleges and also expedite approval to the statutes framed by universities;
- iii. It was stressed upon the universities to expedite formulation of statutes to regulate conferment of autonomous status on colleges and expedite examination of proposals by the Standing Committee.

A Committee has been set-up for advising and monitoring the implementation of the scheme of autonomous colleges. With a view to ensure smooth working of the autonomous colleges and establish their credibility, the Commission took the following steps during the year:

- i. Autonomous colleges were requested to bring out annual report highlighting their achievements, academic innovation etc. as a mechanism to evaluate their performance and assess accountability.

- ii. Universities were advised to hold half-yearly meetings with Principals of autonomous colleges to sort out matters of coordination.
- iii. State governments were requested to set-up Coordination Committees consisting of Vice-Chancellors and Principals of some autonomous colleges so that autonomous colleges develop in a proper manner.

6.07 Autonomous Departments:

The Commission considered the report of the Committee which was appointed to suggest a scheme on the functioning of a department/centre/school/institution as an autonomous unit within the university set up. Keeping in view the report and other suggestions of the committee, the Commission desired that guidelines 'for autonomous departments be reformulated.

6.08 Plan assistance to Delhi Colleges:

Plan assistance provided to Delhi colleges during the year 1988-89 was as follows:

- (a) An amount of Rs.16.50 lakhs was provided to six colleges for the implementation of the scheme of 'Restructuring of Undergraduate Courses'.
- (b) An amount of Rs. 7.47 lakhs was provided to four Delhi Colleges under the Scheme of 'Basic Assistance' as per details given below:

- 1) Books and Journals : Rs. 2.47 lakhs
- 2) Equipment : Rs. 5.00 lakhs

(c) An amount of Rs.43.87 lakhs was provided under the scheme of 'Development of Undergraduate Education' for books and journals, equipment and buildings as per details given below:

- 1) Books and Journals : Rs. 15.57 lakhs
- 2) Equipment : Rs. 21.25 lakhs
- 3) Buildings : Rs. 7.05 lakhs

(d) An amount of Rs. 87.18 lakhs was provided to 16 colleges for construction/extension of buildings and other specific purposes.

(e) An amount of Rs.3.04 lakhs was provided to 16 colleges for meeting 50 per cent of the expenditure incurred by the teachers towards international air passage, TA/DA etc. for attending international Conferences/Seminars/ Symposia abroad.

SECTION 7

DEVELOPMENT OF INSTITUTIONS DEEMED TO BE UNIVERSITIES

7.01 Section 3 of the UGC Act provides for declaring an institution of higher education, other than a university, as an institution deemed to be university' which is having more specific and limited functions and scope and is doing work of a high standard in an academic field. An institution deemed to be a university enjoys the academic status and privileges of a university and is generally expected to aim at strengthening its activities in its field of specialization rather than make efforts towards growing into multi-faculty university of the general type.

7.02 **Enrolment & New Institutions:**

During the year 1988-89, the following four institutions were granted the status of 'deemed university'.

- i) Central Institute of Higher Tibetan Studies, Sarnath, Varanasi (UP).
- ii) Sri Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
- iii) Central Institute of Fisheries Education, Varsova, Bombay.
- iv) National Dairy Research Institute, Karnal.

The Jamia Millia Islamia, New Delhi, which was an institution deemed to be university till 1987-88, was accorded the status of a university during 1988-89.

Thus, the total number of institutions deemed to be universities was 25 as on 31st March 1989. A list of these institutions giving their enrolment, year of establishment and the year of their recognition as 'institutions deemed to be universities' is given in Table 7.1 below:

Table 7.1

Sl. No.	Name of the Institution	Year of Establishment	Year during which recognised	Enrolment during 1988-89
1	2	3	4	5
1.	Indian Institute of Science (Bangalore)	1909	1958	367
2.	Indian Agricultural Research Institute (New Delhi)	1905	1958	666
3.	Gurukul Kangri Vishwa- vidyalaya (Hardwar)	1900	1962	561
4.	Gujarat Vidyapith (Ahmedabad)	1920	1963	856*
5.	Tata Institute of Social Sciences (Bombay)	1936	1964	335

1	2	3	4	5
6.	Birla Institute of Technology and Science (Pilani)	1964	1964	2663
7.	Central Institute of English and Foreign Languages (Hyderabad)	1958	1973	1763
8.	Indian School of Mines (Dhanbad)	1926	1967	306*
9.	Gandhigram Rural Institute (Gandhigram)	1956	1976	998
10.	School of Planning and Architecture (New Delhi)	1959	1979	576
11.	Dayalbagh Educational Institute (Agra)	1973	1981	1871
12.	Sri Sathya Sai Institute of Higher Learning (Prasanthi Nilayam)	1981	1981	772
13.	Banasthali Vidyapith (Banasthali)	1935	1983	893
14.	Indian Veterinary Research Institute (Izatnagar)	1913	1983	85
15.	International Institute for Population Science (Bombay)	1956	1985	67

1	2	3	4	5
16.	Thapar Institute of Engg. and Technology (Patiala)	1956	1985	835
17.	Birla Institute of Technology, Mesra(Ranchi)	1955	1986	1564
18	Rajasthan Vidyapith (Udaipur)	1937	1987	1492 #
19.	Tilak Maharashtra Vidyapith (Pune)	1921	1987	4858
20.	Rashtriya Sanskrit Vidyapith (Tirupati)	NA	1987	244
21.	Shri Lal Bahadur Shastri Rashtriya Vidyapith (New Delhi) **	NA	1987	Nil
22.	Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.	1957	1988	2080
23.	National Dairy Research Institute, Karnal (Haryana)	1957	1989 @	311
24.	Central Institute of Higher Tibetan Studies, Sarnath, Varanasi (UP)	NA	1989	NA

1	2	3	4	5
25.	Central Institute of Fisheries Education, Varsova, Bombay	NA	1989	128

* Pertains to 1987-88

Pertains to 1986-87

@ March, 1989

** It started functioning w.e.f. 23rd June, 1989.

7.03 Maintenance Grants:

The quantum of grants paid to institutions deemed to be universities during 1984-85 1988-89 is given in Table 7.2 below:

Table 7.2

	1984-85	1985-86	1986-87	1987-88	1988-89
	(Grants paid in lakhs of Rupees)				
Institutions deemed to be Universities	1290.50	1614.25	1954.03	2490.00	2568.72
	26.12*	97.89*			6.53*

* By adjustment

7.04 Major Achievements

Major achievements and programmes of the deemed universities as reported by them during 1988-89 are given below:-

1. Central Institute of English & Foreign languages, Hyderabad;

i) The institute has been assigned the role of nodal agency in the field of English and Foreign Language teaching. The educational television programmes produced by the EMRC at the Institute were acclaimed and won prizes in a national level competition.

ii) During the year, the following new courses were started:-

a) Diploma in Spanish

b) M.Litt/Ph.D. in Russian

c) Computer Assisted English Language Learning
(Post Graduate Diploma in the teaching of English)

iii) Apart from its regular programmes, a number of short courses were organised for inservice training of Sainik School teachers and instructors of adult literacy centres at the campuses of the Institute at Lucknow and Shillong.

iv) The Educational Media Research Centre (EMRC) contributed a large number of programmes to the 'Countrywide Classroom' project of the UGC. The

four programmes produced by the Centre won awards at the UGC Sponsored educational video festival held at New Delhi in 1988.

- v) The Institute has set up a National Resource-cum-Development Centre for the creation of common facilities for all the foreign language departments as part of the responsibility assigned to it as a nodal agency for English and foreign languages. This centre collects data regarding various institutions in the country conducting courses in foreign languages and details of the courses, copies of the papers and reports etc. The centre will also prepare a directory of experts in foreign languages and provide bibliographical services.

- vi) The Institute has completed the work assigned to the Curriculum Development Centre for English set up by the UGC. The comprehensive report prepared by the Centre which also includes recommendations for textual materials and suggestions for teaching and testing has been printed and is now available.

- vii) The Institute continued its work on the District Centres Scheme funded by the Ministry of Human Resource Development which involves setting up of one English Language Centre in each State/Union territory.

- viii) The Institute has assisted a number of State governments and educational agencies in re-designing curricula, producing teaching materials and introducing examination reform in the field of language teaching. It designed new courses for the governments of Andhra Pradesh and Kerala for teaching of English in the schools. It has helped the Andhra

Pradesh government for preparation of instructional materials in English for non-formal education. The government of Sikkim was also assisted in preparation of English language text books for the schools.

- ix) It continued its work on 'English 400' and 'English 150' the two new programmes already started. These programmes aim at developing an intensive course in English for school and entrants to undergraduate programmes. These are being assisted by the Ministry of Human Resource Development.

2. **Banasthali Vidyapith, Rajasthan :**

- i) The Vidyapith introduced a two-year Master of Science Course in Computer Science during the year. It has already introduced inter-disciplinary M.Phil programmes in Social Sciences and English.
- ii) After adoption of 10+2+3 pattern by the Rajasthan government, it has restructured its degree course with the following objectives.
 - a) to train a modern liberally educated student who has roots in Indian heritage and who, besides being a good individual, is also an efficient member of the family and the society answering to the needs and demands of modern life;
 - b) to train the students to become a useful productive member of the society; and
 - c) to provide adequate grounding for advanced academic work.

iii) The Vidyapith implemented the various suggestions given by the UGC regarding examination reforms. The syllabi for different examinations have been divided into units and weightage has been given to each unit. Provision has been made for continuous assessment in theory as well as practicals.

iv) The faculty members have participated in a large number of academic conferences, seminars etc. A number of papers have been published in learned journals.

3. Birla Institute of Technology and Science, Pilani:

- i. During the year, the Institute reviewed its academic programmes and courses with a view to enrich the programme content, include new frontiers of knowledge, increase use of computer in course work and rationalise manpower utilization. A large number of new courses have been introduced which include new distance learning programme-based degrees viz., 'Bachelor of Science' (BS) at the first degrees level and 'Master of Science' (MS) at the higher degree level.
- ii. The university-Industry Linkage programme was strengthened during the year and was operated over 90 stations all over the country, accommodating more than 1000 students. The Practice School (PS) assignments were offered to students of all the disciplines relating to on-going production, modernisation, design, development and research needs of the participating industries.
- iii. The Technology Innovation Centre, where problems of the Industry are investigated on the campus through

the involvement of professionals from industry, BITS faculty and students, completed 67 projects during the year involving six industrial units.

- iv. The All-India University Youth Academic work 'APOGEE '88' with partial fund support from the Department of Science and Technology was organised during the year in which 100 students from 25 universities took part and presented 150 papers. An all-India Youth festival 'OASIS '88' was held during October, 1988 in which 600 students from 50 universities across the country participated.
- v. BITS successfully conducted an 'Orientation Training Programme' for a batch of 30 CSIR scientists 'B' at New Delhi, converting their internal in-house training into a pursuit of a higher degree of BITS, namely M.S. in Science & Technology, offered under the non-formal distance learning arrangements of the institute.

4. Tata Institute of Social Sciences, Bombay;

- i. During the year a new department of Health Sciences was started. The department will organise short term and long term training programmes in the area of health/hospital management as well as primary health care management. The Ford Foundation will fund this department for the first five years. A certificate course in Social Welfare Administration was introduced during the year for persons belonging to careers in social welfare management.
- ii. The Institute undertook four inter-departmental research projects involving several disciplines and the faculty from various departments. These include

'Rehabilitation of persons displaced by the Narmada Command Authority' and 'Study of training needs for Social Development/Welfare personnel in the North Eastern Region'.

iii. A large number of faculty members have been providing advice to other organisations and government departments. The faculty members are serving in 128 professional and academic bodies as office bearers and committee members.

iv. The Institute constituted the following two committees for initiating measures for improving standards:-

(a) Committee to consider Report of the Task Force on Performance Appraisal of Teachers

(b) Moderation Committee for Written Test Papers for Promotions of Administrative Staff.

v. The activities of following community services and extension programmes established by the institute were continued during the year.

1. Child Guidance Clinic (Department of Medical and Psychiatric Social Work)

2. Special Cell for Women in Distress (Department of Family and Child Welfare)

3. Udhyan (Department of Urban and Rural Community Development)

4. The Centre for Environment Technology and Resource Development (Department of Urban and Rural Community Development)
 5. Education of the Disadvantaged (Unit for Research in Sociology of Education)
 6. Child Welfare Council (Department of Family and Child Welfare)
 7. Community Centres for Genetic Counselling (Jointly conducted with UNICEF and CAMHADD)
 8. Aftercare Project (Department of Criminology and Correctional Administration).
- vi. The government of Maharashtra gave 100 acres of land in Osmanabad district for the development of a rural campus with the objective of developing a major training-cum-field action and research centre in rural areas. The Ford Foundation has given a grant of \$156,000 for the development of this centre.
- vii. The UGC established a Curriculum Development Centre in the institute in the field of social work education. The institute has also established the Academic Staff College (ASC) and it has been recognised as a nodal centre for social work. The ASC organised training courses for teachers in the Western Zone.
- viii. The Women Study unit has developed and taught specialized courses on 'Women and Work' 'Status and Health of Women' and 'Women and Law'. The course material for teaching these courses was also

prepared. The institute has established a separate library to provide consultation to researchers.

5. Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore:

- i. The Institute was declared as a deemed to be university in 1988. During the year two new courses viz. B.Sc. Textiles & Clothing and B.Sc. Computer Science at the degree level were introduced. An M.Sc. course in Family and Community Science was also started.
- ii. A national seminar on 'Strategies for Implementation of Perspective Plan for Women's Development' was held in Marach, 1989.
- iii. The Institute brought out its first publication on Swami Vivekananda during the year. A number of refresher courses were arranged for college teachers. Students of the institute have been participating in various extension activities relating to adult literacy, propagation of biogas, Smokeless chulas in villages around Coimbatore, etc.
- iv. A team of eight swedish women visited the Institute in January, 1989, to observe the programmes undertaken for women. A delegation from Kampuchea also visited the institute participate in a seminar.

6. Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam

The Institute continued to provide free education to all the students. All the students and staff regularly

participate in social services in the campus. A detailed study on Water, Soil and Vegetation is being undertaken. The Institute continues to make education a forceful tool for the cultivation of social and moral values.

7. Tilak Maharashtra Vidyapeeth, Pune:

- i. The Department of Ayurveda started functioning during the year and a diploma course in Yoga & Ayurveda is being offered. The vidyapith also introduced a course in Indology and started a major project on 'Vedic Concordance' during the year. The vidyapith also conducts a Ph.D. programme in social sciences.
- ii. A lecture series was organised to celebrate Nehru Centenary year. A socio-economic survey about conditions of weaker section of the society in selected villages has been undertaken by the Nehru Institute of Social Studies. A seminar on Secularism in India was also held in March, 1989.

8. Gurukul Kangri Vishwavidyalaya, Hardwar:

A new postgraduate diploma course in Computer Science of one-year duration was started during the year. Also, a new group at B.Ssc. level with computer science as one of the subjects has been introduced. Continuous internal evaluation system has been introduced in undergraduate courses.

9. Gujarat Vidyapith, Ahmedabad:

- i. The vidyapith introduced the following new courses during the year:
 - a) Three-year degree course in Physical Education, Health Education and Sports.
 - b) One-year Post graduate diploma in Computer Applications.
 - c) M.A. in Home Science.
 - d) Master of Rural Management and Rural Development.
 - e) One-year degree course in Library and Information Science.
- ii. The undergraduate courses have already been restructured while the postgraduate and M.Phil courses are being restructured. A separate cell has been established for continuous upgradation of syllabi in each subject.
- iii. A centre for Science Education for Rural Development is spreading knowledge for practical use of solar energy, biogas, improved sanitation and social forestry in selected villages.
- iv. A major project on Value Education is being implemented in 20 high schools of Ahmedabad by the College of Education. A research project on Women's studies with reference to tribal women has been completed.

- v. The vidyapith has signed a bilateral agreement on studies and research relating to 'Non Nuclear-Non-Violent World' with Lumumba University, USSR. Under this agreement, international seminars will be held in Ahmedabad and Moscow.
- vi. The vidyapith is playing a major role in launching the mass-literacy campaign in about 1400 villages in the Gujarat State.

10. **Indian Institute of Science, Bangalore:**

- i. Admissions were made during the academic year 1988-89 under the special research programme in 'Chalcogenide glassy semiconductors' in the departments of Instrumentation and Services and in 'Development of Special strains for bacterial leaching' in the departments of Metallurgy and Microbiology & Cell Biology respectively.
- ii. The Centre for Continuing Education, established in 1975-76 to initiate and channelise programmes on continuing education, has been organising various programmes for the benefit of a wide spectrum of personnel.
- iii. Under the PROFICIENCE Programme, 31 courses were conducted in two semesters with a total participation of nearly 1200 persons from industries, R&D organisations and other establishments.
- iv. During 1988-89, 12 intensive courses were conducted and more than 250 persons attended the courses.

- v. The Curriculum Development Cell attached to this Centre has provided financial assistance towards the preparation of 75 manuscripts of text books out of which 22 have already been published. The cell has also taken up production of video tapes during the year. So far the following lectures have been produced.
- a. Fifth Generation Computer systems.
 - b. Technology for Fifth Generation Computer systems
 - c. Super Conductivity - Basic Phenomena
 - d. Super Conductivity - Materials & Applications
 - e. Super-Computers
 - f. The Mathematics of Ramanujam
 - g. Thyristors
 - h. Parallel Computing
 - i. Digital Signal Processing
 - j. Personal Computers.
- vi. The Centre for Scientific and Industrial Consultancy, established in 1975, encourages and promotes interaction between the faculty and scientific/technical staff on the one hand, and the scientists and industrialists from research organisations and industries on the other hand to link academic work with problem-solving in real life. CSIC channelises such interactions, and acts as a meeting ground for the institute's faculty and the scientists/technologists from industries and other external agencies. The centre has catalysed and nurtured applied research of relevance to industries and has undertaken a wide range of technological services such as 'Design and Development of products and processes,' 'Transfer of technology' 'System Design and Analysis' 'Software Development' 'Advice in setting up R&D

facilities'. 'Model investigations of complex engineering system' Model investigations of complex engineering system' and 'Project evaluation and critical overviews'. In the above tasks, the centre draws from the large and diversified pool of knowledge and expertise of the faculty members. During the period under report 116 consultancy projects were initiated for 93 client organisations. These projects involved 85 faculty members of the Institute.

vii. The Centre for Application of Science and Technology to Rural Areas (ASTRA) has been carrying out a number of field research programmes related to rural development. The ASTRA has developed a stove which is being disseminated all over Karnataka for domestic cooking. A community biogas plant has been developed and demonstrated for water pumping and rural electrification. A community forest wood gasifier is also developed for the rural electrification. ASTRA was involved in a seminar jointly organised by HUDCO, KSCST and other organisations to disseminate information on the mud block technology to engineering professionals and low cost housing and sanitation technologies.

viii. The institute would be getting a super computer which may meet the needs of the country for many more years. The Government of India has approved the plan and the computer is expected to be installed by December 1989.

ix. Over 200 members of the faculty participated in symposia, conferences, seminars and workshops held at national and international levels. Over 60 members of the faculty attended conferences

overseas. About 752 papers have been published on scientific and technical subjects in learned journals, both national and international. Writing books under the UGC Text Book Writing scheme is actively pursued.

11. Thapar Institute of Engineering & Technology, Patiala:

- i. The Institute has strengthened its efforts to update the existing infrastructure by augmenting the computer system, modernising laboratory facilities and creating video instruction facilities.
- ii. In its development, the Institute is seeking a sense of partnership with industry in teaching and research, and has taken several initiatives to reach out to meet the needs of the industry. These include the programme for the appointment of adjunct professors, industrial opportunities programmes and the cooperative programmes. Under the adjunct professors' programme, engineers and scientists from the industry are invited to teach courses in collaboration with the teachers in the institute. Under the industrial opportunities programme, the teachers spend 6 to 8 weeks in the industry during summer and winter breaks. The programme makes available to the industry the expertise of the institute teachers and gives to the teachers the opportunity to work in industrial environment. A major innovation in technical education which involves a close interaction with industry has been introduced through the cooperative programme for students admitted to the industrial engineering programme.

iii. The institute has improved the quality of teaching and research through:

- a. Curricular changes to encourage creativity, design capability and professional practice.
- b. modernisation of laboratories with emphasis on innovation and indigenisation in laboratory work.
- c. providing opportunities for promoting research.
- d. location of Thapar Corporate Research & Development Centre on the Campus of the institute with the express purpose of promoting interaction and collaboration between the centre and the institute to mutually beneficial projects.

12 **Central Institute of Higher Tibetan Studies, Sarnath, Varanasi:**

The institute was established in 1967 to give an institutional basis for Tibetology, Buddology and Himalayan studies. It was declared as a deemed to be university in April 1988. It has now about 60 faculty members and a number of Visiting Professors. It has about 300 students. It provides instructions in the following courses.

Course	Duration	Equivalence
-----	-----	-----
Purvamadyama	2 years	High School
Uttarmadyama	2 years	Intermediate
Shastri	3 years	B.A.
Acharya	2 years	M.A.

M.Phil and Ph.D. programmes will be initiated soon. It has brought out six different series of publications, mostly restored texts or serious research works. A major project for compilation and publication of bilingual Tibeto-Sanskrit dictionary in seven volumes has been undertaken. A project for editing and publishing a rare Sanskrit-Buddhist text on 'Tantra' is in progress. The publication unit of the institute has so far published 34 books and 16 more are likely to be published soon.

7.05 Grants paid to Institutions deemed to be Universities: A statement indicating the grants paid to institutions deemed to be universities during 1988-89 under Non-Plan and Plan is given in Table 7.3 below:

Table 7.3

	Non-Plan	Plan	Total
	(Rupees in lakhs)		
1. Banasthali Vidyapith	-	20.35	20.35
2. Birla Institute of Technology and Science		64.46	64.46
3. Central Institute of English and Foreign Languages	155.40	43.46	198.86
4. Dayal Bagh Educational Institute	26.00	27.12	53.12
5. Gandhigram Rural Institute	116.99	24.30	141.29
6. Gujarat Vidyapith	121.97	44.57	166.54

7. Gurukul Kangri Vishwavidyalaya	82.13	24.86	106.99
8. Indian Institute of Science	1339.67	589.16	1928.83
9. Indian School of Mines	372.14	128.84	500.98
10. Indian Veterinary Research Institute	-	0.11	0.11
11. Jamia Millia Islamia	276.90	186.46	454.36
12. School of Planning and Architecture	-	0.85	0.85
13. Sri Sathya Sai Institute of Higher Learning	-	61.15	61.15
14. Tata Institute of Social Sciences	136.37	16.21	152.58
15. Thapar Institute of Engineering and Technology	0.90	21.69	22.59
16. Birla Institute of Technology, Mesra, Ranchi.	3.00	11.06	14.06
17. Sh. Lal Bahadur Shastri Rashtriya Sanskrit Vidyapith, New Delhi.	0.66	-	0.66
18. Rajasthan Vidyapith	-	21.35	21.35
19. Tilak Maharashtra Vidyapith	-	9.90	9.90
Total:	2623.13	1295.90	3919.03

SECTION 8

NON-PLAN GRANTS TO UNIVERSITIES

8.01 The maintenance grants are paid to the central universities in terms of the statutory provision under section 12(b) of the UGC Act to meet recurring expenditure of all faculties on items such as salaries of staff (both teaching and non-teaching), maintenance of laboratories, libraries, buildings etc. In the case of Aligarh Muslim University and the Banaras Hindu University, such grants are also given for the maintenance of hospitals attached to the medical colleges of these universities.

In addition, non-plan grants are paid both to the central, as well as State Universities for specific purposes subject to the agreed levels of expenditure. Non-plan grants include grants for scholarships and fellowships under engineering and technology, teacher fellowships, national fellowships, national associateships, national lectures, junior research fellowships and research associateships. These also include grants for fellowships and awards reimbursed to non-university institutions (like the IITs, PG Institute of Medical Education & Research, NCERT etc.). Non-plan grants paid under various schemes during 1988-89 are given in Table 8.1 below:

Table 8.1

Statement of non-plan grants paid under various schemes during 1988-89

S.No.	Purpose	Amount
		(Rs. in lakhs)
1.	Maintenance grants to Universities	11190.60
2.	Maintenance grants to Institutions deemed to be Universities	- 2575.24

S.No.	Purpose	Amount
3.	Maintenance grants to Anna and Roorkee Universities for specific purposes	65.56
4.	Maintenance grants to Constituent/Affiliated Colleges of Delhi University	4185.13
5.	Maintenance grants to Constituent/Affiliated Colleges of B.H.U.	48.08
6.	House Building Advance to Institutions deemed to be universities and central Universities.	345.25
7.	Teacher Award for schemes like Teacher Fellowship, National Fellowship/Associateship, National Lectures, Retired Teachers, Emeritus Fellowship etc.	31.26
8.	Research Fellowships/Associateships	529.48
9.	Scholarships/Fellowships under Engg. & Tech.	117.25
10.	Grants to non-university Institutions	7.08
		19076.38*

* This does not include Rs.338.08 lakhs released towards UGC administration charges, pay of officers, establishment etc.

8.02 Non-plan Grants to Central Universities:

Grants paid by the Commission towards the maintenance of central universities for the years 1984-85 to 1988-89 are indicated in Table 8.2. It will be seen that the

quantum of grants paid year after year has been increasing. During 1988-89, grants amounting to Rs.11190.60 lakhs were released towards maintenance of the central universities.

Table 8.2

S.No.	University	1984-85	1985-86	1986-87	1987-88	1988-89
1.	Aligarh Muslim University	1496.85	1621.37	1888.62	2540.05	2748.06
2.	Banaras Hindu University	2188.93	2479.45	2811.65	3366.15	3394.04
3.	Delhi University	1060.49	1166.31	1427.02	1655.82	1889.25
4.	Hyderabad University	206.87	297.36	361.08	423.75	489.01
5.	Jawahar Lal Nehru University	523.32	621.43	735.27	952.20	1023.84
6.	North Eastern Hill University	188.82	549.20	669.85	752.60	843.00
7.	Visva Bharati	409.09	485.59	521.11	713.10	773.40
8.	Jamia Millia *	-	-	-	-	30.00
Total:		6074.37	7220.71	8414.60	10403.67	11190.60

* Became a Central University in 1988-89.

The maintenance expenditure of the medical colleges at the Aligarh Muslim University and the Banaras Hindu University and the attached hospitals was met out of block grants of the university, whereas in the case of College of Medical Sciences, Delhi University, the maintenance grant was paid directly to the institution.

8.03 **Maintenance Grants to Central Universities, Institutions Deemed to be Universities and State Universities:**

In compliance with the observations made by the Public Accounts Committee in its 73rd Report, a statement showing maintenance grants (Non-Plan) in respect of Central Universities, institutions deemed to be universities and such of the State Universities which have furnished the information for the year 1986-87 is given in Appendix-XXVII.

SECTION 9

FACULTY IMPROVEMENT PROGRAMME

9.01 The Commission has been providing financial assistance for various programmes of faculty improvement which provide opportunities to teachers to keep in touch with the modern developments in their fields of study and research and to exchange ideas with experts in their subject areas and related fields. These programmes aim at improving the professional competence of teachers to make them better equipped so that they can offer high quality instructional programmes and thus maintain high standards. A resume of these programmes supported by the Commission during 1988-89 is given below:

9.02 **Seminars, Symposia, Refresher Courses, Workshops etc.**

The Commission provides financial assistance to universities and colleges for organising seminars, symposia, refresher courses, workshops etc. in accordance with approved norms. The programmes have extensively been taken advantage of by universities and colleges. The number of proposals accepted by the Commission during 1988-89 is given in table 9.1 :

Table 9.1

**Proposals for Seminars, Symposia, Workshops,
Refresher Courses accepted during 1988-89**

Sl. No.	Programme	Humanities & Social Sciences	Sciences	Total
1.	Seminars	56	16	72
2.	Symposia	12	12	24
3.	Short-term Institutes	7	9	16
4.	Workshops	10	8	18
5.	Refresher Courses	3	1	4
Total:		88	46	134

It has been decided that programmes like Summer Institutes, Refresher Courses and Workshops will henceforth be organised by the Academic Staff Colleges (ASC's), as part of the refresher courses programmes either by themselves or at some selected University departments w.e.f. 1988-89. The Commission, in August 1988, identified 92 university departments/institutions on zonal basis to organise refresher courses in major disciplines in sciences, social sciences and humanities. It was primarily for this reason that only 22 proposals for organisation of workshops and refresher courses were approved during 1988-89 (till July, 1988) when the revised guidelines of the 'Unassigned Grant' scheme were circulated to Universities in June, 1988. In these guidelines, a new component was inter alia added under the 'Unassigned Grant' scheme from 1.4.1988 for organisation of short-term programmes like Seminars, Symposia, conferences etc. for the university sector. Grants

ranging from Rs.1 lakh to Rs.3 lakhs were made available to each university for this purpose. From 1988-89, assistance is being provided directly by UGC only to the college sector for organisation of short-term programmes and to the non-University institutions for organisation of conferences. Universities are now required to organise such short-term programmes within the ceiling amount provided under the 'Unassigned Grant' scheme.

In addition to the programmes organised by universities and colleges, the Commission also provided TA/DA to university and college teachers to participate in similar activities organised by non-university institutions during the year.

9.03 Conferences:

The Commission provides a token contribution to universities and colleges for organisation of conferences at the state, regional, all-India and international levels. The purpose of these conferences is to provide an opportunity to faculty members and researchers to discuss their research findings. The number of conferences at various levels for which the Commission provided token contribution during 1988-89 was as follows:-

State level	7
Regional level	1
All-India level	29
International level	7

Total	44

9.04 **Strengthening the Teaching of English Language:**

The Commission provides financial assistance to universities for organising specialised Summer Institutes for English Language Teaching (ELT) in collaboration with the British Council and the Central Institute of English & Foreign Languages, Hyderabad. It was decided by the UGC Advisory Committee at its meeting held in January, 1989 that for the year 1988-89, new types of refresher courses for teachers of English be organised by the three Academic Staff Colleges at Rajasthan,, Gauhati and Poona universities. In the case of CIEFL, Hyderabad, infrastructure including funding available at the Academic Staff Colleges (University of Hyderabad) may be utilised for refresher courses.

In addition, the departments of English could also send proposals through the university concerned for the organisation of refresher courses in specialised areas for improvement of English teaching.

9.05 **Academic Staff Orientation Scheme:**

Phase I : Orientation Programmes for newly appointed teachers:

The scheme was initiated by the Commission during 1987-88. 48 Academic Staff Colleges (ASC) were approved to organise orientation programmes for newly appointed Lecturers in universities and colleges. The main objectives of this programme are to enhance the motivation of teachers, ensure systematic orientation in specific subjects, techniques and methodologies and to provide opportunities for professional and career development so that teachers can fulfil their role and responsibility. Each ASC is expected to organise upto eight orientation programmes a

year of four weeks duration each. While 85-90 per cent of the teachers are to be enrolled from the notified catchment area of the ASC, the remaining 10-15 per cent can be invited from outside the State on all-India basis. Out of 48 ASCs, 43 had started organising orientation programmes. It is expected that the remaining 5 ASCs will also become functional during 1989-90.

Phase II : Refresher courses for in-service teachers:

In August, 1988 the Commission identified 93 university departments/institutions on regional basis to organise subject oriented refresher courses for in-service teachers. For the present, these are for Lecturers only and will subsequently cover Readers and Professors. The duration of the course will be three-four weeks and the number of teachers limited to 40 in each batch. Each centre is expected to organise five refresher courses in a year in the allotted discipline in Sciences, social sciences and humanities and two-three courses in languages.

The Commission, in collaboration with the National Institute of Educational Planning and Administration, organised two seminar-cum-workshops for the directors of the ASCs in April and December, 1988 respectively. These were organised with a view to (a) discuss the progress of academic staff development in India, particularly in the light of experience gained by various ASCs in conducting orientation and refresher courses for teachers in higher education, and (b) work out methods of effective planning and management of ASCs.

The data supplied by 30 ASCs reveal that 148 orientation programmes had been organised till 31.3.1989 and 4411 newly recruited teachers were given orientation. In

addition 34 refresher courses had been conducted with a participation of 953 in-service teachers. Thus about 5400 teachers participated in the Orientation/Refresher Courses till 31.3.1989. The data also reveal that in the next five years these ASCs propose to cover about 33500 new teachers under the orientation programme and 27000 in-service teachers under the refresher course.

The Commission is providing 100 per cent assistance to the ASCs for organising Orientation/Refresher Courses till the end of Seventh Plan, i.e. till March 31, 1990. Grants to the tune of Rs.5.31 crores have already been sanctioned to the universities for this programme till 31st March, 1990.

9.06 **National Fellowships:**

The scheme of National Fellowships provides an opportunity to teachers of outstanding eminence to take a year or two off from their normal duties to devote themselves exclusively to research and writing the results of their study. Under the scheme, 30 fellowships are available at any point of time. The teachers who are awarded this fellowship receive their normal salary, allowances and fellowship allowance of Rs.500/- per month in addition to a non-lapseable grant of Rs.5,000/- per year for secretarial assistance, travel and contingent expenditure. During 1988-89, seven scholars were working under the scheme.

9.07 **Visiting Associateships:**

The scheme aims at assisting outstanding university/college teachers, generally below 40 years of age and engaged in research, to visit and work for short periods (not exceeding three months at a time) at other university centres/research institutions/national

laboratories which have special facilities relevant to their fields of work. Three types of Associateships are available viz. for one year, three years, and five years. The number of awards made under each category during 1988-89 is given below:

	<u>No. of awards made</u>
One year award	35
Three year award	23
Five year award	1

9.08 **National Lectures:**

This programme enables outstanding teachers and research scholars to visit universities/colleges for delivering a series of lectures in their fields of specialisation and to participate in academic programmes of host institutions. The Commission provides to the identified teacher an honorarium of Rs.1500/- and a grant of Rs.250/- for preparing necessary materials for delivering lectures and preparation of teaching aids in addition to travel expenses. Local hospitality is provided by the host institution. As per the revised procedure laid-down for the award since 1987-88, 152 scholars recommended by the subject panels were approved under the scheme during 1988-89.

9.09 **Guest/Part-Time Teachers:**

Guest/Part-time teachers are appointed by universities and colleges in exceptional circumstances in such specialised fields/subjects where professional expertise is required to strengthen and supplement teaching as also in cases where the work-load does not justify the appointment of a full-time regular teacher throughout the academic year. As per the revised guidelines in force

w.e.f.1.4.1988, the honorarium payable to guest/part-time teachers in universities and colleges is as under:

Revised Norms

Workload per week	Honorarium per month
-----	-----
4-6 hours	Rs.1000/-
7-10 hours	Rs.1500/-

9.10 Emeritus Fellowships:

Under the scheme, fellowships are provided to such of the highly qualified and experienced superannuated Professors in universities upto 65 years of age who have been actively engaged in research during their career. The objective is to enable such Professors to pursue active research in their fields of specialisation and to utilise their services for monitoring educational programmes of the Commission. The awardee gets besides his usual superannuation benefits a fellowship amount of Rs.4,000/- p.m. and non-lapseable contingent grant of Rs.10,000/-p.a. towards secretarial assistance, travel, stationery, postage, telephone rent, consumables etc. Additional modest support can also be provided to enable the fellow to pursue his research and academic activities on the merits of each case. The total number of fellowships at any given time was raised from 25 to 60 in February, 1989. During 1988-90 36 scholars were working under the scheme.

9.11 Visiting Professors/Visiting Fellows:

The Commission provides assistance to Universities for appointment of Visiting Professors/ Visiting Fellows. The honorarium payable to visiting Professors is Rs.5000/- p.m. In the case of Visiting fellow, a daily allowance of Rs.200/- is paid. These rates are effective from 1.4.1988.

9.12 Participation of retired teachers in research projects:

The Commission has been providing honorarium to superannuated teachers participating in approved research projects as principal investigators. The honorarium payable to retired teachers for the purpose is Rs.2000/- p.m. It is laid down under the scheme that a retired teacher should teach four to six hours a week in addition to his research/project work for which he should attend the university/college during normal working hours.

9.13 Research Scientists:

The scheme for the award of Research Scientist positions in three categories viz. A, B & C was initiated by the Commission in 1983-84 with a view to build a cadre of Research Scientists in Universities to promote high quality research in science, engineering/technology and humanities and social sciences by providing opportunities to persons with outstanding merit and zeal for creative work. 100 positions of research scientists have been earmarked for science and engineering subjects and 100 for humanities including social sciences subjects in the three categories mentioned above corresponding to the grades of Lecturers, Readers and Professors respectively in the ratio of 60,30 and 10. During the period under report,

the Commission selected 118 candidates for placement as research scientists in different subjects against the available number of positions in different categories.

9.14 Travel Grants for Attending Conferences etc.:

The Commission provides financial assistance to the extent of 50 per cent to college teachers for attending international academic conferences abroad for presenting papers on the findings of their research work. Grants to the tune of Rs.15.42 lakhs were paid by the Commission for the purpose during 1988-89. Similar assistance is available for university teachers under the scheme of "unassigned grants" given to universities.

9.15 Staff Quarters and Teachers' Hostels:

The Commission has also been providing grants on a limited basis for the construction of staff quarters and teachers' hostels. Grants amounting to Rs.95.07 lakhs were released for the purpose during 1988-89.

9.16 Teacher Fellowships

The scheme enables teachers to acquire M.Phil/Ph.D. degree and thereby improve their competence & methodology of teaching. Teacher fellowships are mainly meant for teachers working in affiliated colleges offering instructions in subjects pertaining to humanities, social sciences and sciences. Professional colleges offering courses of medicine, agriculture & engineering are not covered under the scheme. However, teacher fellowship may be awarded to teachers in subjects of basic sciences and

humanities working in professional colleges. The Commission is awarding two types of teacher fellowships - short-term and long-term. The duration of the short-term fellowship is one year which can be utilized for pursuing the M.Phil course. The normal duration of the long-term fellowship is three years and is meant to enable the teachers to conduct research for the award of Ph.D. (including M.Phil, wherever necessary). The tenure of the long-term fellowship can be extended by one year in special cases.

SECTION 10

STUDENTS

10.01 The Commission attaches high priority to the well-being of the student community and to the creation of an environment conducive to study, learning and research activities. Efforts of the Commission in this regard have a direct bearing on the maintenance and improvement of standards of higher education in the country. All development programmes of the Commission including appointment of staff, construction of academic buildings, libraries and laboratories, purchase of equipment, books and journals have a direct or indirect bearing on the well-being of the students and promotion of congenial environment and conditions for pursuing academic programmes. Besides, the Commission has initiated a number of programmes for needy and economically weaker students on the one hand and meritorious students on the other, like the provision of scholarships and fellowships, hostel facilities etc. Details of these programmes are given in the following paragraphs.

10.02 **Junior Research Fellowships 'at any one given time basis':**

The Commission continued to provide assistance to universities for the implementation of the scheme relating to allocation of junior research fellowships at 'any one given time basis'. Since 1984, the junior research fellowship award is made only to those who qualify in the national level test conducted by the UGC/CSIR or test declared equivalent there to for the purpose.

Fellowship for the candidates who had qualified in the national level test, had been allocated to universities under 'at any one given time basis'

scheme. Universities were requested to make the award to the qualified candidates keeping in view the number of junior research fellowships allocated. The Commission also agreed to provide supernumerary/personal fellowships over and above the allocated quota to accommodate the qualified candidates. The number of candidates who qualified the test during 1988-89 is given at appendix XV.

10.03 **Junior Research Fellowships for Scheduled Caste/Tribe Students:**

During the year, the Commission also awarded 50 JRF's in science and humanities including social sciences to SC/ST candidates through open selection. As per the revised procedure for open selection, candidates who could not qualify the UGC NET/Joint UGC-CSIR JRF examination even at the relaxed standard were interviewed and selected for the award.

10.04. **Border Hill Areas Scholarships:**

The Commission also awards 25 post-graduate scholarships to SC/ST candidates belonging to border hill areas in order to promote the channel of academic communication between students of these regions and rest of the country.

10.05. **Research Fellowships in Engineering and Technology:**

The Commission awards 60 research fellowships every year in engineering and technology to enable students in this discipline to undertake advanced study and research in their fields of specialisation. The awards for 1988-89 were yet to be finalised.

10.06. **Lump-sum Grant to Universities for meeting contingent needs of research scholars:**

The Commission provides lump-sum grant to

universities for meeting contingent needs of the research scholars who are not in receipt of any fellowship/scholarship. Assistance for this purpose is provided at two levels viz. Rs.25,000/- for the universities having on an average 100 full-time research scholars during the last three years and Rs.50,000/- for the universities having more than 100 full time research scholars.

10.07

Research Associateships

The Commission centrally awards 150 research associate-ships annually including five each for Gandhian Studies, Nehru Studies and National Integration with a view to provide an opportunity to research scholars and teachers who have shown talent and competence to take up post-doctoral research work independently or on project assignments in science, humanities including social sciences and engineering and technology. During the period under report, the Commission selected 83 research associates in science, 84 in humanities and social sciences, six in Gandhian Studies, four in Nehru Studies and six in National Integration against the quota of 1986-87.

The Commission revised the rules governing the scheme and also the emoluments for research associates as under with effect from 1.4.87:-

S.No.	Pre-Revised	Revised
1.	Rs.1400/-	2200-100-2700
2.	Rs.1600/-	2700-100-3200
3.	Rs.1800/-	3200-100-3700
4.	Rs.2000/-	3700-125-4325

10.08 **Research Associateships for Scheduled Caste/Tribe Students**

During the year, the Commission selected three candidates belonging to SC/ST category for the award of research associateships for conducting post-doctoral research against the annual quota of 40 research associateships for candidates belonging to SC and ST category. These candidates were selected against the allocated quota for the year 1986-87.

10.09. **Junior Research Fellowship/Research Associateship to scholars of developing countries.**

The Commission awards annually 20 junior research fellowships for doing research leading to M.Phil/Ph.D. degree and seven research associateships for doing post-doctoral research to scholars from developing countries in science, engineering and humanities including social sciences and provides them financial assistance through the Indian universities/ institutions in which they are placed for conducting research. Applications are invited from the eligible candidates through Indian Missions abroad. Awards under the scheme were still to be finalised during the year.

10.10 **Research Associateship for Disabled Students:**

The Commission selected six disabled candidates for the award of research associateship against the annual quota of 30 research associateships for physically handicapped scholars including the blind, deaf and the mute during the year under report. These candidates were selected against the quota for the year 1986-87..

10.11. **Part-time Research Associateship for Women**

The working group on Personnel Policy recommended,

interalia, a scheme for the award of part-time research associateships for women candidates. The Scheme was accordingly introduced by the Commission and first sanction was made during 1988-89 for the quota of 1987-88. The awards under the scheme are made for research work on part-time basis and for a longer duration, as may be considered appropriate, to such of the talented women scholars who are unable to devote full-time to research. The Commission has allocated 40 positions of part-time research associateships annually to be awarded centrally to women candidates. The award carries emoluments of Rs.1,800/- p.m. in the 1st category and Rs.2,200/- p.m. in the 2nd category with an annual contingency grant of Rs.5,000/-. Candidates are selected on the recommendations of a Selection Committee. The duration of the award is five years initially which is extendable by another term not exceeding three years based on a thorough assessment of the work done by the candidates and after interviewing them. The selected candidates are required to conduct post-doctoral research upto 20 hours per week in a recognised university/institution of national importance under the rules of the scheme.

The Commission selected 46 candidates for the award in different subjects during 1988-89.

10.1

Youth and Sports - Implementation of New Education Policy:

The Commission has been implementing various provisions of the New Education Policy (1986). In the field of Youth and Sports, the following steps were taken during 1988-89:-

- (a) On Commission's request, the Lakshmbai National College of Physical Education (LNCPE), Gwalior agreed to organise refresher courses of four week duration for the directors of physical

education. The courses were expected to start soon after the financial arrangements, syllabi etc. were finalised.

- (b) The report of the Committee appointed to prepare a model curriculum of Physical Education was received by the Commission in 1987-88. The model curriculum was referred for examination to the panel on physical Education appointed by the Commission.
- (c) The Committee appointed by the Commission to examine the feasibility of allowing such students, who are outstanding in sports, but are unable to take their examination at an appointed time due to their participation in sports tournaments or coaching camps to appear at examinations specially held at a later date, made the following recommendations:-
 - (i) Sports-persons may be permitted credit for lectures/practicals missed by them as a result of their participation in Inter-Collegiate, Inter-University, State, National and International tournaments and coaching camps organised in preparation of these tournaments. This credit should be allowed on the basis of production of a Certificate for participation in authorised sporting activities from the organisers of the event (s).
 - (ii) A sports-person who is unable to take the examination because of participation in coaching camp/tournament may be allowed to move to the next class and keep terms in higher classes. He may, thereafter, be permitted to appear in the subsequent examination(s) and carry credits for the paper(s) cleared from one examination to another till the entire course is completed and he/she becomes eligible for the degree.

(iii) In the event of a sports-person being absent for long periods of time for coaching camps, efforts should be made by the organising authority to arrange for all possible educational facilities including the use of library. Universities/ Colleges may also consider organising classes/ practicals and providing other facilities to the sports-persons for making up loss of studies due to long absense from their institutions. The recommendations of the Committee have been sent to the Universities for adoption.

(d) The recommendations of the Committee appointed by the Commission to work out the modalities for compulsory participation of students in games, sports and physical education for promotion to higher classes were being finalised.

10.13 Construction of Hostels:

In the interest of social justice, the Commission has laid down that all universities assisted by it to construct students' hostels would be required to reserve 20 per cent of the seats in such hostels for students belonging to Scheduled Castes and Scheduled Tribes. The Commission has also laid down that its assistance for construction of hostels in backward areas would be 75 per cent of the total expenditure as against 50 per cent available for other areas. The Commission has also been encouraging the construction of dormitories and/or double or triple seated rooms rather than single seated rooms in the hostels in order to keep the per student cost low.

During 1988-89 a grant of Rs.79.52 lakhs was paid to universities and colleges towards the construction of hostels.

SECTION 11

CULTURAL EXCHANGE PROGRAMMES AND INTERNATIONAL COLLABORATION

11.01 Cultural Exchange Programmes:

Programmes of Cultural Exchange are intended to promote cultural, educational and scientific cooperation between India and other countries and are covered under specific agreements between the Government of India and Governments of other countries. Programmes connected with higher education in the university sector are assigned by the Government of India to the UGC for implementation. These programmes relate generally to exchange of visits of teachers for study-cum-lecture, exchange of views, developing contacts, development of bilateral academic links between institutions in the two countries, organisation of joint seminars, assignment of foreign language teachers and award of scholarships/fellowships. Visits under these programmes normally range from four to twelve weeks. In specific cases, these visits could be for a period of upto six months. In the case of assignment of foreign language teachers and award of fellowships/scholarships, these visits are normally for one academic year. These programmes prove useful to the teachers in keeping themselves abreast of advances made in their fields of specialisation and in exploring possibilities of developing collaborative programmes. During 1988-89, such programmes were being implemented by the Commission with 46 countries. During the year, the Commission hosted the visits of 106 foreign scholars from various countries and arranged their programmes at various institutions in India. The corresponding number of Indian scholars who were deputed abroad under these programmes during the year was 105.

11.02 Bilateral Institutional Linkages:

In the recent past, the Commission has been giving greater emphasis on the development of bilateral institutional linkages in specific areas between identified departments of universities and institutions of higher education in the two countries. As such, areas of bilateral collaboration have been identified with countries like the USSR, FRG, GDR, Bulgaria, Czechoslovakia, Hungary, Poland, France, Yugoslavia, Italy, Finland, Iran, etc. This programme is reviewed from time to time and additional areas are identified for collaboration.

A resume of the various activities under the Cultural Exchange Programmes for 1988-89 is given below:

11.03 Delegations:

- i) A delegation led by the Chairman, UGC visited China during November, 1988 to explore the possibility of collaboration between the institutions of higher education in the two countries.
- ii) A delegation led by Vice-Chairman, UGC visited Yugoslavia, USSR & FRG during May, 1988. It signed a Memorandum of Understanding with the Union of Universities of Yugoslavia.
- iii) A three-member USSR delegation led by Prof. E.P. Chelyshev visited India during February, 1989 to identify areas for cooperation between the institutions of higher education in India and the USSR.

11.04 Foreign Language Teachers:

The Commission continued to provide foreign language teachers in Russian, German, Polish, Serbo-Croatian, Rumanian, Bulgarian, Mongolian, Korean, Vietnamese, Hungarian, Portuguese, Chinese and French language to the universities having a proper infrastructure for teaching the foreign languages concerned as per the provisions of the Cultural Exchange Programme. The Commission, however, feels that foreign language teachers should support the indigenous Indian Staff and not replace them. With this in view, the commission has emphasised that the department in the university should develop a proper infrastructure in the teaching of the foreign language concerned with the help of Indian faculty members and reach a level when they can interact with foreign language teachers from abroad. During the year 1988-89, 40 teachers in Russian, 11 in German, 10 in French, three in Spanish and one each in Polish, Serbo-Croatian, Rumanian, Portuguese, Bulgarian, Mongolian, Korean, Vietnamese, Hungarian, and Chinese were assigned to universities in India.

11.05 Fellowships and Scholarships:

The following fellowships/scholarships were offered during 1988-89:

- i) The Commission nominated scholars against the 12 fellowships offered by the German Academic Exchange Service for advanced research in Natural Sciences, Mathematics, Geology, German Language and literature and some areas in Humanities and Social Sciences. Two of these fellowships are reserved for German Language and Literature.

- ii) The German Academic Exchange Service offered six short term fellowships for senior students of M.A. course as well as for students enrolled in M.Phil/M.Litt course at the German departments of Indian Universities.

- iii) The Commission nominated teachers and students against the six fellowships and 13 scholarships offered by the French Government for French Language, Literature and Civilisation for 1988-89.

11.06 Academic Link Interchange Scheme (ALIS):

This programme, implemented in collaboration with the British Council, provides for the development of linkages in specified areas between institutions of higher education in India and the U.K. It involves the exchange of faculty from identified participating institutions for a period not exceeding 20 weeks each for undertaking joint research, joint publications, curriculum and course Development and academic/professional/administrative staff exchange development.

Of the 31 areas identified for collaboration, programmes have been mutually agreed to in 21 areas for implementation. Twelve Indian scholars visited the UK under the programme while an equal number of British scholars visited universities in India during 1988-89. The Commission in consultation with the British Council and on the advice of an expert committee has identified ten new emerging areas and some Indian universities/institutions for development of bilateral collaboration under the programme. The Commission has requested universities/institutes to send concrete proposals for development of this link with institutions of higher education in U.K.

11.07 Collection of Source Material for Research Work in UK and other Countries:

The Commission continued to provide travel and maintenance expenses to senior Indian scholars in humanities and social sciences for their visit to UK for a period of 6-8 weeks to enable them to collect material for their research work, which is ordinarily not available in India. The period of 12 man-months available under this programme was almost fully utilised and eight scholars were assisted during the year.

11.08 Travel Grants to Teachers who have offers of Fellowships/ Stipends for their Maintenance in a Foreign Country

The Commission continued to provide travel grant to teachers for their visit to foreign countries for collection of material for their research work or to avail offer of a fellowship or assistance from an agency from that country where the scholar has been offered partial or full financial assistance for his maintenance. Twelve teachers were provided assistance under this scheme during the year.

11.09 Development of Canadian Studies:

Under the scheme, the Commission has identified some universities for the development of Canadian Studies in specific disciplines. Although the universities have been identified for a single discipline to start programmes in Canadian Studies, the intention is that in course of time they would develop into multi-disciplinary centres of Canadian Studies. During the year, a scholar from

Rajasthan University visited Canada to familiarise himself with teaching and research being done in Canadian universities with a view to introducing Canadian Studies in the area of Political Science in Rajasthan University. It was agreed with the Shastri Indo-Canadian Institute that there will be an exchange of scholars between the two countries for a period of two man-months per year. The Commission nominated three scholars against this provision for visit to Canada to discuss problems with senior scholars. Three Canadian Political Scientists also visited India under this programme during the year and had discussions with senior scholars in some universities.

11.10 INDO-US Fellowship Programme:

Against 15 fellowships of ten months each to American scholars for their post-doctoral research work in India, the Commission received nominations for 13 long-term fellowships of ten months duration and six short term fellowships of two-three months duration. The Government of India allocated 12 fellowships to UGC for the visit of Indian teachers from universities/colleges and Institutes of technology for post-doctoral work in USA. The Commission converted five fellowships into 15 short-term visitorships of 3 weeks each and made nominations against the residual seven long term fellowships of ten months each and 15 short-term visitorships of 3 weeks each.

11.11 CSIR-CNRS (France) Exchange of Scientists Programme:

Under this programme, the CSIR allocates 200 man-days for the visit of Indian scientists to France and similarly the UGC allocates 200 man-days to the CNRS for the visit

of French scientists to India in connection with their research work during the year. There was no visit on either side under this programme during the year.

11.12 Commonwealth Academic Staff Fellowships & Scholarships:

Under this programme, the Commission coordinates with the Commonwealth Scholarship Commission in UK and makes nominations for the Commonwealth Staff awards (fellowships and scholarships) to enable promising faculty members in universities and colleges in India to work at universities or other institutions in the UK. These awards are not available in the fields of Medicine and Surgery as Commonwealth Medical awards are available separately. During 1988-89, the Commission recommended 34 scholars for fellowships and 13 for scholarships. Out of these, the Commonwealth Scholarship Commission finally selected 23 for fellowships and seven for scholarships.

11.13 Specialised Programmes Organised by International Centres/ Agencies:

The Commission provides one-way air fare to teachers in universities and colleges for participation in summer/winter schools on specialised courses organised by centres run by international agencies or professional bodies like the British Council. The remaining air fare and living expenses for the duration of the course are to be provided by the organisers of the programme or the institution where the teacher is working or the State Government or any other agency. During the year, the Commission agreed to provide financial assistance by way of one-way air fare to four teachers from universities/colleges.

11.14 Visits Abroad:

In pursuance of the decision taken on recommendation 3.8 contained in the 73rd report of the Public Accounts Committee (Sixth Lok Sabha) on University Grants Commission, the information in respect of the visits abroad of the Chairman, Vice-Chairman and Officers of the Commission during the year 1988-89 is given in Appendix-XXVIII.

SECTION 12

ADULT, CONTINUING AND EXTENSION EDUCATION AND DISTANCE LEARNING

12.01 Adult Education, Eradication of Illiteracy, Continuing Education:

The Commission has been providing assistance to universities for promoting programmes of adult education, eradication of illiteracy, continuing education, population education and planning forums. Under the new guidelines on area-based development approach circulated to universities last year, assistance for these programmes is being provided on a package basis.

During the year 1988-89, 100 Universities were invited to discuss their proposals, prepared for a period of three years on the basis of new guidelines, with the expert committees appointed by the Commission for deciding the extent of UGC assistance. Of these, 85 Universities submitted their proposals for assistance as a package deal, for which the expert committees recommended assistance. Pending finalisation of their proposals, the remaining 15 universities were advised to carry on the programme as already approved in their cases except that they were to bring down the number of adult education centres by 25% of the approved number of such centres.

The work load in respect of the 85 universities was clubbed together for the following activities:

- i. Eradication of illiteracy through centre-based approach.
- ii. Continuing education programmes - both community-based and institution-based.

iii. Population education both by way of clubs at the institutions and by way of activities at the Adult Education Centres.

iv. Jan Shikshan Nilayams.

Thus, under the new guidelines, 85 universities and 1278 colleges have been sanctioned 17700 Adult Education Centres, 889 Jan Shikshan Nilayams, 1116 Population Education clubs and 843 Continuing Education Courses. In addition, population education activities have been sanctioned in 13750 Adult Education Centres. Through Jan Shikshan Nilayams, it is intended to institutionalise post-literacy and continuing education. The JSNs can also provide linkage with elementary education, the drop outs and pass outs, non-formal education for post-literacy and continuing education and also the functional literacy centre itself. The JSNs will thus provide facilities for retention, continuing education including dissemination of information and creating awareness about national concerns and on development programmes and application of functional literacy. The programmes approved are in keeping with the goals of National Literacy Mission and concept of Area Development Approach.

In view of the work load involved and in order to enable the universities to take up the adult education programmes/activities in the field effectively, the Commission also provided assistance for the purchase of vehicles and the salary of a driver on a sharing basis of 50 : 50. During 1988-89, nine universities were provided assistance for the purpose. Under the programme, assistance is also provided for the purchase of audio-visual equipment. As on 31st March 1989, assistance for the purpose was provided to 37 universities.

12.02 **Mass Programme for Functional Literacy (MPFL)**

The revised guidelines on adult education programme, interalia, contain a provision for giving academic incentives to students for their active involvement in the mass programmes for functional literacy as also incentives to the institutions based on their performance and achievements under extension programmes. During the year, universities were advised to continue and strengthen their involvement in the programme through NSS, NCC, Non-NSS, Non-NCC etc., for which Commission's assistance was available.

12.03 **Planning Forums**

The Commission continued to provide assistance to universities and colleges for the establishment of Planning Forums. Under the revised guidelines for adult education programme, the quantum of assistance for setting up Planning Forums has been revised from Rs.3,000/-p.a. to Rs.5,000/-p.a. per institution. However it has since been decided, in consultation with the Planning Commission, that the scheme be revamped and taken out of the purview of adult, continuing and extension education departments of universities its guidelines be revised.

12.04 **Population Education**

The Commission continued to provide assistance to Universities during the year for activities of the Population Education clubs set up by universities/colleges. Universities were advised to increase the number of such clubs and also utilise the Adult Education Centres/Jan Shikshan Nilayams for the spread of population education at the grassroot level. The working groups and the Population Education Resource Centres (PERCs) set up under the UNFPA-UGC project, as reported last year, made significant progress in providing support services in population education programmes to universities/colleges

in specified areas in terms of development of curricula, training and extension programmes. Some universities have included population education as a foundation course under the scheme of restructuring of courses and this course is being offered at the undergraduate and post-graduate levels.

During the year, efforts were made by PERCs to set up linkages with the other two population education projects (viz., School education and adult education) within their service area as also with other departments such as departments of Women and Child Development, Health and Family Welfare, Science and Technology and some non-governmental organisations and international agencies. Other important activities undertaken by the working groups and resource centres during the year were as follows:

(i) Curriculum Development:

The resource centres initiated steps to design (a) curricula for foundation courses in population education and (b) curricula for extension activity for the Adult Education Centres.

Guidelines for Curriculum for extension activities for the two groups of population (viz., students and the community) were prepared and circulated to universities. Guidelines for some more target groups alongwith proto-type materials were being prepared.

(ii) Learning Material (Print and Audio-Visuals):

The working group on learning materials (Print and Audio-Visual) has undertaken work relating to the preparation of directories of available print and audio-visual materials. It has also undertaken dissemination of materials produced by various agencies to PERCs and universities/colleges

undertaking population education programme. About one lakh copies of the 'World Population Report 1988' (Hindi) and 0.5 lakhs copies each of the 'Girl child' and 'Rights of Girls' were distributed among the universities, colleges and the community. During the year the PERCs also provided technical resource support to institutions assigned to them.

(iii) Research:

A national level diagnostic study on the working of the population education clubs vis-a-vis the college youth, and population education activities vis-a-vis the community members has been undertaken. Some PERCs also undertook evaluation studies relating to perception of the programme by different groups and to media programmes related directly or indirectly to population education. The PERC at the University of Kerala completed an evaluation of the 'Mother-Child Care' broadcasts by the All India Radio, Trivandrum.

(iv) Extension Activities:

Extension activities in population education were undertaken by universities/colleges through their Population Education Clubs. The PERCs initially provided technical resource support to these activities such as awareness campaign, health care campaign for women and children, formation of Mahila Mandal/Youth Clubs, extension lecture series, responsible parenthood, drug abuse prevention education, radio talks, television programmes, features in the local press, etc., Songs and drama, street plays, essay writing, debate/declamation etc. concerning population education were also organised in universities/colleges. The acceptance of the area development approach in extension programmes in universities/colleges has sharpened the need to strengthen outreach capacities of

various PERCs. The PERCs have also organised training programmes in large numbers for college youths and the Community members.

12.05 Coaching Classes for Competitive Examination for Weaker Sections Amongst Educationally Backward Minority Communities:

The Commission continued to provide assistance to universities and colleges for conducting coaching classes to prepare candidates belonging to the educationally backward amongst minority communities for various competitive examinations as well as for admission to professional and technical courses. During the year, assistance was provided to eight universities and five colleges from which progress reports and grant utilisation certificates were received regarding programmes organised during the preceding years. In addition, several more colleges were identified during the year for assistance to organise coaching classes. Other institutions were reminded to expedite implementation of the programme.

The centres located in universities provide coaching for all-India services as well as state services, while the centres located in colleges are responsible for organising coaching classes for lower categories of examinations.

12.06 Distance Education/Correspondence Courses:

Distance Education/Correspondence Education, essentially based on the supply of instructional material for home study, is supported and supplemented by personal contact programmes, radio programmes, audio-visual aids etc. The objectives of the scheme are (a) to meet the increasing demand for education by utilising alternative systems and (b) to bring about equalisation of opportunities by providing facilities in backward regions, to weaker sections of the community who have to take up jobs owing

to their pecuniary circumstances and to women who find it difficult to go to a college as they belong to traditional families and communities.

Correspondence Courses were being conducted by 37 Universities/institutions during 1988-89. A list indicating the courses run by them and enrolment in each course is given at Appendix-XXIX. During the year, the Commission provided assistance for this purpose to seven universities by way of staff, personal contact programmes, study centres, preparation of lessons, library facilities etc.

A sub-Committee appointed by the UGC Standing Committee on Distance Education for revision of the guidelines submitted its report during the year. The report was being processed. The report covers the following aspects of distance education:

- (i) Organisational set-up of institutions of correspondence courses within the university system.
- (ii) Pattern of assistance.
- (iii) Developing consortium approach by universities having correspondence courses so as to be able to share resources/infrastructure to make the programme more effective.
- (iv) Continuous review and updating of learning material.

SECTION 13

FACILITIES FOR SCHEDULED CASTES AND SCHEDULED TRIBES

13.01 The Commission has over the years made special efforts for providing facilities to persons belonging to the scheduled caste and scheduled tribe communities in universities and colleges. These include reservation of seats in various courses offered by universities and colleges, reservation in recruitment for non-teaching posts and posts of lecturers, and reservation of seats in hostels. The Commission has also made provisions of reservation in various scholarships and fellowships awarded by it and initiated a number of schemes for the advancement of persons belonging to these communities. Details of these schemes are given in the following paragraphs.

13.02 Reservations in admission to various courses in universities and colleges:

The Commission has requested the universities to reserve 15 per cent of seats for admission in various courses for scheduled caste candidates and 7.5 per cent for students belonging to scheduled tribes with a provision for interchangeability, where necessary. While making the reservation as above, provision may be made to give concession of 5 per cent marks in the minimum percentage of marks required for admission to any course of study. Universities/colleges have also been requested to make reservation in the appointments to the posts of lecturers and non-teaching posts and also in the provision of seats in hostels.

13.03 Setting up of Special Cells in Universities/Institutions:

With a view to watch the effective implementation of various orders for admissions, employment, reservation in hostels, introduction of remedial courses and other

measures for improvement in the educational level of Scheduled Castes and Scheduled Tribes, the Commission has set-up special SC/ST cells in various universities/institutions. The Commission has been providing financial assistance to universities/institutions on 100 per cent basis. During the year 1988-89, the Commission accepted 10 proposals for the setting up of Cells. With this, the number of special cells approved in various universities and institutions upto 31.3.1989 rose to 82.

3.04 Reservation of Fellowships/Scholarships :

The Commission has allocated 3595 junior research fellowships to the universities on 'any one given time basis.' Since 1984, these fellowships are awarded only to those who qualify in the national level test conducted by the UGC/CSIR. Relaxed standards have been provided to qualify the test for candidates belonging to scheduled Caste/Tribe categories. Besides this, 50 junior research fellowships are exclusively awarded to Scheduled Caste and Scheduled Tribe students directed by the UGC.

3.05 Reservation of Research Associateships:

During the year the Commission selected three candidates belonging to SC/ST category for the award of research associateships for conducting post-doctoral research. These candidates were selected against the allocated quota for the year 1986-87.

3.06 Reservation of Teacher Fellowships:

The Commission has instituted 50 teacher fellowships (20 for Ph.D. and 30 for M.Phil) with a view to providing more opportunities to teachers belonging to scheduled caste and scheduled tribe communities working in affiliated colleges to improve their qualifications. The duration of short term fellowship for pursuing M.Phil course is one year. The normal duration of the long-term teacher fellowship leading to Ph.D. degree is three years

(including M.Phil, wherever provided). In special cases extension of the long-term teacher fellowships by one year can be granted.

13.07 Postgraduate scholarships to candidates belonging to scheduled tribes of Border Hill Areas:

The Commission has instituted 25 scholarships for students belonging to scheduled castes/tribes and backward communities of border hill areas for enabling them to undertake postgraduate studies in science, humanities and social sciences.

13.08 Remedial coaching classes:

The Commission has been implementing the scheme of organising remedial coaching classes for students belonging to weaker sections of the society, specially the Scheduled Castes and Scheduled Tribes. Such classes may have not more than 20 students who may be put under a teacher.

13.09 Assistance to colleges catering to the needs of Scheduled Caste and Scheduled Tribe Students

The Commission is providing assistance upto Rs.4 lakhs to Colleges having at least five permanent teachers excluding the Principal and Physical Training Instructor/Director and a minimum of 100 students in degree and post-degree courses provided at least 35 of these belong to Scheduled Caste and Scheduled Tribe communities. Colleges with larger enrolment are eligible for such a grant if the number of scheduled caste and scheduled tribe students is not less than 20% of the total enrolment in degree and post-degree courses or at least 35 in case of colleges with enrolment upto 175 students.

3.10 Reservations in the UGC Office:

The Commission continued its efforts during the year to give due representation to the reserved categories of Scheduled Castes and Scheduled Tribes and to make good the shortfall wherever existing in the office of the Commission in accordance with the orders issued by the Government of India on the subject.

The following officials belonging to the reserved categories of Scheduled Castes and Scheduled Tribes were appointed during the year under report:

Sl. No.	Cadre	Appointment made by <u>direct recruitment</u>		<u>Post filled by Promotion</u>	
		Scheduled Caste	Scheduled Tribe	Scheduled Caste	Scheduled Tribe
1.	Under Secretary	1	-	-	-
2.	Lower Division Clerk (LDC)	9	-	-	-

SECTION 14

HIGHER EDUCATION AND WOMEN

14.01 Educational opportunities for women in the sphere of general and professional education at the University level have expanded appreciably in recent years. It is gratifying to observe that women have responded with alacrity and availed of various opportunities as reflected by consistent increase in women enrolment in all faculties and at all levels of education. There has also been re-orientation of women education at the university and college levels in response to the changing needs of the society and the demands of the public and private sectors. Year after after more and more women have been found competing for admission to specialised and professional courses which used to be the domain of men only. The following paragraphs present an account of the numerical expansion of women participation in higher education and the efforts made by the Commission for promoting women studies in universities and colleges.

14.02 **Growth of Enrolment:**

There has been a remarkable growth in the number of women enrolled in institutions of higher education as shown in Table 14.1.

Table 14.1

NUMBER OF WOMEN FOR HUNDRED MEN

	1950-51	1955-56	1960-61	1965-66	1975-76	1981-82	1982-83	1983-84	1984-85	1985-86*	1986-87*	1987-88*	1988-89*
Total women enrolment (in thousands)	40	84	150	271	595	817	880	940	992	1059	1125	1195	1251
Number of women per hundred men	14	17	23	24	33	38	39	40	41	42	44	46	46

* Estimated

It will be seen from the table that women enrolment has grown from a mere 40 thousand in 1950-51 to 12.51 lakhs in 1988-89, recording an increase of more than 30 times over three and a half decade period. The number of women enrolled per hundred men enrolled during this period has gone up more than three-fold, from 14 in 1950-51 to 46 in 1988-89.

Table 14.2 shows the enrolment of women as a proportion of total enrolment during the period 1979-80 to 1988-89. It will be seen that enrolment of women as percentage of total enrolment increased progressively from 26.0 per cent in 1979-80 to 30.6 per cent in 1986-87, 31.3 percent in 1987-88 and 31.7 per cent in 1988-89. In absolute terms, the number of women enrolled increased from 7.89 lakhs in 1979-80 to 12.51 lakhs in 1988-89.

Table 14.2
Total enrolment and enrolment of Women

Year	Total Enrolment	Women Enrolment	Percentage of women
1979-80	26,48,579	7,89,042	26.0
1980-81	27,52,437	7,48,525	27.2
1981-82	29,52,066	8,16,704	27.7
1982-83	31,33,093	8,80,156	28.1
1983-84	33,07,649	9,40,253	28.4
1984-85	34,04,096	9,92,139	29.1
1985-86*	35,70,897	10,58,612	29.6
1986-87*	36,81,870	11,25,304	30.6
1987-88*	38,14,417	11,95,073	31.3
1988-89*	39,47,922	12,51,491	31.7

* Estimated

14.03 Women's Colleges:

Table 14.3 shows the number of colleges meant exclusively for women. This number has gone up from 577 in 1979-80 to 824 in 1988-89, recording an increase of over 43 per cent during this decade.

Table 14.3

Women's Colleges

Year	Number of colleges for women only
1979-80	577
1980-81	609
1981-82	624
1982-83	647
1983-84	676
1984-85	712
1985-86	741*
1986-87	771*
1987-88	802*
1988-89	824*

* Provisional

14.04 State-wise distribution:

Statewise distribution of enrolment of women for the years 1984-85 to 1988-89 is given in Appendix-XXX. It will be seen that enrolment of women as a percentage of total enrolment during this period has gone up in all the States except Manipur where it declined from 35.0 per cent in 1983-84 to 33.3 per cent in 1988-89. The

all-India average of women enrolment as a percentage of total enrolment rose from 29.1 in 1984-85 to 31.7 in 1988-89. A comparative picture of women enrolment in the past two years shows that women enrolment as a percentage of total enrolment has gone up in 1988-89 as compared to 1987-88 in all the States except Jammu & Kashmir and Maharashtra. However, it remained unchanged in these two years in the States of Meghalaya/Nagaland and Manipur. As in the earlier years, Kerala (52.1%) continued to lead in terms of women enrolment as percentage of its total enrolment in 1988-89 followed by Panjab (46.6%), Delhi (44.6%), Haryana (39.7%) and Meghalaya/Nagaland (39.6%). On the other hand, as before, Bihar remained at the bottom with women enrolment only 16.0 per cent of its total enrolment in 1988-89. As many as 14 States and the Union territory of Delhi had percentage of women enrolment higher than the all-india average of 31.7. These were Gujarat, Haryana, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya/Nagaland, Panjab, Tamil Nadu and West Bengal/Tripura/Sikkim.

14.05 Stage-wise Distribution:

Sex-wise distribution of enrolment at different stages of study is given in Appendix-XXXI. It will be seen that during the period 1980-81 to 1988-89, enrolment of women as a percentage of total enrolment has been consistently going up at all levels viz., graduate, post-graduate and research levels. For example, at the graduate level, enrolment of women as a percentage of total enrolment increased from 27.2% in 1980-81 to 31.6% in 1988-89. Similarly, at the post-graduate level, the corresponding increase was from 28.2% to 33.0% and at the research level from 27.3% to 34.6%. It is interesting to observe that percentage of women enrolment at the research level has increased faster than percentage

enrolment at other levels. Women enrolment at the diploma/certificate level which was 24.9% of total enrolment at that level in 1988-89 showed a mixed trend, rising in one year and falling in the other, during the period under reference. In the last three years, however, it has been consistently on the rise.

14.06 Faculty-wise Distribution:

Faculty-wise distribution of women enrolment given in Appendix-XXXII shows that women enrolment in each faculty as a percentage of total enrolment in that faculty registered a gradual increase from 1980-81 to 1988-89 except that in some faculties it declined in a stray year so as to rise again the following year. In the faculty of 'others' consisting of Fine Arts/Music etc., however, the trend observed over the period was a mixed one with rising and falling women enrolment as percentage of total enrolment in the faculty till the year 1984-85 after which it has maintained a rising trend upto 1988-89. The highest percentage of women enrolment in any faculty was recorded by the faculty of Education with 52.4 per cent of its total enrolment in 1988-89 consisting of women, followed by the faculty of Arts (43.2%), 'others' (42.3%), Science (32.6%), Medicine (31.7%) and Commerce (20.5%). It is interesting to note that even in the faculty of Engineering/ Technology, women enrolment as a percentage of total enrolment has consistently gone up from 3.8 percent in 1980-81 to 6.2 per cent in 1988-89, thus indicating a healthy trend of more and more women opting for non-traditional courses.

14.07 Promotion of Women's Studies in Universities:

The Commission is assisting the universities to create awareness and conscientise both men and women by helping

them to understand, recognise and acknowledge the multi-dimensional role played by women in society, for taking up programme on women's studies as a motivator for various adult education programmes and critical instrument for social and academic development through teaching, research/training and extension. Under its scheme for the development of women's studies, the Commission provided assistance to 19 universities and seven colleges/university departments for setting up women's studies centres/cells. In addition to these centres/cells, the Commission provided assistance for 27 research projects concerning women's studies upto the year 1988-89.

To streamline and strengthen the programme, the Commission has a Standing Committee on Women's Studies which reviews, advises and monitors the implementation of the scheme. The Committee is assisted by two sub-committees, one which scrutinises proposals for setting up centres/cells in the university system and also monitors the work of existing centres/cells and the other which scrutinises the research proposals relating to women's Studies.

A workshop funded by the Commission was organised by Sri Padmavati Mahila Vishwavidyalay, Tirupati in August, 1989 to review the work done by the various women's studies centres.

14.08 Part-time Research Associateship for Women:

The Commission has introduced a scheme for the award of part-time post-doctoral associateships for such of the talented women scholars in humanities, social sciences, science, engineering/technology subjects who are unable to devote their full time to research. Detail of this scheme are given in para 10.11.

SECTION 15

UGC FINANCES AND ORGANISATIONAL SET UP

15.01 **Non-Plan Funds:**

The University Grants Commission received a grant - in - aid of Rs.19,187.00 lakhs from the Government of India during the year under report. In addition, an amount of Rs.262.30 lakhs was also obtained under miscellaneous items including refund of Rs.1.44 lakhs as unspent balance out of the grants paid in the previous years. Thus the total non-plan receipts in hand during 1988-89 were Rs.19,449.30 lakhs and against this grants paid amounted to Rs.19,433.01 lakhs. Detailed break-up of non-plan grants paid under various schemes during 1988-89 is given in table 15.1 below:

Table-15.1

Statement of non-plan grants paid under various schemes during 1988-89

S.No.	Purpose	Amount
		(Rs. in lakhs)
1.	UGC Administration Charges	
a.	Pay of Officers	53.64
b.	Pay of Establishment	87.04
c.	Allowances, Honoraria (including DA, Interim Relief, Bonus, CCA, LTC, TA etc.)	75.78
d.	TA/DA of Commission/Committee members	0.91

e.	Other charges like printing & Stationery, postage, telephones, electricity/water charges, upkeep of motor vehicles, publication, library books and journals, purchase of furniture and fixture, maintenance of UGC buildings, other expenditure, rent rates and taxes, departmental charges, conveyance allowance etc.	80.60
f.	Contributions for CGHS, Pension & leave salary, CP Fund, GP fund, gratuity etc.	40.11

		338.08
2.	Maintenance grants to Central Universities	11,190.60
3.	Maintenance grants to Institutions deemed to be Universities	2,575.24
4.	Maintenance grants to Anna and Roorkee Universities for specific purposes	65.56
5.	Maintenance grants to Constituent/ Affiliated Colleges of Delhi University	4,185.13
6.	Maintenance grants to Constituent/ Affiliated College of B.H.U.	48.08
7.	House Building Advance to Institutions deemed to be universities and central Universities.	345.25

8.	Teachers award for schemes like Teacher Fellowship (both general & SC/ST Candidates), National Fellowship/ Associateship, National Lectures, Emeritus Fellowship etc.)	31.26
9.	Research Fellowships/Associateships	529.48
11.	Scholarships/Fellowships under Engineering and Technology.	117.25
12.	Grants to non-university Institutions	7.08

		19,433.01

From the above table it would be observed that the Administration charges of the Commission amount to about 1.7 per cent of the total non-plan grant which was disbursed by the Commission. The major component of the non-plan funds was earmarked for meeting the maintenance expenditure of central universities, deemed universities and colleges affiliated to the central universities. It would be seen that out of the total non-plan grant, about 57.6 per cent was paid as block grant to central universities, 13.2 per cent to deemed to be universities, 0.03 per cent to Anna & Roorkee Universities for certain specific purposes and 21.8 per cent for maintenance of colleges affiliated to central universities. The house building advance was 1.8 per cent of the total non-plan allocation. A grant of Rs.685.07 lakhs (3.5 per cent) was given to provide various incentives to teachers and for various categories of research fellowships.

15.02 Plan Funds

During the year under report, the Commission received grants-in-aid of Rs.13,010.11 lakhs from the Government of India for general development of the universities and Institutions including SACC* programme and Rs.55.01 lakhs for UNFPA Population Education Project. In addition, a separate allocation of Rs.1300.00 lakhs was also made available for development of engineering and technical education in the universities/institutions eligible to receive grant under the UGC Act. Miscellaneous receipt under Plan head was a marginal amount of Rs.158.28 lakhs which was mainly obtained by way of interest on the bank accounts, refund of unspent balances out of grants paid in previous years etc. A plan grant of Rs.14,508.58 lakhs was paid to various institutions as indicated in table 15.2 below.

Table-15.2

**Statement of Plan Grants Paid under Six Major Schemes
of UGC during 1988-89**

S.No.	Scheme	Universities	Colleges	Misc.	Total
(Rs. in lakhs)					
1.	Restructuring of courses, Adult, Continuing and Extension Education Programmes	437.70	67.02	-	504.72
2.	Programmes for Quality Improvement of Education	5,176.09	3,648.46	9.98	8,834.53

* Science Advisory Committee to the Cabinet

3. Programmes for Quality Improvement of Research and SACC	2,776.01	383.91	58.73	3,208.65
4. Mass Communication and Improvement of Weaker Sections of the Society	289.78	25.24	24.64	339.66
5. Establishment of Autonomous Colleges and Improvement of Management System of Universities and the UGC.	0.75	248.68	63.34	312.77
6. Development of Engineering and Technology	1,299.30	8.95	-	1,308.25
Total:	9,969.63	4,382.26	156.69	14,508.58

15.03 Organisational Set-up

The Commission consists of twelve members. The Chairman and the Vice-Chairman are its full-time working members. The Secretariat of the Commission is headed by a Secretary. He is assisted by a Financial Advisor, a Director (Science) and two Additional Secretaries.

The Secretariat of the Commission is organised on the pattern of Sections and Divisions. The basic unit is a Section which is headed by a Section Officer who has adequate supporting staff comprising of Assistants, Upper Division Clerks, Lower Division Clerks/Typists, normally numbering between five and eight depending on the workload. Usually, for two Sections there is a Branch Officer

who is designated Under Secretary/Education Officer or an officer of equivalent rank. Two to four Sections constitute a Division. Normally, a division is headed by a Deputy Secretary or an Officer of equivalent rank like Co-ordinator, Principal Scientific Officer, etc. The work of a group of Joint Secretaries/Deputy Secretaries/other officers of equivalent rank is assigned to Additional Secretary/ Director (Science)/Financial Advisor. For specialised items of work, which are generally of a specified duration, or for specific assignments, the Commission engages Consultants. At present, there are three Consultants who advise the Commission on matters pertaining to data-based systems of management, mass communication and educational technology, and physical education & sports.

According to Section 10 the UGC Act, the Commission appoints a Secretary and other employees as necessary for the efficient functioning of the Commission. The manner of appointment includes direct recruitment, promotion, deputation and contractual appointment.

Professor S.K. Khanna
Secretary

Professor Yash Pal
Chairman

Members

Shri Anil Bordia
Prof. Suresh Dalal
Prof.(Mrs.) Archana Sharma
Prof. Inder Pal Singh *
Prof. M.M. Sharma *
Shri L.N. Sinha *
Prof. S.P. Sinha *
Dr.(Mrs.) P. Selvie *
Prof. Jafar Nizam *
Shri K.P. Geethakrishnan **

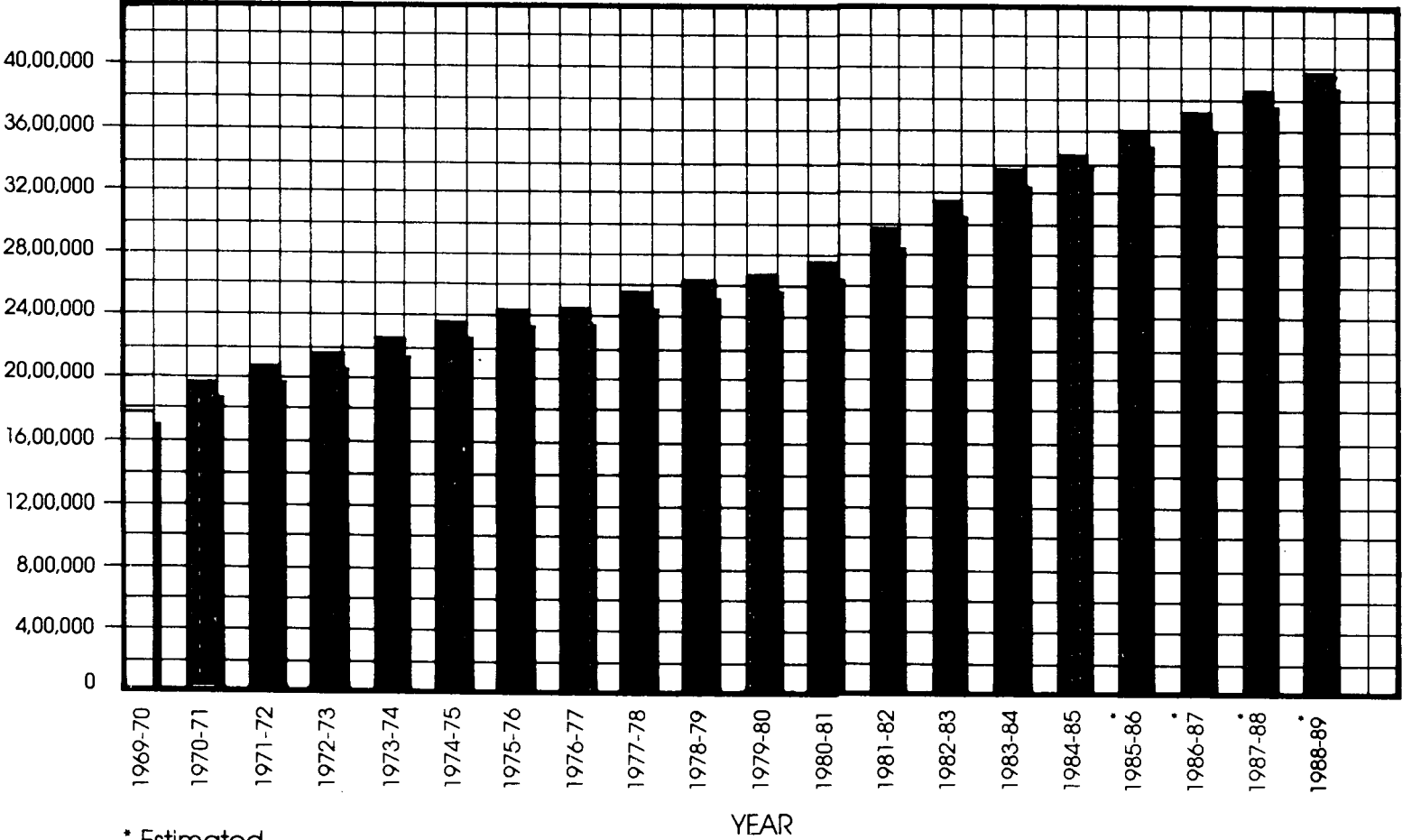
* Appointed w.e.f. 30th May, 1989

** Appointed w.e.f. 11th August, 1989 in place
of Shri R.R. Gupta

ILLUSTRATIONS AND APPENDICES

GROWTH OF STUDENT ENROLMENT

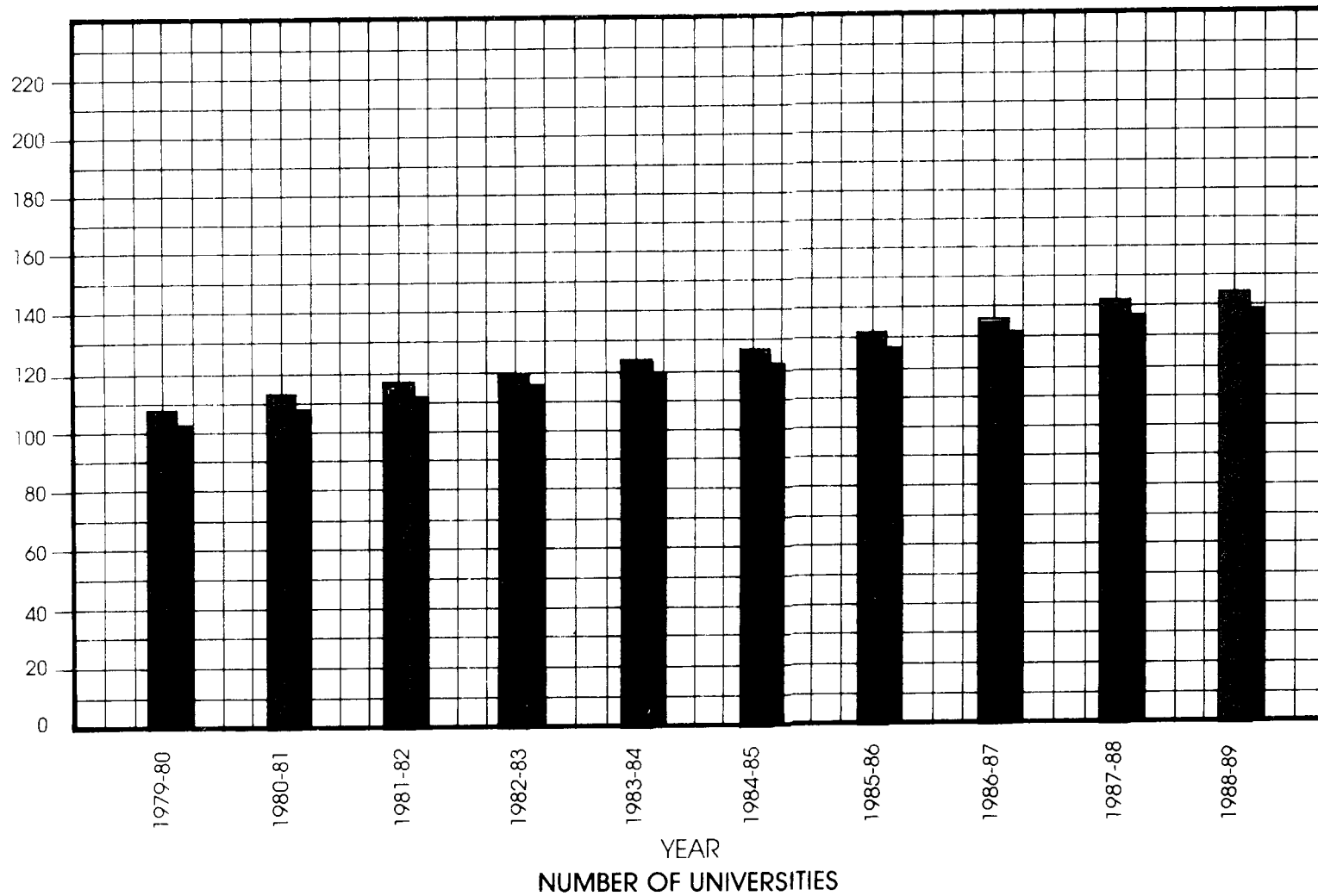
1969-70 to 1988-89
(UNIVERSITY LEVEL)



* Estimated

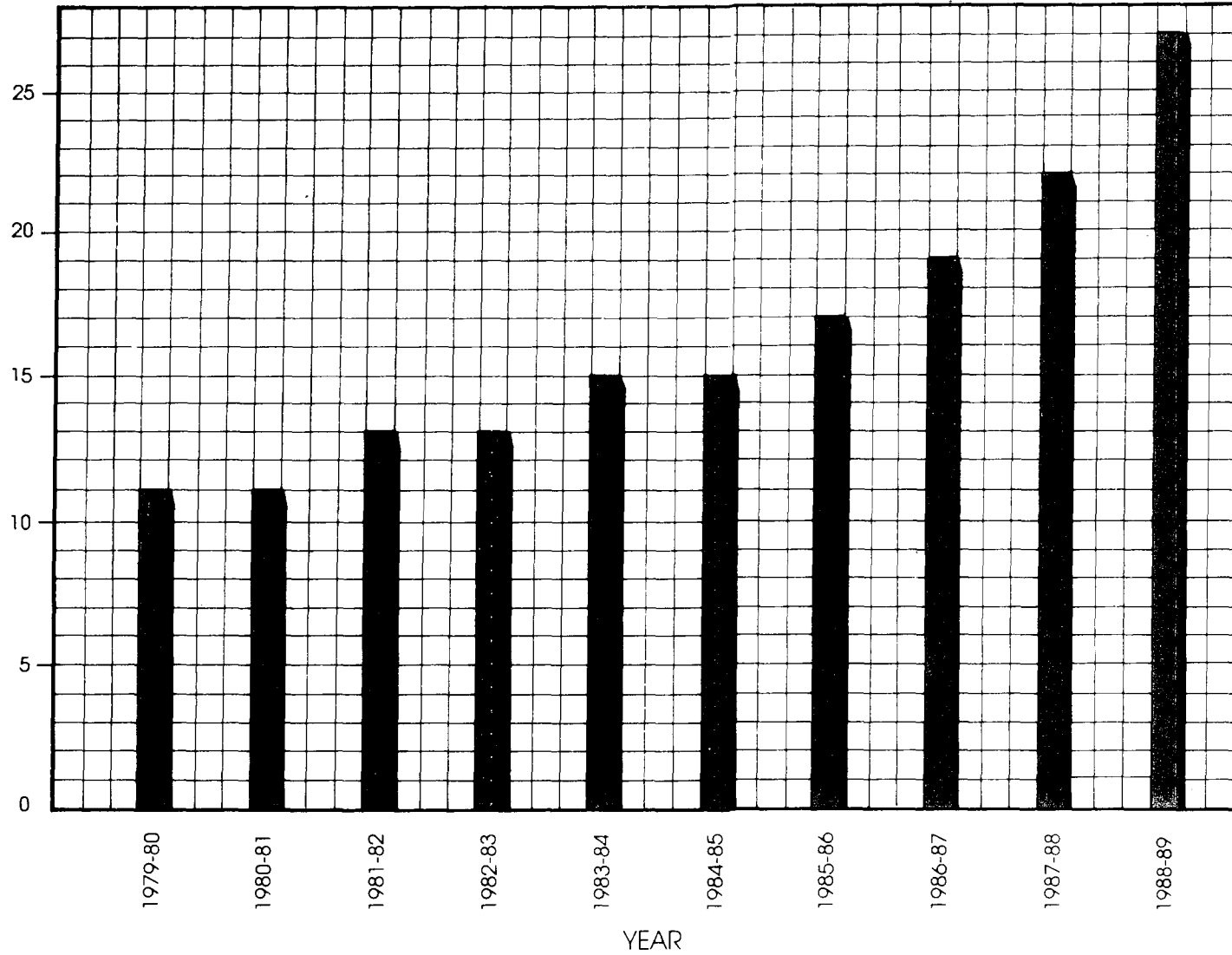
GROWTH OF UNIVERSITIES

1979-80 to 1988-89



GROWTH OF INSTITUTIONS DEEMED TO BE UNIVERSITIES

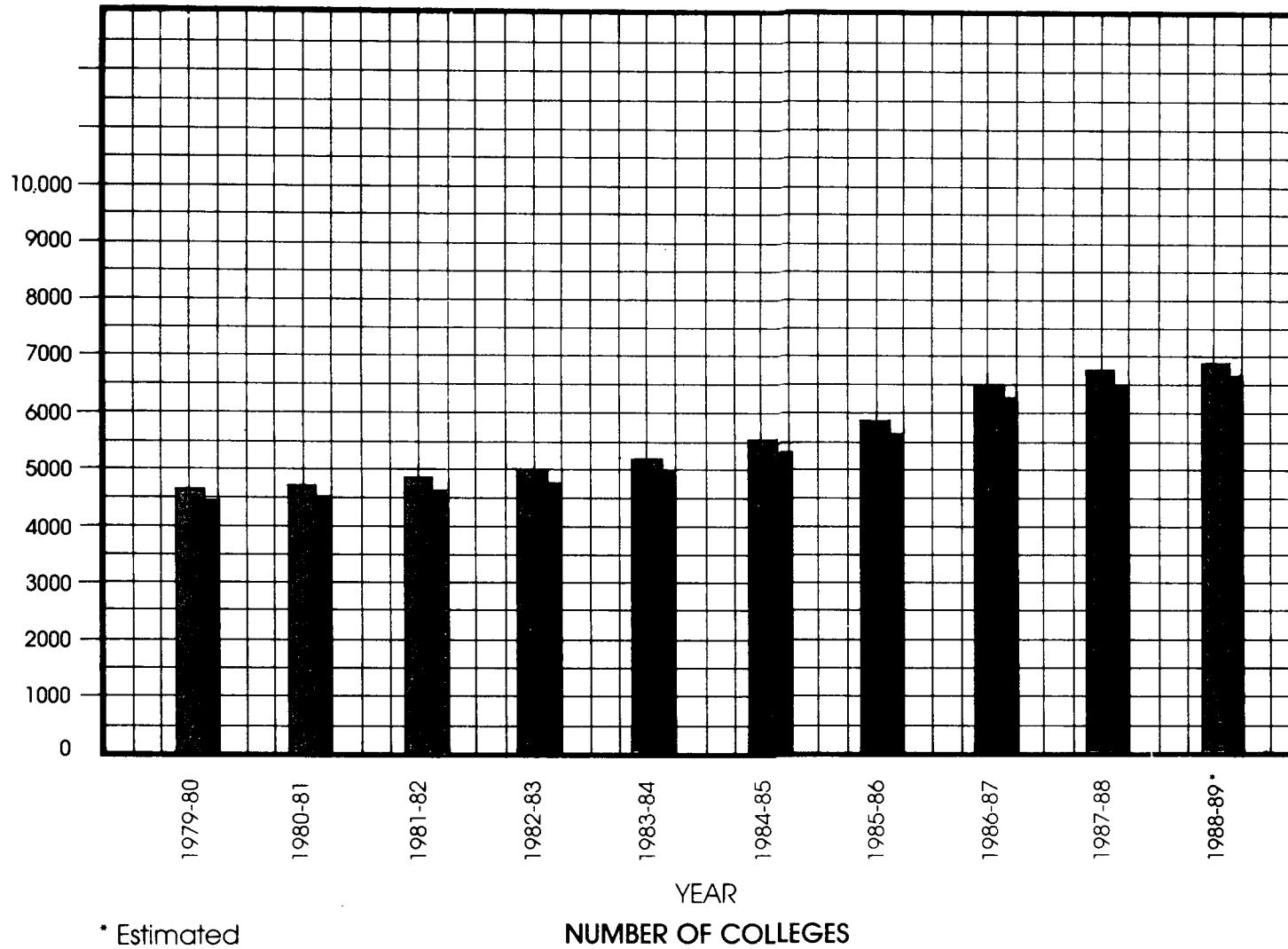
1979-80 to 1988-89



NUMBER OF INSTITUTIONS DEEMED TO BE UNIVERSITIES

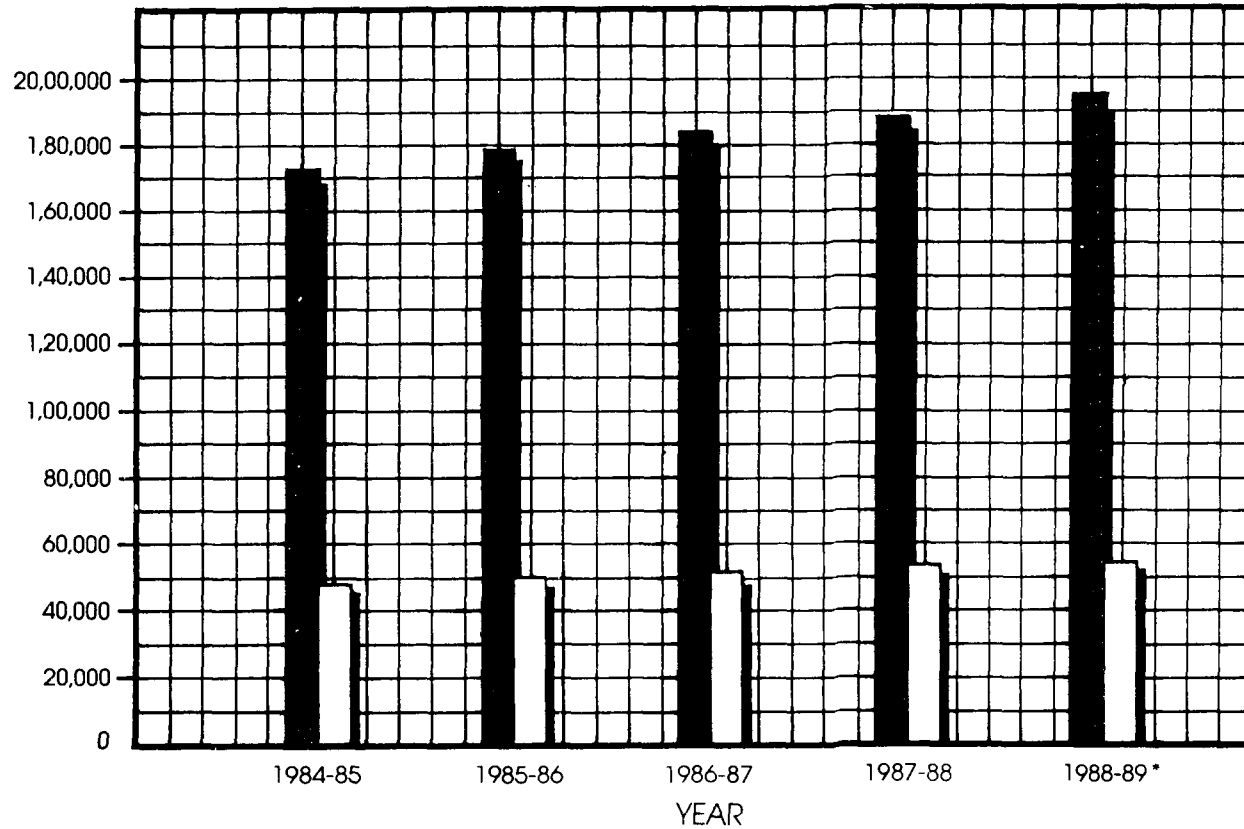
GROWTH OF COLLEGES

1979-80 to 1988-89



TEACHING STAFF IN UNIVERSITY DEPARTMENTS/UNIVERSITY COLLEGES AND AFFILIATED COLLEGES

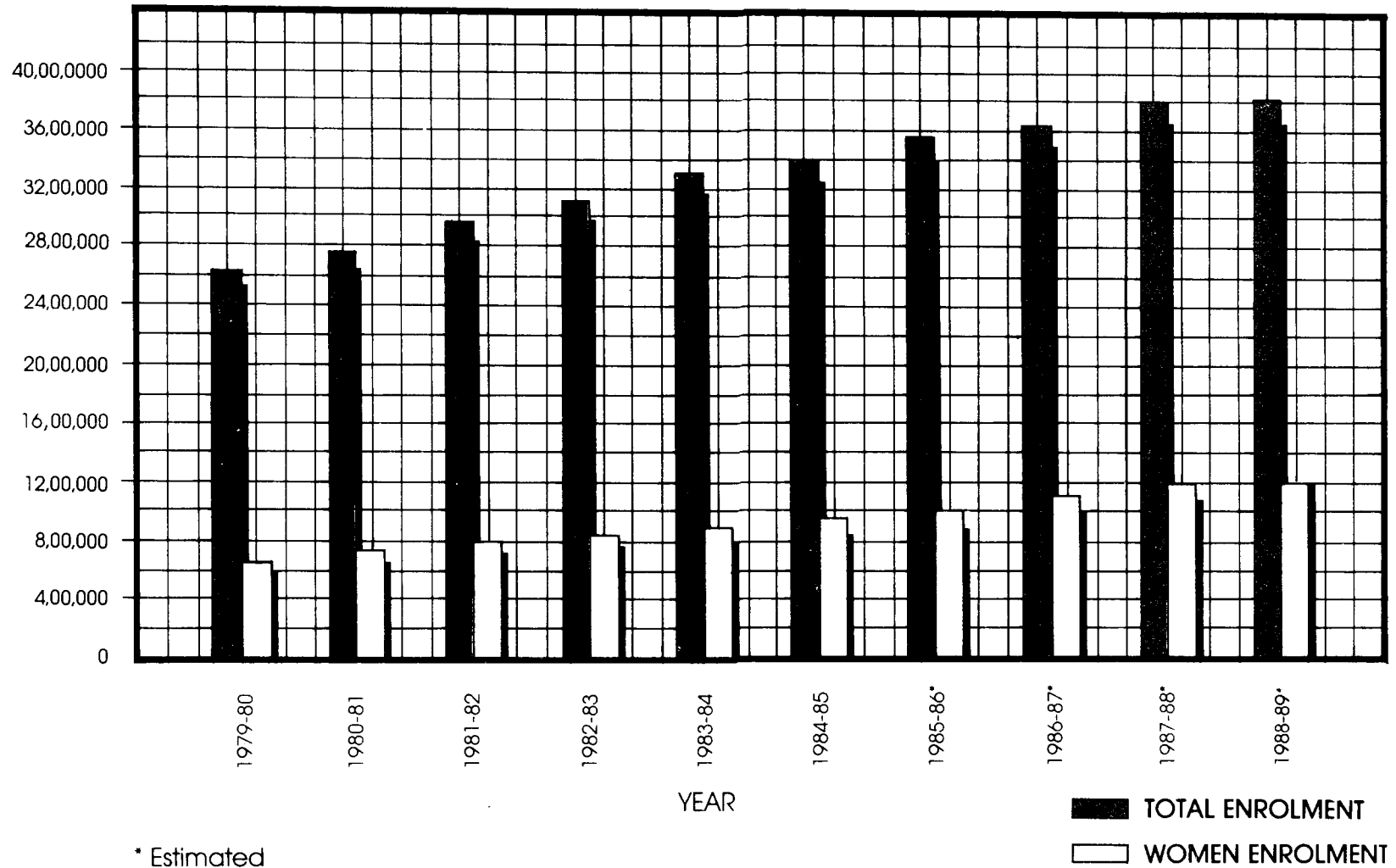
1984-85 to 1988-89



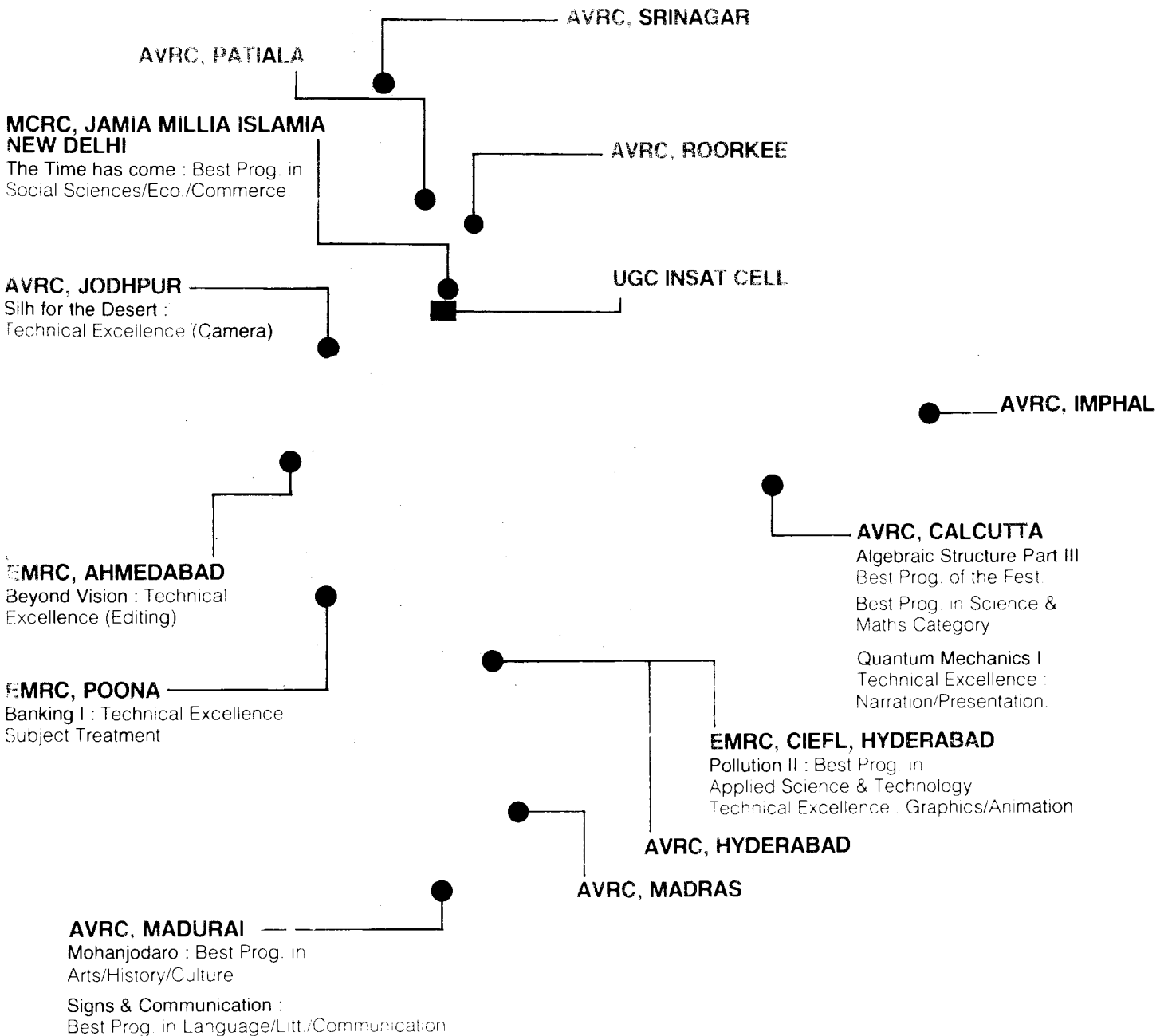
█ Includes Principals/Senior Lecturers/Readers/
Assistant Professors/Temporary Lecturers and Tutors/Demonstrators (AFFILIATED COLLEGES)
□ Includes Professors, Readers, Lecturers and Tutors/Demonstrators (UNIVERSITY COLLEGES)

* Estimated

WOMEN ENROLMENT
 (UNIVERSITY LEVEL)
 1979-80 to 1988-89



AVRC's and EMRC's at Universities



AVRC Stands for Audio Visual Research Centre
EMRC Stands for Educational Media Research Centre

APPENDIX

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APPENDIX - I

List of Universities and Institutions Deemed to be Universities in India

(as on 31.3.1989)

Sl. No.	Name of the University /Institution	Year of establishment
1.	Calcutta	1857
2.	Bombay	1857
3.	Madras	1857
4.	Allahabad	1887
5.	Banaras Hindu	1916
6.	Mysore	1916
7.	Patna	1917
8.	Osmania	1918
9.	Aligarh Muslim	1921
10.	Lucknow	1921
11.	Delhi	1922
12.	Nagpur	1923
13.	Andhra	1926
14.	Agra	1927
15.	Annamalai	1929
16.	Kerala	1937
17.	Utkal	1943
18.	Dr. Hari Singh Gaur	1946
19.	Rajasthan	1947
20.	Punjab	1947
21.	Gauhati	1948
22.	Kashmir	1949
23.	Roorkee	1949
24.	Poona	1949
25.	M.S. University of Baroda	1949
26.	Karnataka	1949
27.	Gujarat	1950
28.	S.N.D.T. Women's	1951
29.	Vishwa Bharati	1951
30.	Bihar	1952
31.	Sri Venkateshwara	1954
32.	Sardar Patel	1955
33.	Jalavpur	1955
34.	Kurukshetra	1956
35.	Indira Kala Sangect	1956
36.	Vikram	1957
37.	Gorakhpur	1957
38.	Rani Durgavati	1957
39.	Sampurnanand Sanskrit	1958
40.	Marathwada	1958
41.	G.B. Pant University of Agriculture and Technology	1960
42.	Burdwan	1960
43.	Kalyani	1960
44.	Bhagalpur	1960
45.	Ranchi	1960
46.	K.S. Darbhanga Sanskrit	1961
47.	Panjab Agricultural	1962
48.	Punjabi	1962
49.	Orissa University of Agriculture & Technology	1962
50.	North Bengal	1962
51.	Rabindra Bharati	1962
52.	Magadh	1962
53.	Jodhpur	1962
54.	Sukhadia	1962
55.	Shivaji	1962
56.	Devi Ahilya	1964
57.	Jiwaji	1964
58.	Ravi Shankar	1964

APPENDIX - I (Contd.)

Sl. No.	Name of the University /Institution	Year of establishment
59.	University of Agricultural Sciences	1964
60.	Andhra Pradesh Agriculture	1964
61.	Bangalore	1964
62.	Jawaharlal Nehru Krishi	1964
63.	Dibrugarh	1965
64.	Kanpur	1965
65.	Meerut	1965
66.	Madhurai Kamraj	1965
67.	Saurashtra	1965
68.	South Gujarat	1965
69.	Berhampur	1967
70.	Sambalpur	1967
71.	Gujarat Ayurveda	1968
72.	Jawaharlal Nehru	1968
73.	Mahatma Phule Krishi	1968
74.	Calicut	1968
75.	Awadesh Pratap Singh	1968
76.	Assam Agricultural	1968
77.	Guru Nanak Dev	1969
78.	Jammu	1969
79.	Punjabrao Krishi	1969
80.	Haryana Agricultural	1970
81.	Himachal Pradesh	1970
82.	Barkatullah	1970
83.	Rajendra Agricultural	1970
84.	Tamilnadu Agricultural	1971
85.	Cochin	1971
86.	Kerala Agricultural	1972
87.	Gujarat Agricultural	1972
88.	Konkan Krishi	1972
89.	L.N. Mithila	1972
90.	Marathwada Krishi	1972
91.	Jawaharlal Nehru Technological	1972
92.	North Eastern Hill	1973
93.	Kumaun	1973
94.	Hemvati Nandan Bahuguna	1973
95.	Kashi Vidyapith	1974
96.	Bidhan Chandra Krishi	1974
97.	Hyderabad	1974
98.	N.D.University of Agriculture & Technology	1974
99.	C.S. Azad University of Agriculture & Technology	1974
100.	Avadh	1975
101.	Bundelkhand	1975
102.	Rohilkhand	1975
103.	Maharishi Dayanand	1976
104.	Kakatiya	1976
105.	Nagarjuna	1976
106.	Bhavnagar	1978
107.	Anna	1978
108.	Himachal Pradesh Krishi	1978
109.	Manipur	1980
110.	Gulbarga	1980
111.	Mangalore	1980
112.	Birsa Agricultural	1980
113.	Vidyasagar	1981
114.	Sri Jagannath Sanskrit	1981
115.	Sri Krishnadevaraya	1981
116.	Tamil	1981
117.	Bharathiar	1982
118.	Bharathidasan	1982
119.	Sher-e-Kashmir University of Agricultural Sciences & Technology	1982
120.	Andhra Pradesh Open	1982

APPENDIX - I (Contd.)

Sl. No.	Name of the University /Institution	Year of establishment
121.	Sri Padmavati Mahila	1983
122.	Amravati	1983
123.	Guru Ghasi Das	1983
124.	Mahatama Gandhi	1983
125.	Mother Teressa	1984
126.	Alagappa	1985
127.	Arunachal	1985
128.	Pondicherry	1985
129.	Goa	1985
130.	Indira Gandhi National Open	1985
131.	Telugu	1985
132.	Dr. Yashwant Singh Parmar	1986
133.	Andhra Pradesh University of Health Sciences	1986
134.	University of Agricultural Sciences, Dharwad	1986
135.	North Gujarat	1986
136.	Indira Gandhi Krishi	1987
137.	Kota Open	1987
138.	Ajmer	1987
139.	Tripura	1987
140.	Kuvempu	1987
141.	Rajasthan Agricultural	1987
142.	Purvanchal	1987
143.	Jamia Millia Islamia	1988
144.	Dr. M. G. R. Medical	1989
INSTITUTE ESTABLISHED UNDER STATE LEGISLATURE ACT		
145.	Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow	1983
INSTITUTIONS DEEMED TO BE UNIVERSITIES		
1.	Indian Institute of Science, Bangalore	1958
2.	Indian Agricultural Research Institute	1958
3.	Gurukul Kangri Vishwavidyala, Haridwar	1962
4.	Gujarat Vidyapith, Ahmedabad	1963
5.	Tata Institute of Social Sciences, Bombay	1964
6.	Birla Institute of Technology and Science, Pillani	1964
7.	Indian School of Mines, Dhanbad	1967
8.	Central Institute of English and Foreign Languages, Hyderabad	1973
9.	Gandhigram Rural Institute, Gandhigram	1976
10.	School of Planning and Architecture, New Delhi	1979
11.	Dayalbagh Educational Institute, Agra	1981
12.	Sri Sathya Sai Institute of Higher Learning, Prassanthinilyam	1981
13.	Banasthali Vidyapith, Rajasthan	1983
14.	Indian Veterinary Research Institute, Izatnagar	1983
15.	International Institute for Population Sciences, Bombay	1985
16.	Thapar Institute of Engineering & Technology, Patiala	1985
17.	Birla Institute of Technology, Mesra	1986
18.	Rajasthan Vidyapith	1987
19.	Rashtriya Sanskrit Vidyapith, Tirupati	1987
20.	Sri Lal Bahadur Shastri Sanskrit Vidyapith, New Delhi	1987
21.	Tilak Maharashtra Vidyapith, Pune	1987
22.	Sri Avinash Lingam Institute for Home Sciences & Higher Education for Women	1988
23.	Central Institute of Higher Tibetan Studies	1989
24.	National Dairy Research Institute	1989
25.	Central Institute of Fisheries Education	1989
26.	Jamia Hamdard	1989
27.	National Museum Institute of History of Arts Conservation & Museology	1989

APPENDIX – II

Growth of Student Enrolment (1969-70 to 1988-89)

YEAR	Total enrolment	Increase over the preceding year	Percentage Increase
1969-70	17,92,780	2,26,677	14.5
1970-71	19,53,700	1,60,920	9.0
1971-72	20,65,041	1,11,341	5.7
1972-73	21,68,107	1,03,066	5.0
1973-74	22,34,385	66,278	3.1
1974-75	23,66,541	1,32,156	5.9
1975-76	24,26,109	59,568	2.5
1976-77	24,31,563	5,454	0.2
1977-78	25,64,972	1,33,409	5.5
1978-79	26,18,228	53,256	2.1
1979-80	26,48,579	30,351	1.2
1980-81	27,52,437	1,03,858	3.9
1981-82	29,52,066	1,99,629	7.3
1982-83	31,33,093	1,81,027	6.1
1983-84	33,07,649	1,74,556	5.6
1984-85	34,04,096	96,447	2.9
1985-86*	35,70,897	1,66,801	4.9
1986-87*	36,81,870	1,10,973	3.1
1987-88*	38,14,417	1,32,547	3.6
1988-89*	39,47,922	1,33,505	3.5

APPENDIX – III

Growth of Enrolment (Excluding PUC/Inter/Pre-Prof.) during the period from 1984-85 to 1988-89

1984-85

S.No.	State/ Union Territory	Enrolment (Estimated)	Increase over the Preceding year	Percentage increase
1.	Andhra Pradesh	2,57,651	5,721	2.3
2.	Assam	73,961	2,565	3.6
3.	Bihar	2,36,856	-4,522	-1.9
4.	Gujarat	2,00,297	4,187	2.1
5.	Haryana	69,622	- 707	-1.0
6.	Himachal Pradesh	17,889	1,926	12.0
7.	Jammu & Kashmir	25,004	757	3.1
8.	Karnataka	2,39,137	263	0.1
9.	Kerala	1,33,302	3,927	3.6
10.	Madhya Pradesh	2,51,382	6,617	2.7
11.	Maharashtra	4,35,307	32,820	8.2
12.	Manipur	9,291	- 299	-3.1
13.	Maghalaya/Nagaland	8,466	932	12.1
14.	Orissa	70,105	3,315	5.0
15.	Punjab	1,26,348	5,657	4.7
16.	Rajasthan	1,69,587	6,314	3.9
17.	Tamil Nadu	3,42,609	2,898	1.2
18.	Uttar Pradesh	4,75,069	4,934	1.0
19.	West Bengal/Tripura/Sikkim	2,66,033	14,268	5.7
20.	Delhi	96,089	4,874	5.3
	All India Total	34,04,096	96,447	2.9

APPENDIX – III (Contd.)

1985-86

S.No.	State/ Union Territory	Enrolment (Estimated)	Increase over the Preceding year	Percentage increase
1.	Andhra Praedsh	2,72,595	14,944	5.8
2.	Assam	79,878	5,917	8.0
3.	Bihar	2,59,869	22,913	9.7
4.	Gujarat	2,06,306	6,009	3.0
5.	Haryana	73,451	3,829	5.5
6.	Himachal Pradesh	19,096	1,216	6.8
7.	Jammu & Kashmir	26,404	1,900	7.6
8.	Karnataka	2,47,507	8,370	3.5
9.	Kerala	1,38,234	4,932	3.7
10.	Madhya Pradesh	2,63,196	11,814	4.7
11.	Maharashtra	4,68,826	33,519	7.7
12.	Manipur	9,746	455	4.9
13.	Maghalaya/Nagaland	8,643	177	2.1
14.	Orissa	73,190	3,085	4.4
15.	Punjab	1,31,149	4,801	3.8
16.	Rajasthan	1,75,353	5,766	3.4
17.	Tamil Nadu	2,50,858	8,249	3.4
18.	Uttar Pradesh	4,85,521	10,452	2.2
19.	West Bengal/Tripura/Sikkim	2,80,931	14,898	5.6
20.	Delhi	99,644	3,555	3.7
	All India Total	35,70,897	1,66,801	4.9

1986-87

S.No.	State/ Union Territory	Enrolment (Estimated)	Increase over the Preceding year	Percentage increase
1.	Andhra Praedsh	2,79,822	7,227	2.7
2.	Assam	81,001	1,123	1.4
3.	Bihar	2,65,095	5,226	2.0
4.	Gujarat	2,13,549	7,243	3.5
5.	Haryana	73,637	186	0.3
6.	Himachal Pradesh	20,250	1,154	6.0
7.	Jammu & Kashmir	29,455	2,551	9.5
8.	Karnataka	2,54,049	6,542	2.6
9.	Kerala	1,43,593	5,359	3.9
10.	Madhya Pradesh	2,72,458	9,262	3.5
11.	Maharashtra	4,78,643	9,817	2.1
12.	Manipur	11,046	1,300	13.3
13.	Maghalaya/Nagaland	9,205	526	6.5
14.	Orissa	73,637	447	0.6
15.	Punjab	1,36,229	5,080	3.9
16.	Rajasthan	1,80,412	5,059	2.9
17.	Tamil Nadu	2,61,413	10,555	4.2
18.	Uttar Pradesh	5,08,098	22,577	4.7
19.	West Bengal/Tripura/Sikkim	2,87,186	6,255	2.2
20.	Delhi	1,03,092	3,448	3.5
	All India Total	36,81,870	1,10,973	3.1

APPENDIX – III (Contd.)

1987-88

S.No.	State/ Union territory	Enrolment (Estimated)	Increase over the Preceding year	Percentage increase
1.	Andhra Pradesh	2,89,896	10,074	3.6
2.	Assam	83,917	2,916	3.6
3.	Bihar	2,67,009	1,914	0.7
4.	Gujarat	2,25,051	11,502	5.1
5.	Haryana	80,103	6,446	8.8
6.	Himachal Pradesh	20,979	729	3.6
7.	Jammu & Kashmir	29,752	297	1.0
8.	Karnataka	2,67,009	12,960	5.1
9.	Kerala	1,48,762	5,169	3.6
10.	Madhya Pradesh	2,78,452	5,994	2.2
11.	Maharashtra	4,90,511	11,868	2.4
12.	Manipur	11,443	397	3.6
13.	Maghalaya/Nagaland	9,536	331	3.6
14.	Orissa	76,288	2,651	3.6
15.	Punjab	1,41,133	4,904	3.6
16.	Rajasthan	1,86,906	6,494	3.6
17.	TamilNadu	2,74,638	13,225	5.1
18.	Uttar Pradesh	5,32,518	24,420	4.8
19.	West Bengal/ Tripura /Sikkim	2,93,710	6,524	2.3
20.	Delhi	1,06,804	3,712	3.6
	All India Total	38,14,417	1,32,547	3.6

1988-89)

S.No.	State/ Union Territory	Enrolment (Estimated)	Increase over the Preceding year	Percentage increase	Average annual compound rate of the period from 1984-85 to 1988-89
1.	Andhra Pradesh	2,99,913	10,017	3.5	3.6
2.	Assam	87,235	3,318	4.0	4.0
3.	Bihar	2,73,303	6,294	2.4	2.5
4.	Gujarat	2,32,602	7,551	3.4	3.5
5.	Haryana	82,588	2,485	3.1	3.3
6.	Himachal Pradesh	22,437	1,458	7.0	7.1
7.	Jammu & Kashmir	31,256	1,504	5.0	5.2
8.	Karnataka	2,74,103	7,094	2.6	2.8
9.	Kerala	1,53,753	4,991	3.3	3.5
10.	Madhya Pradesh	2,87,240	8,788	3.2	3.3
11.	Maharashtra	5,14,809	24,298	4.9	5.1
12.	Manipur	11,941	498	4.3	4.5
13.	Maghalaya/Nagaland	10,103	567	5.9	6.1
14.	Orissa	78,771	2,483	3.2	3.4
15.	Punjab	1,46,574	5,441	3.9	4.0
16.	Rajasthan	1,92,990	6,084	3.3	3.4
17.	TamilNadu	2,83,854	9,216	3.4	3.5
18.	Uttar Pradesh	5,48,791	16,273	3.1	3.2
19.	West Bengal/Tripura/Sikkim	3,04,738	11,028	3.7	3.9
20.	Delhi	1,10,921	4,017	3.9	4.0
	All India Total	39,47,922	1,33,505	3.5	3.6

Note :— As the estimates are based on back-data, the enrolments relating to the new states, some of which are having universities, have not been shown separately. The enrolments relating to Assam, Maharashtra and Meghalaya include enrolment of the new states viz. Arunachal Pradesh, Goa and Mizoram respectively. The enrolments relating to the Union Territories of A & N Islands, Pondicherry and Daman & Diu are clubbed with enrolments of Punjab, Tamilnadu, and Gujarat respectively. The enrolment relating to the Union Territory of Chandigarh is merged with that of Punjab.

APPENDIX - IV

Student Enrolment in the Universities stage-wise (1984-85 to 1988-89)

Stage	1984-85		1985-86*		1986-87*		1987-88*		1988-89*	
	Enrolment	% of	Enrolment	% of	Enrolment	% of	Enrolment	% of	Enrolment	% of
Graduate	29,99,621	88.1	31,42,389	88.0	32,40,046	88.0	33,56,687	88.0	34,74,171	88.0
Post-graduate	3,22,541	9.5	3,29,235	9.5	3,49,778	9.5	3,62,370	9.5	3,75,053	9.5
Research	38,160	1.1	39,280	1.1	40,500	1.1	41,958	1.1	43,427	1.1
Diploma/ Certificate	43,774	1.3	49,993	1.4	51,546	1.4	53,402	1.4	55,271	1.4
Total	34,04,096	100.0	35,70,897	100.0	36,81,870	100.0	38,14,417	100.0	39,47,922	100.0

* Estimated

APPENDIX - V

Stage-wise Enrolment : Universities and Affiliated Colleges 1988-89 (estimated)

Stage	University Deptts./ University Colleges	Affiliated Colleges	Total	% in affiliated colleges			
				1988-89	1987-88	1986-87	1985-86
Graduate	4,23,849	30,50,322	34,74,171	87.8	87.7	87.7	87.7
Post Graduate	1,62,773	2,12,280	3,75,053	56.6	56.5	56.5	56.5
Research	36,913	6,514	43,427	15.0	15.0	14.9	14.9
Diploma/ Certificate	31,283	23,988	55,271	43.4	43.6	43.2	43.2
Total	6,54,818	32,93,104	39,47,922	83.4	83.3	83.3	83.3

APPENDIX - VI

Student Enrolment in the Universities : Faculty-wise 1984-85 to 1988-89

Course of study	1984-85		1985-86		1986-87		1987-88		1988-89	
	Enrolment	% of total	Enrolment (estimated)	% of total	Enrolment (estimated)	% of total	Enrolment (estimated)	% of total	Enrolment (estimated)	% of total
Arts (including Oriental learning)	13,72,277	40.3	14,39,071	40.3	14,83,794	40.3	15,37,210	40.3	15,91,012	40.3
Science	6,69,563	19.7	7,03,467	19.7	7,25,328	19.7	7,51,440	19.7	7,77,740	19.7
Commerce	7,38,506	21.7	7,67,743	21.5	7,91,602	21.5	8,20,100	21.5	8,48,804	21.5
Education	76,522	2.2	82,131	2.3	84,683	2.3	87,732	2.3	90,803	2.3
Engineering/Technology	1,59,046	4.7	1,64,261	4.6	1,69,366	4.6	1,75,463	4.6	1,81,604	4.6
Medicine	1,18,890	3.5	1,28,552	3.6	1,32,547	3.6	1,37,319	3.6	1,42,125	3.6
Agriculture	41,741	1.2	46,422	1.3	47,864	1.3	49,587	1.3	51,323	1.3
Veterinary Science	9,413	0.3	10,713	0.3	11,046	0.3	11,443	0.3	11,844	0.3
Law	1,95,708	5.7	2,07,112	5.8	2,13,549	5.8	2,21,236	5.8	2,28,979	5.8
Others	22,430	0.7	21,425	0.6	22,091	0.6	22,887	0.6	23,688	0.6
Total	34,04,096	100.0	35,70,897	100.0	36,81,870	100.0	38,14,417	100.0	39,47,922	100.0

APPENDIX - VII

Distribution of Colleges according to Course of Study : 1984-85 to 1988-89

Course of study	(Number of colleges*)				
	1984-85	1985-86	1986-87	1987-88	1988-89
Arts, Science & Commerce	4,004	4,132	4,354	4,460	4,574
Technical/Professional break-up	618	655	695	718	743
(a) Engineering/Technology	223	242	253	260	269
(b) Medicine/Pharmacy/Ayurveda/Nursing					
Dentistry/Homoeopathy	303	320	342	359	373
(c) Agriculture	63	63	67	66	67
(d) Veterinary Science	29	30	33	33	34
Law	194	199	202	231	240
Physical Education & Education	430	441	479	463	472
Oriental Learning	277	321	720	711	819
Music/Fine Arts	67	68	62	64	64
Total	5,590	5,816	6,512	6,647	6,912

* Excludes Junior colleges and colleges having only diploma/certificate courses.

** Provisional.

APPENDIX - VIII

Increase in number of Colleges during the period from 1984 to 1988-89

(State-wise)

State/Union Territory	1984-85		1985-86		1986-87		1987-88*		1988-89*		Increase during the period from 1984-85 to 1988-89
	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	
1. Andhra Pradesh	470	50	492	22	495	3	530	35	546	16	76
2. Arunachal Pradesh	-	-	-	-	3	3	3	-	4	1	4
3. Assam	162	8	171	9	180	9	181	1	186	5	24
4. Bihar	504	31	568	64	617	49	632	15	664	32	140
5. Goa	-	-	-	-	19	19	19	-	24	5	24
6. Gujarat	295	10	302	7	311	9	317	6	322	5	27
7. Haryana	143	-	143	-	142	-1	147	5	148	1	5
8. Himachal Pradesh	27	-	33	6	34	1	40	6	43	3	16
9. Jammu & Kashmir	39	-2	39	-	41	2	41	-	42	1	3
10. Karnataka	535	37	556	21	603	47	649	46	677	28	142
11. Kerala	184	-	188	4	200	12	203	3	208	5	24
12. Madhya Pradesh	445	49	472	27	502	30	515	13	530	15	85
13. Maharashtra	801	108	834	33	874	40	864	-10	880	16	79
14. Manipur	23	1	23	-	23	-	24	1	24	-	1
15. Meghalya/Nagaland	34	1	34	-	37	3	38	1	39	1	5
16. Orissa	215	36	225	10	248	23	252	4	261	9	46
17. Punjab	228	-	226	-2	231	5	230	-1	231	1	3
18. Rajasthan	222	1	221	-1	237	16	240	3	244	4	22
19. Tamil Nadu	297	12	311	14	311	-	314	3	318	4	21
20. Uttar Pradesh	561	-	562	1	964	402	963	-1	1068	105	507
21. West Bengal/Tripura/Sikkim	348	-	357	9	372	15	374	2	379	5	31
22. Delhi	57	2	57	-	57	-	57	-	57	-	-
23. Pondicherry	-	-	2	2	11	9	14	3	17	3	17
Total	5,590	344	5,816	226	6,512	696	6,647	135	6912	265	1322

* Provisional UC = University Colleges AC = Affiliated Colleges

APPENDIX - IX

**Increase in number of Affiliated Colleges* (Arts, Science and Commerce only) during the period
1984-85 to 1988-89 (State-wise)**

State/Union Territory	1984-85	1985-86		1986-87		1987-88*		1988-89**		Increase during the period from 1984-85 to 1988-89
	No. of colleges	No. of colleges	Increase over the preceding year	No. of colleges	Increase over the preceding year	No. of colleges	Increase over the preceding year	No. of colleges	Increase over the preceding year	
1. Andhra Pradesh	319	319	-	323	4	365	42	377	12	58
2. Arunachal Pradesh	-	-	-	3	3	3	-	4	1	4
3. Assam	132	141	9	150	9	151	1	156	5	24
4. Bihar	359	400	41	448	48	462	14	488	26	129
5. Goa	-	-	-	10	10	10	-	12	2	12
6. Gujarat	196	200	4	207	7	219	12	225	6	29
7. Haryana	107	107	-	107	-	115	8	123	8	16
8. Himachal Pradesh	22	28	6	29	1	34	5	37	4	15
9. Jammu & Kashmir	23	23	-	25	2	25	-	26	1	3
10. Karnataka	342	354	12	373	19	413	40	431	18	89
11. Kerala	129	130	1	141	11	144	3	148	4	19
12. Madhya Pradesh	331	360	29	385	25	401	16	418	17	87
13. Maharashtra	532	548	16	563	15	571	8	580	9	48
14. Manipur	19	19	-	19	-	20	1	21	1	2
15. Meghalaya/Nagaland	25	25	-	28	3	30	2	31	1	6
16. Orissa	145	154	9	175	21	181	6	190	9	45
17. Punjab	176	175	-1	180	5	185	5	187	2	11
18. Rajasthan	129	128	-1	136	8	148	12	153	5	24
19. Tamil Nadu	205	208	3	204	-4	206	2	206	-	1
20. Uttar Pradesh	390	391	1	391	-	404	13	407	3	17
21. West/Bengal/Tripura Sikkim	273	281	8	295	14	307	12	315	8	42
22. Delhi	38	38	-	38	-	45	7	47	2	9
23. Pondicherry	-	2	2	6	4	7	1	9	2	9
Total	3,892	4,031	139	4,236	205	4,446	210	4,591	145	699

* Also includes constituent colleges

** Provisional

APPENDIX - X

Number and Distribution of Teaching Staff in the University Departments/University Colleges according to Designation (1984-85 to 1988-89)

Year	Professor	Readers	Lecturers*	Tutors/ Demonstrators	Total
1984-85	5,683 (12.0)	11,841 (25.0)	27,863 (58.8)	1,995 (4.2)	47,382 (100.0)
1985-86**	5,792 (11.8)	12,026 (24.5)	29,241 (59.6)	2,029 (4.1)	49,088 (100.0)
1986-87**	5,933 (11.6)	12,481 (24.4)	30,588 (59.8)	2,148 (4.2)	51,150 (100.0)
1987-88**	6,273 (11.8)	13,079 (24.6)	31,580 (59.4)	2,233 (4.2)	53,165 (100.0)
1988-89**	6,432 (11.7)	13,468 (24.5)	32,764 (59.6)	2,309 (4.2)	54,973 (100.0)

Note : Figures in parentheses indicate the percentages of the cadets to the total staff in the corresponding year.

* Including Assistant Professors and Assistant Lecturers.

** Estimated.

APPENDIX - XI

Number and Distribution of Teaching Staff in the University Departments/University Colleges according to Designation (1984-85 to 1988-89)

Year	Senior Teachers *	Lecturers **	Tutors/ Demonstrators	Total
1984-85	22,368 (13.0)	1,42,524 (82.5)	7,827 (4.5)	1,72,719 (100.0)
1985-86***	23,921 (13.4)	1,46,235 (82.2)	7,745 (4.4)	1,77,901 (100.0)
1986-87***	24,371 (13.3)	1,50,621 (82.2)	8,246 (4.5)	1,83,238 (100.0)
1987-88***	24,923 (13.2)	155,389 (82.3)	8,496 (4.5)	1,88,808 (100.0)
1988-89***	25,815 (13.3)	1,59,546 (82.2)	8,734 (4.5)	1,94,095 (100.0)

Note : Figures in parentheses indicate the percentages of the cadets to the total staff in the corresponding year.

* Including Principals/Senior Lecturers/Readers.

** Including Assistant Professors and Assistant Lecturers.

*** Estimated.

APPENDIX—XII

Number of Doctorate Degrees awarded : Faculty-wise (1983-84 to 1987-88)

Faculty	1983-84	1984-85	1985-86	1986-87*	1987-88*
Arts	2,678	2,754	2,886	2,910	2,933
Science	2,890	2,922	2,838	2,840	2,842
Commerce	177	185	263	244	225
Education	187	239	219	212	205
Engineering/Technology	192	210	194	215	236
Medicine	59	70	61	77	93
Agriculture	648	576	627	592	557
Veterinary Science	65	102	155	98	74
Law	8	25	34	43	51
Others	30	56	69	64	59
Total	6,934	7,139	7,346	7,295	7,275

* Provisional.

APPENDIX-XIII
**Details of Departments
supported under COSIST**

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
PHYSICS				
1.	Department of Radio Physics & Electronics, Calcutta University.	1983-84	Solid state and Electronic devices, Micro-electronics techniques, Fabrication of Impantdiodes including establishment of a mm wave laboratory and photovoltaic devices.	Semiconductor characterisation unit for concentration, impurity profile, lifetime etc. measurement. Plasma and dry etching equipment, Environmental control equipment, Cryotemperature generator.
2.	Department of Physics, Punjab University.	1983-84	Experimental Nuclear Physics	Multiuser data analysis system with 4 ADCS, Helium leak detector, Systems for characterisation and study of electrical/optical properties of materials and devices, Opto-acoustic spectrometer.
3.	Department of Physics, University of Poona, Pune.	1983-84	PG Education only	Geir-Dunkle integrating sphere-spectrophotometer (range 0.32-2.5 μ), Magnetic susceptibility measuring set up, Photoacoustic spectrometer, 'Neuromatic' 2-Channel neuro-myograph.
4.	Department of Physics, Indian Institute of Science, Bangalore.	1983-84	Crystal growth and material preparation	Programmed temperature controlled furnace, Accessories for crystal pulling unit (RF Heater, pulling mechanism, environment control, temperature control), Liquid helium liquifier, Cryogenic measuring facilities.
5.	Department of Physics, Banaras Hindu University.	1984-85	Physics of materials with particular reference to synthesis, crystal growth and characterisation of crystals, lasers and molecular photo-physics.	Electron microscope TEM with STEM, EBIC, EDAX & ELS attachment; DTA/TGA/DSC facility, Mask processor, Mask aligner vacuum chucks, scribes and ultrasonic bonders, Universal Czochralski crystal puller, Nd/YAG Laser pumper, Dye laser with facilities for pressure tuning and polarization control.
6.	School of Physics, University of Madras.	1984-85	Nuclear and theoretical physics.	X-ray diffractometer 1730/10 alongwith microprocessor, High purity germanium detectors, Multichannel analyser with two point digital spectrum stabilizer, Mossbaver spectrometer with large velocity.
7.	Department of Physics, Roorkee University.	1985-86	Solid state physics (theoretical and experimental), Physics of Molecular Collision.	Computer peripheral devices, Simultaneous thermal analysis system for PG/DTA.
8.	School of Physics Andhra University	1987-88	Physics of materials and space physics	Fabry-Perot Interferometer, VHF Doppler sounder, Transportable digital ionosonde-IPS-42.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
9.	Department of Physics Aligarh Muslim University	1987-88	Theoretical Physics interacting with experimental Nuclear Physics and high energy. Physics. Laser Spectroscopy and study of materials.	FTIR, EPR Unit, Compton suppressed Gamma ray spectrometer.
10.	Department of Physics University of Delhi	1987-88	Theoretical Physics	Experiments Rutherford Scattering, X-ray Flourescence, Electro-optics, Characterisation of surface acoustic wave devices, moving-film X-ray diffractometer.
11.	Department of Physics University of Allahabad	1987-88	Solid State & Molecular Physics.	Microvax II* add ons, Multichannel analyser with accessories, Microwave Net work analyser, Thermal analysis system, RF impedance analyser.
12.	School of Physics University of Hyderabad	1987-88	Theoretical Physics, Physics of Materials with particular reference to disordered materials High TC Super conductors.	NMR magnetometer, Microvax II, Liquid nitrogen plant, Liquid helium plant.
13.	Department of Physics, Jadavpur University	1987-88	Physics of the condensed matter, High energy and theoretical physics.	Semiautomatic scanning and measurement system for Nuclear track, Bubble chamber scanner tape drive.
14.	Department of Physics, Rajsthan University, Jaipur	1988-89	High JC and High Energy particle plugs.	XPS, AES and EDX, TG, DTG, DTA, DSC, with recorder.
15.	Department of Physics, Osmania University, Hyderabad	1988-89	Condensed matter physics	Liquid Nitrogen plant PC and mini Computer, Laser facilities, Logic analyser.
CHEMISTRY				
16.	Department of Chemistry, Punjab University	1983-84	Organic and Physical Chemistry	G.L.C, Fischer spinning band columns, Inverted chromatography, Chromatotron molecular stills, Photo-correlation spectrometer, HPLC.
17.	Solid State and Structural Chemistry, Indian Instt. of Science, Bangalore.	1983-84	Solid state and Structural Chemistry	IR spectrometer, Raman spectrometer, Closed circuit helium cryostat
18.	Department of Chemistry, University of Delhi	1984-85	Synthesis & Structural Organic Chemistry with particular reference to biologically active compounds, peptides etc., Physical Chemistry with particular reference to studies of micles and instrumentation.	Computer system, HPLC, Polarograph, Programmable thermostat.
19.	Department of Chemistry, University of Hyderabad	1984-85	Orgaic Synthesis	---
20.	Department of Chemistry, Jodhpur University.	1984-85	Phytochemistry of arid zone plants, soil Chemistry and Physical Chem- istry.	Stop flow spectrometer, C,H,N analyser, HPLC, Mini computer.

APPENDIX-XIII (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
21.	School of Chemistry, University of Madras.	1984-85	Inorganic Chemistry	Nd-YAG laser, ESR spectrometer with photo-chem accessories, Stop flow acc., Corrected spectra accessories for Spectrofluorimeter.
22.	Department of Chemistry, University of Poona.	1984-85	Radiation and Nuclear Chemistry	Liquid scintillation counter, Multi-channel analyser, Ga-Li and Si-Li detector, Gamma source.
23.	Department of Chemistry, Rajasthan University.	1984-85	Organometallic Chemistry and organofluorine Chemistry.	X ray diffraction unit.
24.	Department of Organic Chemistry, Indian Instt. of Science, Bangalore.	1984-85	Organic Chemistry.	High resolution mass spectrometer with GC
25.	Department of Chemistry, North-Eastern Hill University.	1986-87	Physical & Organic Chemistry.	Proton NMR spectrometer, Gas Chromatograph, Closed helium cryocooler attachment for ESR Spectrometer, Electro Chemical Instrument (Cyclic Voltmeter), Liquid nitrogen cryostat.
26.	School of Chemistry, Andhra University.	1987-88	Marine Natural Product	FT-NMR with multiprobe, GLC Tracer with FID, Automatic C,H,N, analyser
27.	Department of Chemistry Jadavpur University	1987-88	Analytical Chemistry	NMR, AAS, Ion Chromatograph, Spectrofluorimeter, HPLC, Solution Calorimeter.
28.	Department of Chemistry, Guru Nanak Dev University	1987-88	Organic Chemistry	High resolution multi nuclear 90 MHz FT-NMR, Mass spectrometer, Polarographic analyser, Densitometer, vis. Spectrophotometer.
29.	Department of Chemistry Gorakhpur University	1987-88	Physical & Inorganic Chemistry	NMR 60 MHz, IR Spectrophotometer, Element Analyser, Photirradiation & Corrosion measurement System.
30.	Department of Chemistry, Banaras Hindu University	1987-88	Structural Chemistry	Mass Spectrometer, Peripheral mini Computer with suitable software, I.R. Electrochemistry system.
31.	Department of Physical and Inorganic Chemistry University of Bangalore.	1988-89	Physical and Inorganic Chemistry.	Multi Nuclear NMR, CHN analyzer.
LIFE SCIENCES & BIO-SCIENCES				
32.	Department of Bio-Chemistry, Instt. of Med. Scs. Banaras Hindu University.	1983-84	Molecular Biology & Genetic Engineering	Drive unit for ultracentrifuge, HPLC, Circular dichromic spectrophotometer, GLC Large fermentor.
33.	Department of Botany, Calcutta University.	1983-84	Cell Biology, Chromosome Research	Liquid scintillation counter, HPLC, Gilson analyser, Lyophiliser, CO ₂ incubator and specialised electrophoresis unit, Gas chromatograph equipped with flameionisation and nitrogen detector unit.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
34.	School of Life Sciences, Jawaharlal Nehru University.	1983-84	Radiation Biology, Tissue culture and Molecular Biology including Genetic Engineering.	GLC, Refrigerated centrifuge, ESR spectrophotometer, HPLC.
35.	School of Bio-Sciences, Madurai Kamraj University.	1983-84	Molecular Genetics, Immunology, Plant pathology and plant physiology.	Ultracentrifuge, Liquid scintillation counter.
36.	Department of Micro biology, M.S. University of Baroda.	1983-84	Industrial Microbiology and Microbial Genetics.	HPLC, Electron microscope, Lyophilizer, Scintillation counter.
37.	PG School of Biological Studies, Ahmednagar College (Poona Univ.)	1983-84	Evolutionary Genetics.	NMR spectrometer, Refrigerated high speed centrifuge with rotors. UV Spectrophotometer with special attachment for study of DNA melting profiles & DNA reassociation. Radioimmunoassay & Fraction plot accessories for the liquid scintillation counter.
38.	Department of Biochemistry Osmania University.	1984-85	Chemistry & Biochemistry of amino peptides and proteins, metal toxicity and fungal metabolism.	UV-VIS recording spectrophotometer, Processor controlled liquid scintillation system, AAS Orion ion analyser & electrodes for F, NIP NO ₃ CA etc., HPLC 3-Ternary gradient model LC-4A.
39.	Entomology Research Institute, Loyola College, Madras University, Madras.	1984-85	Host specificity in relation to insect-plant interaction.	HPLC, Refrigerated centrifuge, UV spectrometer, Mini bomb calorimeter.
40.	Department of Micro biology & Cell Biology Indian Instt. of Science, Bangalore.	1984-85	Gene structure, Organisation and functions in micro-organism and Eukaryotes, microbial metabolism & applied Microbiology Immunology of pathogenic organism, Tyn-cruimmunology immunodiagnostic technology.	Electron microscope model EM-109 R with ultra microtome, Fast protien liquid chromatography system, fermenter, UV-Spectrophotometer, UV transilluminator with camera, high voltage electrophoresis system.
41.	Department of Biochemistry, Indian Instt. of Science, Bangalore.	1984-85	Lipids and Biomembranes, molecular Endocrinology, Neurochemistry and Bio-energetics.	High speed centrifuge, Liquid scintillation counter, Ultra centrifuge with rotors, spectro fluorimeter, HPLC.
42.	Department of Zoology, Calcutta University.	1985-86	Genetics and Vertebrate Endocrinology.	Image analyser, HPLC.
43.	Department of Zoology, Delhi University.	1985-86	Cell and developmental Biology, reproductive Endocrinology, Physiology and Toxicology.	Flow cytometer, HPLC, Tissue culture, Hybridoma facility, GLC, Liquid scintillation counter.
44.	Department of Zoology, Banararas Hindu University, Varanasi.	1985-86	Reproductive Physiology & Endocrinology, Biochemistry and Cytogenetics.	Liquid scintillation counter, Gamma counter, Ultra centrifuge, Plasma-2000 spectrometer, UV spectrophotometer, X-ray machine, High speed refrigerated centrifuge.
45.	Department of Botany, Delhi University.	1985-86	Biology of reproduction plant physiology, Molecular Biology	Growth chambers, Liquid scintillation counter, Densitometer, Polarizing microscope.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
46.	Department of Botany, Banaras Hindu University.	1985-86	Algology and Ecology	Amino-acid analyser, GLC, C,N, H-analyser, High-voltage, Electrophoresis.
47.	School of Marine Sciences, Cochin University.	1985-86	Costal and Esturine, Oceanography and Coastal water and mud banks.	Electron microscope, Liquid scintillation counter, scintillation balance, Differential thermal analyser, X-ray diffraction analyser C,N,H analyser, Proton precision magnetometer.
48.	Molecular Bio-physics Unit, Indian Instt. of Science, Bangalore.	1985-86	Bio-Molecular structure and interaction.	Rotating anode, X-ray generator, Micro processor controlled light resolution CD spectrometer, Protein sequenator, Liquid scintillation counter.
49.	Department of Bio-Chemistry, M.S. University	1986-87	Nutrition and Nutritional Bio-Chemistry. Neurochemistry.	Spectrophotometer, Refrigerated & Ultracentrifuges, Liquid scintillation counter.
50.	Department of Bio-Chemistry, Lucknow University.	1987-88	Plant Bio-chemistry and Enzymology	Spectrophotometer,, Super speed refrigerated centrifuge, Ultrascan laser densitometer, Total chromatographic system..
51.	Department of Bio-Chemistry, Calcutta University.	1987-88	Nutrition Bio-chemistry and Microbiology, Physiology	Ultracentrifuge, Refrigerated centrifuge, HPLC, Liquid scintillation counter, Gamma counter with minigama & RIA.
52.	Deptattment of Botany Patna University	1987-88	Mycology, Pathology & Algae.	TEM, High speed centrifuge, UV/VIS spectrophotometer-cum-scanner, DNA sequencing unit, Fermentation vessel with controls.
53.	Department of Botany Bhagalpur University	1987-88	Mycotoxicology, & Environmental Biology.	Lyophilizer, Midget electrophoresis with laser densitometer, HPLC, Flow injection analysis system.
54.	C.A.S. in Botany University of Madras	1987-88	Mycology, Plant Pathology and Algae.	UV-VIS spectroflurimeter, Ultratome, Liquid scintillation system, Dissolved oxygen monitor, Ultrasonic disintegrator.
55.	Department of Marine Biology, Annamalai University	1987-88	Marine Microbiology & Toxicology.	HPLC, Microbial identification system, Plasma spectrophotometer, High speed refrigerated centrifuge.
56.	Department of Zoology Poona University	1987-88	Only postgraduate teaching	Electron microscope with other accessories and photographic unit.
57.	Department of Zoology Gujarat University	1987-88	Cell & Radiation Biology	Chromosome work station for automatic funding, counting, karyotyping, Binocular microscope, Interactive image analyser, MCP control unit for scanning.
EARTH-SCIENCES				
58.	Department of Geology, Presidency College, Calcutta.	1984-85	Study of Crustal evolution and metalogenesis in some precambrian sheild.	ICPL, Thermal ionisation mass spectrometer.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
59.	Department of Geology, Gauhati University.	1984-85	Petrology (Sedimentary, metamorphic, Igenous and coal)	AAS with tubes, Flame photometer, Image analyser with photomicroscope projection attachment.
60.	Department of Geology, Kumaon University.	1984-85	Geophysical, geomorphological and environmental investigation of the Gaula river in the outer lesser Himalaya, Natural resources and environmental degradation, Assessment through remote sensing of the outer range of lesser Himalaya	DTA/DTG, Additive Colour viewer, Transfexscope (APT-1 type)
61.	Department of Geology, MS University of Baroda.	1984-85	Quaternary Geology	AAS, EDX qualitative and quantitative analyser (attachement to the SEM), LKB liquid scintillation counters (for C ₁₄ & H ₃), Digital type resistivity meter, Portable drilling unit for sample collection.
62.	Department of Earth Scs. University of Roorkee.	1984-85	Engg. Geophysics, Engg. Geophydrology, Engg. Geology.	Mobile laboratory, ICPL, Spectral data analyser.
63.	Department of Geophysics, Osmania University.	1985-86	Exploration Geophysics.	Pulse EM system, Multi sensor well logging unit (Truck mounted with sensor).
64.	Department of Geology Jadavpur University	1984-85	Economics Geology, Petrology, Minerology and Geo-Chemistry.	ICP unit, DTA/TGA.
65.	Department of Geology Punjab University	1986-87	Exploration Geology and Geo-Chemistry, Himalayan Geology	Stereoscopic of inocular microscopes, ICPS, Mass spectrometer.
66.	Department of Geology, University of Mysore.	1987-88	Palaeontology & Geochemistry of Precambrian rocks.	Microscopes, Electron probe microanalyser with attachment, Chiller, UPS, Logitech. (a)
67.	Department of Geology, Banaras Hindu University	1987-88	Micro-palaeontology Stratigraphy	SEM* with accessories
68.	Department of Applied Geology, Indian School of Mines, Dhanabad.	1987-88	Structural Geology & Mineral Exploration	XRD with Texture Gonimeter, ICP sequential spectrometer, Logitech section cutting & polishing machine, Rock strength testing machine.
MATHEMATICS				
69.	Department of Maths, Punjab University.	1984-85	Number theory, Algebra, analysis (Pure Maths, deptt), Magneto hydrodynamics (Applied Maths Deptt.)	—
70.	Department of Mathematics, Ramanujan Instt., Madras University	1985-86	Analysis, Algebra, Geometry, Topology.	—
71.	Department of Mathematics. University of Delhi	1987-88	—	—
72.	Department of Statistics Poona University	1987-88	—	—

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
73.	Department of Maths, & Statistics, University of Allahabad	1987-88	—	—
ENGINEERING/TECHNOLOGY				
74.	Department of Civil Engg. University of Roorkee.	1985-86	Transportation Engg., Environmental Engg., Remote Sensing and Photogrammetric Engg.,	Temperature and humidity control system for transportation laboratory, Multipurpose mobile laboratory, Terrestrial plotter with digital read-out, Zoom transferoscope.
75.	Department of Civil Engg., Indian Instt. of Science, Bangalore.	1985-86	Hydromechanics and water resources.	Tri-axial and consolidation testing facility, differential thermal analyser and surface area measuring device, Laser Doppler anemometer, Dynometer turbine. Calcorup plotter.
76.	Department of Chemical Engineering, Anna University.	1984-85	Process Development Transport processes, Crystal Growth	GC, AAS, HPLC, Modular crystal growth unit, Rotary drier complete with drive, tilting arrangement, electrically heated and with blower.
77.	Deptt. of Chemical Tech. Division of Chemical Engg., University of Bombay.	1984-85	Multiphase reaction, Multiphase reactors, Separation processes.	Fourier transform infrared, Liquid nitrogen plant, Core facilities for membrane processes, Laser-Doppler anemometer.
78.	Department of Electrical Engineering, Indian Instt. of Science, Bangalore.	1984-85	Power Electronics & Drives, Remote sensing Singal & image processing.	Minicomputer system, Logic Analyser, Current transducers, Torque and Speed transducers, High resolution VCR with colour camera and colour monitor, On-board power supply for the VCR and camera, RGB video digitizer, Extension of the image processing system.
79.	Department of Electrical Engineering, Roorkee Univ.	1985-86	Measurement and instrumentation with an emphasis on industrial instrumentation and power systems, process instrumentation.	Multiuser microporcessor development system, General purpose data acquisition system. computer with perriferial attachment power system stimulator with relays.
80.	Department of Electronics Engineering, Instt. of Technology, Banaras Hindu University.	1984-85	Microwave Engineering, Communication system Engineering.	Signal generator built-in doubler, Automatic scalar network analyser, Ultra high vacum system, Suction pump and turbomolecular pump having a mass analyser and ovening facility, Hydrogen plant with molecular gas purifier, Contactless resistvity measurement equipment.
81.	Deptt. of Electrical Communication Engineering, Indian Instt. of Science, Bangalore.	1984-85	Computer-software, hardware and optical communication, digital circuits.	32-bit minicomputer, Lasers and accessories Fibre-optic test-set-up. Programmable digital test and measuring instruments.
82.	Deptt. of Electronics Engineering, Roorkee University.	1985-86	Communication systems and control and guidance (with an emphasis on pictures and speech processing and digital control)	Spectrum analyser, Digital picture storage system with camera and monitor, 16-bit microprocessor development system, Digital network, analyser.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
83.	Deptt. of Mech. & Ind. Engg., Roorkee University.	1985-86	CAD/CAM, welding engineering, Refrigeration and air-conditioning.	CNC/Milling Machine, CAD/CAM facility, 2-D/3-D drafting system, solid & surface, modelling & manufacturing, 6-axis Robot, Drafting plotter.
84.	Department of Production Engineering, Jadavpur University.	1985-86	Manufacturing systems, Automation and robotics.	CNC-II, Vision system, Auto-Inspect System, Censors and Actuators.
85.	Department of Metallurgy, Indian Instt. of Science, Bangalore.	1985-86	Mineral processing, Hydro-metallurgy pyro-metallurgy, computer modelling, metallic glasses.	Impact tester, X-ray diffractometer, Lathe & shaping machine, Electro-Chemical measurement console, UV-visible Spectrometer, High-temperature impedance spectrometer, Gas analysis chromatograph, Analytical scanning electron microscope.
86.	Department of Metallurgical Engineering, Banaras Hindu University.	1985-86	Rapid solidification and metallic glasses, Deformation and fracture, phase stability and phase transformation process metallurgy.	Surface area analyser, Instron testing machine, Dilatometer, Quantitative image analyser, High-speed movie camera, Lathe and milling machine.
87.	Department of Earthquake Engineering, Roorkee University	1984-85	Structural Dynamics, Soil and Rock Dynamics Engineering, Seismology & Seintectonics.	15T overhead cross with supporting system, High speed and high resolution data acquisition and processing system dedicated to dynamic testing set up including airconditioned housing, Shake table platform with foundations and platforms for model fabrication, Motor set up for controlled power supply for vibration testing/processing of data.
88.	Department of Mining Engg. Indiaa School of Mines, Dhanbad.	1986-87	Rock mechanics and ground control, Mining systems and techniques, Mine environment.	Ventilation with word leonard set for speed control, Remote monitor for slacks and fire aross, Accoustics emission equipment for rock noise and failure, Modern rock blasting facility with high speed camera, Portable coring rig.
89.	Department of Mining Engg., Instt. of Technology, Banaras Hindu University.	1986-87	Mine planning and design, Exploration and Exploitation.	I.C.D. emission spectrometer, Particle size analyser and sinslin-II, Airbom dust measruinmg unit.
90.	Department of Electrical Engg. Jadavpur University.	1986-87	Power system control, measurment and instrumentation.	Super micro-computer with multiterminal facilities, Real time data-acquisition and local area networking facility, Multichannel Programmable polygraph, image processing systems, Mini-computer.
91.	Centre for Water Resource Anna University.	1987-88	Ground Water Resources and Water Resources Management	Bore hole deep water camera with VCR and accessories, Scaler water quality analyser, AAS, SAS Terrameter Loggerunit and VES software, Exploration rig, Drag balance and Signal conditioner cum balancing unit, Electronic distance meter.

APPENDIX-XIII (Contd.)

<i>S. No.</i>	<i>Name of the Department/ University</i>	<i>Year of Support</i>	<i>PG Education and Research (Thurst Area)</i>	<i>Major Equipment provided</i>
1	2	3	4	5
92.	Civil Engineering Department, Jadavpur University	1987-88	Structural Engineering & Water Resources Management	H & V Shake Tables, Electronic Triaxial, Wind Tunnel with measuring equipment/instruments with micro-computer.
93.	Chemical Engineering Department, Indian Institute of Science.	1987-88	Multiphase phenomenon	Computer system Video System, Haake Viscometer, HPLC, Pressure reactor, Laser holograph, Minimax polymer evaluation system.
94.	Electronics and Communication Department, Cochin University of Science and Technology	1987-88	Microprocessor application & Microwave Antennas	Image Scanner, CAD System (PCB design system), LAN System, RF network analyser Polar display with aumillary power supply Broad band microwave units, Microwave frequency counter.
95.	Pharmaceutical Sciences Department Punjab University	1987-88	Pharmaceutical Chemistry and Pharacology.	HPLC, NMR, IR, UV-Double Beam Spectrophotometer, Precision Polarimeter, Computerised animal activity monitor with accessories, Electromagnetic blood flow meter
96.	Metallurgical Engineering Department Roorkee University	1987-88	Metal casting Technology	Vacuum induction melting Unit: Capacity 5 kg. Vaccum 10-5 Torr., Dissolved gas analyser (O,N,H), Water testing facility, Corrosion meter, chamber and potentiostat.
97.	Department of Aerospace I.I.Sc. Bangalore.	1988-89	Aerodynamic	Aerodynamic.
98.	Institute of Medical Science	1988-89	Medical Science Cancer Research	Teaching, Training, Treatment.

APPENDIX - XIV (a)

**List of Subjects (Category 'A') for which Junior Research Fellowship
Examination was held on September 11, 1988.**

<i>Code No.</i>	<i>Subject</i>
1.	Economics
2.	Political Science
3.	Philosophy
4.	Psychology
5.	Sociology
6.	History
7.	Anthropology
8.	Commerce
9.	Education
10.	Social Work
11.	International Relations including Defence / Strategic Studies
12.	Home Science
13.	Maithili
14.	Bengali
15.	Hindi
16.	Kannada
17.	Malayalam
18.	Oriya
19.	Punjabi
20.	Sanskrit
21.	Tamil
22.	Telugu
23.	Urdu
24.	Arabic
25.	English
26.	Linguistics
27.	Rural Development
28.	Public Administration
29.	Population Studies
30.	Music

APPENDIX - XIV (b)

**List of Subjects (Category 'B') for which Junior Research Fellowship Examination
was held on September 11, 1988.**

<i>Code No.</i>	<i>Subject</i>	<i>Code</i>	<i>Subject</i>
31.	Adult Education	76.	Religious Studies
32.	Work Education	77.	Theology
33.	Andragogy	78.	Mass Communication
34.	Physical Education	79.	Communicative English
35.	Speech & Hearing	80.	Journalism
36.	Business Admn./Management	81.	Dance
37.	Marketing/Marketing Management	82.	Dramatic Arts
38.	Indus. Relations, Personnel Mgt.	83.	Fine Art
39.	Management	84.	History of Arts
40.	Personnel Management	85.	Drawing & Painting
41.	Indian Culture	86.	Musicology
42.	Arab Culture	87.	Karnatak Music
43.	Islamic Studies	88.	Museology
44.	West Asian Studies	89.	Archaeology
45.	South East Asian Studies	90.	Chinese
46.	International Studies	91.	French
47.	African Studies	92.	German
48.	Labour Welfare	93.	Japanese
49.	Labour and Social Welfare	94.	Persian
50.	Industrial Relations/Lab.Welfare	95.	Russian
51.	Industrial Relations	96.	Spanish
52.	Rural Sociology	97.	Dogri
53.	Rural Economics	98.	Gujarati
54.	Rural Services	99.	Marathi
55.	Co-operation	100.	Nepali
56.	Cooperative Management	101.	Rajasthani
57.	Social Dynamics	102.	Assamese
58.	Medical & Psych. Social Work	103.	Manipuri
59.	Demography	104.	Criminology
60.	Urban & Regional Planning	105.	Comparative Literature
61.	Development Planng. & Management	106.	Tamilnadu & Indian Literature
62.	Development Studies	107.	Tribal & Regional Languages
63.	Resource Development	108.	Folk Literature
64.	Econometrics	109.	Tribal Development
65.	Agricultural Economics	110.	Dharam Shastra
66.	Applied Economics	111.	Jyotish
67.	Business Economics	112.	Sidha Jyotish
68.	Mathematical Economics	113.	Mimansa
69.	Law	114.	Navya Vyakaran
70.	Library Science	115.	Navya Nyaya
71.	Peace making	116.	Sahitya
72.	Gandhian Thought	117.	Sankhya Yog
73.	Buddhist Studies	118.	Tulnatamak Darshan
74.	Pali	119.	Accountancy
75.	Prakrit		

APPENDIX-XV

Subject-wise break-up of Successful Candidates at the Examination held on September 11, 1988

<i>Code No.</i>	<i>Subject</i>	<i>No. of Successful Candidates</i>
1.	Economics	69
2.	Political Science	86
3.	Philosophy	45
4.	Psychology	24
5.	Sociology	38
6.	History	86
7.	Anthropology	21
8.	Commerce	46
9.	Education	30
10.	Social Work	12
11.	International Relations including Defence / Strategic Studies	13
12.	Home Science	15
13.	Mathili	2
14.	Bengali	15
15.	Hindi	51
16.	Kannada	9
17.	Malayalam	8
18.	Oriya	4
19.	Punjabi	6
20.	Sanskrit	50
21.	Tamil	11
22.	Telugu	9
23.	Urdu	12
24.	Arabic	5
25.	English	57
26.	Linguistics	6
27.	Rural Development	5
28.	Public Administration	8
29.	Population Studies	6
30.	Music	9
31.	Others	130
	Total	888

APPENDIX-XVI

List of Subjects for which Junior Research Fellowship Examination was conducted jointly by the U.G.C. and C.S.I.R. in January, 1989

<i>Sr. No.</i>	<i>Subject</i>
1.	Physics
2.	Chemistry
3.	Mathematics
4.	Statistics
5.	Earth Sciences
6.	Life Sciences (Botany, Microbiology, Zoology, Bio-Chemistry)

APPENDIX-XVII

List of Centres of Advanced Study in Humanities and Social Sciences as on 31.3.1989

S. No.	Subject	University/Instt.	Thrust area(s)
1.	Economics	Bombay University	Public Finance & Industrial Economics
2.	Economics	Delhi University	Economics of development & Economic History.
3.	Economics	Gokhale Instt.	Agricultural Economics.
4.	Linguistics	Annamalai Univ.	Dravidian Linguistics.
5.	History	A.M.U., Aligarh	Medieval Indian History.
6.	Sanskrit	Poona Univ.	Sanskrit Literature.
7.	Philosophy	Madras Univ.	Advaita & allied system of Philosophy.
8.	Education	M.S. Univ. of Baroda.	Education research.
9.	Psychology	Utkal Univ.	Educational Psychology and Social Psychology.
10.	Psychology	Allahabad Univ.	1) Applied and experimental social psychology; 2) Organisational psychology.
11.	Sociology	Delhi Univ.	Sociology
12.	Archaeology	Deccan College, Pune.	Indian archaeology.
13.	Philosophy	Jadavpur Univ.	1) Theory of knowledge and reality - Indian & Western; 2) Logic & language - Indian & Western; 3) Ethics, Religion, Social and Political Philosophy - Indian & Western 4) Philosophy of mind.
14.	Anthropology	Ranchi Univ.	1) Advanced anthropological Theory & Methodology; 2) Macro-analysis, qualification methods and system analysis.
15.	Linguistics	Osmania Univ.	1) Historical and Comparative method (Indo-Aryan and Dravidian) 2) Phonetics (linguistics and experimental) 3) Contact and convergence study with special reference to Munda, Dravidian and Indo-Aryan Languages in Central India. 4) Socio-Linguistics and Applied Socio-Linguistics w.s.r.t. Language teaching, literacy & translation. 5) Psycholinguistics.

APPENDIX-XVIII

List of Departments of Special Assistance in Humanities and Social Sciences as on 31.3.1989

<i>S. No.</i>	<i>Subject</i>	<i>University/Instt.</i>	<i>Thrust Area(s)</i>
1.	Commerce	AMU, Aligarh	1) Enterpreneurial studies in backward regions and weaker sections; 2) Energy & Water Management.
2.	-do-	Andhra Univ.	Investigation of the problems of local industries in A.P.
3.	-do-	Allahabad Univ.	1) Finance & Accounting; 2) Public enterprise management; 3) Marketing.
4.	-do-	Banaras Hindu University.	Corporate studies, Banking, Insurance & Finance.
5.	-do-	Calcutta Univ.	1) Accounting & Finance; 2) Economic Environment & Human resources development.
6.	-do-	Delhi Univ.	1) Accounting & Finance; 2) International business; 3) Organisation behavior/human relations.
7.	-do-	Gauhati Univ.	1) Rural development; 2) Accounting & Finance.
8.	-do-	Rajasthan Univ.	1) Accounting & Business data processing. 2) Rural management; 3) Banking & institutional finance.
9.	Economics	Andhra Univ.	1) Agricultural economics & cooperation; 2) Regional & Urban economics; 3) Public economics.
10.	-do-	Calcutta Univ.	Urban Economics.
11.	-do-	Jadavpur Univ.	1) Regional economics studies with special emphasis on (a) Trade & industry; (b) Transport energy.
12.	-do-	MS Univ. of Baroda.	1) Economics of education & human resources; 2) Growth processes of Indian economy.
13.	-do-	Marathwada	1) Regional development; 2) Agricultural Economics; 3) International Economics.
14.	-do-	Presidency College, Calcutta	Indian Economy.
15.	-do-	Punjabi Univ.	1) Regional economics; 2) Economics of Socialism.
16.	-do-	S.V. Univ. Tripuati.	1) Labour economics; 2) Agricultural economics.
17.	-do-	Sardar Patel Univ.	Agricultural economics.
18.	-do-	Osmania Univ.	Economics of planning.
19.	-do-	Madras Univ.	Economics of applied welfare & applied development.
20.	-do-	Utkal Univ.	Rural development & Regional Planning.
21.	Pol. Science	Calcutta Univ.	Indian politics w.s.r.t. regional politics.

APPENDIX-XVIII (Contd.)

<i>S. No.</i>	<i>Subject</i>	<i>University/Instt.</i>	<i>Thrust Area(s)</i>
22.	-do-	Delhi Univ.	1) Indian political studies; 2) Peace studies; 3) Political theory; 4) Politics & developing countries; 5) Development administration in India.
23.	-do-	Jadavpur Univ.	1) International relations; 2) Defence & strategic studies.
24.	-do-	MS Univ. of Baroda	1) International relations theory/International political economy/World Over studies; 2) Comparative foreign policy studies with particular emphasis on Indian foreign policy analysis; 3) International organisations & contemporary & projected dimensions of the International legal order; 4) Strategic studies of defence analysis 5) Conflict analysis & pace research studies.
25.	-do-	Rajasthan Univ.	Indian political traditions and contemporary political structures and processes in India.
26.	Ancient History	Allahabad Univ.	1) Socio-economic history of India 2) Archaeology.
27.	Modren History	Calcutta Univ.	1) Economic history of Modern India; 2) Modern Indian history w.r.t. Agrarian History, Social history & Intellectual history.
28.	History	MS Univ. of Baroda	1) Medieval archaeology & history of Modern India; 2) Medieval art, archaeology, Eqigraphy and Nunismatics.
29.	-do-	Mysore Univ.	Pre modern & Modern South Indian history w.p.r.t. Socio-economics history of the region.
30.	Art History	MS Univ. of Baroda	Indian & Western art w.s.r.t. Vashta shastra & Vashtushilpa.
31.	History	Jawaharlal Nehru Univ.	Indian history.
32.	-do-	Patna Univ.	Socio-economic history of Medieval Indian w.s. emphasis on urban problems.
33.	-do-	Hyderabad	Social & Cultural history of Deccan through ages.
34.	Philosophy	Banaras Hindu Univ.	1) Different schools of Indian philosophy in the context of Indian culture; 2) Indian religion with a comparative orientation; 3) Philosophy of languages grammer.
35.	-do-	Delhi Univ.	1) Indian Logic & epistemology including the philosophy of languages; 2) Social philosophy w.s. emphasis on Indian thinking.
36.	-do-	Panjab Univ.	1) Social philosophy including the sociolistic thought in the context of Indian social reality; 2) Philosophy of culture including aesthetics and ethics w.s.r.t. Indian Philosophical traditions.
37.	-do-	Rajasthan Univ.	1) Logic & Philosophy of Science; 2) Indian Philosophy; 3) Philosophy of Law.
38.	-do-	Visva-Bharati	1) Philosophy of art & culture; 2) Mataphysics & religion.

APPENDIX-XVIII (Contd.)

<i>S. No.</i>	<i>Subject</i>	<i>University/Instt.</i>	<i>Thrust Area(s)</i>
39.	Philosophy	Utkal Univ.	1) Analytic studies of basic values; 2) Analytic studies of basic concept in Indian Philosophy
40.	-do-	Allahabad Univ.	1) Schools of Vedanta; 2) Logic & epistemology.
41.	-do-	Andhra Univ.	Philosophy, religion & Culture w.s.r.t. Vedanta & Budhism.
42.	-do-	Poona Univ.	1) Logic & Philosophy of science; 2) Classical Indian Philosophy; 3) Socio-cultural & moral philosophy.
43.	Sociology	Jawaharlal Nehru Univ.	1) Sociology of development & modernisation; 2) Sociology of profession & professionalization; 3) Sociology of Social movement & mobilisation; 4) Sociology of Agrarian structures and processes; 5) Studies of marginal group; minorities and ethics communities.
44.	-do-	Panjab Univ.	1) Development studies; 2) Urban studies; 3) Population studies.
45.	-do-	Ravi Shankar	1) continuity change in folklore & traditional culture in the following aspects; 2) Study of traditional folkculture; 3) Studies of elite tradition; 4) Dynamics of Indian Society.
46.	-do-	Bangalore Univ.	1) Dynamics of Rural transformation; 2) Institution and process of Development
47.	-do-	Osmania Univ.	Rural-urban development
48.	-do-	Poona Univ.	Sociology of Development.
49.	Psychology	Delhi Univ.	1) Cognitive Processes; 2) Applied Social Psychology.
50.	-do-	Gorakhpur	1) Enviornment and Human Development. 2) Experimental theoretical Psychology.
51.	Anthropology	Delhi Univ.	Human Ecology.
52.	Anthropology	Punjabi Univ.	Anthropology of North West India Biological & Souseological Dimensions (w.r.t. Punjab, Haryana & H.P.)
53.	-do-	Utkal Univ.	Anthropology of Regional Development with special reference to Orissa.
54.	Education	Himachal Pradesh Univ.	Education of the disadvantaged.
55.	-do-	Kerala Univ.	Studies in learning curriculum and educational technology.
56.	-do-	Kurukshetra Univ.	1) Educational Management; 2) Educational Technology.
57.	Linguistics	Delhi Univ.	1) Theoretical linguistics; 2) Sociolinguistics; 3) Applied Linguistics.
58.	-do-	Deccan College, Pune.	1) Experimental phonetics and phonology; 2) Grammer & semantics of South Asian Linguistics.

APPENDIX-XVIII (Contd.)

<i>S. No.</i>	<i>Subject</i>	<i>University/Instt.</i>	<i>Thrust Area(s)</i>
59.	Sanskrit	Jadavpur Univ.	1) Literature and literary criticism & Philosophy of language; 2) Indian philosophy.
60.	-do-	Karnatak Univ.	1) Litt. & literary criticism; 2) Vedanta system of philosophy.
61.	Comparative Literature	Jadavpur Univ.	1) Comparative Indian literature 2) The third World literatures; 3) Translation; 4) East-West relations.
62.	Urdu	Kashmir Univ.	1) Culturology of Urdu literature with special reference to Kashmiri language & Litt. 2) Urdu journalism & Mass Media.
63.	Telugu	S.V.Univ. Tirupati	1) Folklorestic studies; 2) Comparative study of south Indian literatures.
64.	Tamil	Madurai Kamraj Univ.	1) Indian comparative literary studies; 2) Tamil Nadu Folklore studies; 3) Regional mass communication.
65.	Punjabi	Punjabi Univ.	1) Persian & Sanskrit sources Punjabi Litt. 2) Poetic both Sanskrit & Western Folkloristics & Semiotics; 3) Comparative litt. (w.r.t. MIL). 4) Courses in creative writing and literary appreciation. (आधुनिक भारतीय भाषाओं के संदर्भ में)
66.	Hindi	Sardar Patel Univ.	1) Linguistics and linguistic approach to literature; 2) Comparative literature; 3) Drama & Dramaturgy.
67.	-do-	Allahabad Univ.	Modern Hindi Poetry.
68.	Gujarati	SNDT Women Univ.	Modern Gujarati Literature.
69.	Bengali	Burdwan Univ.	1) Language & Culture of Barh. 2) Comparative study of the Litt. of Eastern Indian languages.
70.	Kannada	Mysore Univ.	1) Comparative literature. 2) Classical studies. 3) Folklore.
71.	Malayalam	Kerala Univ.	1) Comparative Indian literature and Literary criticism. 2) Comparative language studies. 3) Socio-cultural factors of literary evolution. 4) Folklore studies. 5) Genre studies, Thematic studies, Epoch & period studies.
72.	M.C. & Journalism	Osmania Univ.	Print and Communication Research.
73.	-do-	Bangalore Univ.	Audio Visual Research.

APPENDIX-XIX

List of Departmental Research Support Projects in Humanities and Social Sciences as on 31-3-1989

<i>S. No.</i>	<i>Subject</i>	<i>University/Instt.</i>	<i>Thrust Area(s)</i>
1.	Marathi	Marathwada Univ.	Ancient literature-Mahanubhava literature, Modern literature, Folk Literature
2.	Oriya	Sambalpur Univ.	Folk literature; comparative literature; Modern literature (Poetry, fiction, etc.)
3.	Assamese	Gauhati Univ.	Survey of dialects of Mayang & Doom Dooma area. Editing of old Manuscripts, collection & analysis of Folklore material. Study of linguistic variation in South Kamrup & South Goalpara.
4.	Music & Musicology	Banaras Hindu Univ.	Music & Musicology.
5.	Education	SNDT Women Univ.	Development & Tryout of a package of techniques & materials for identifying & developing research aptitudes among PG students of education.
6.	Philosophy	Hyderabad Univ.	Philosophy of language & Philosophy of Religion.
7.	Education	South Gujarat	Use of Tech. for developing the programme in group guidance. Development of try out multi media package on population education.
8.	Philosophy	N.E.H.U.	Rationality, justification & Tribal Thought Indian Philosophy of Religion.
9.	Anthropology	Calcutta Univ.	Man & Environment : An Anthropological Study.
10.	-do-	Lucknow Univ.	Social Anthropology & Morphological Genetic characters in Physical Anthropology.
11.	Geo Politik	Panjab Univ.	Geo Politik
12.	Pol. Science	Osmania Univ.	Political Economy of India & State Politics in India.
13.	History	Garhwal Univ.	Multi-disciplinary Archaeological studies in Mid. central Himalaya People & their response to material & environment.
14.	Economics	Jammu Univ.	Macro-Economic Analysis Agricultural Economics.

APPENDIX – XX

University-wise List of Centres of Advanced Study in Science, Engineering and Technology
as on 31.3.1989.

<i>Sl.No.</i>	<i>University</i>	<i>Name of the CAS</i>
1.	Aunamalai	1. Marine Biology*
2.	Banaras Hindu University	(1.) Zoology (2) Botany (3) Met. Engn.
3.	Bombay	(1.) Applied Chemistry* (2) Mathematics*
4.	Calcutta	(1.) Botany (2) Chemistry* (3) Radio Physics & Electronics (4) Applied Maths
5.	Delhi	(1.) Botany* (2) Zoology* (3) Physics* (4) Chemistry*
6.	I.I.Sc. Bangalore	(1.) Molecular Biophysics (2) Bio-Chemistry (3) Inorganic & Physical Chemistry (4) Solid State Chemistry (5) Physics.
7.	Jadavpur	1. Geology
8.	Madras	1. Maths* (2) Botany*
9.	Panjab	(1.) Maths (2) Geology* (3) Chemistry*
10.	Poona	(1.) Physics
		Total = 26 CAS

* Completed 15 years

APPENDIX-XXI

University-wise List of Departments of Special Assistance in Science (DSA) Engineering and Technology as on 31.3.1989

<i>Sl.No.</i>	<i>University</i>	<i>Departments</i>
1.	Andhra	(1) Physics (2) Botany (3) Zoology (4) Geology (5) Nuclear Physics
2.	Anna	(1) Chemical Engg. (2) Water Resources Engg. (3) Env. Engg. (4) Civil Engg. (5) Electrical Engg.
3.	Aligarh Muslim Univ.	(1) Geography (2) Physics (3) Maths (4) Wild Life Biology (Zoology)
4.	Allahabad	(1) Chemistry (2) Botany (3) Maths (4) Physics
5.	Banaras Hindu Univ.	(1) Physics (2) Geography (3) Bio-Science(IMS) (4) Mining Engg. (5) Caramic Engg. (6) Electrical Engg. (7) Electronic Engg.
6.	Bangalore	(1) Mathematics (2) Zoology
7.	Bombay	(1) Chemical Engg.
8.	Calcutta	(1) Physics (2) Zoology (3) Geology
9.	Delhi	(1) Geology
10.	Gujarat	(1) Zoology
11.	Hyderabad	(1) Organic Chemistry (2) Inorg & Physical Chemistry (3) Physics
12.	I.I.Sc. Bangalore	(1) Maths (2) Electrical Engg. (3) Metallurgical Engg. (4) Civil Engg. (5) Organic Chemistry (6) Mechanical Engg. (7) Automation Engg. (8) Aerospace Engg. (9) Electronics & Electrical Communication.
13.	I.S.M. Dhanbad	(1) Mining Engg.
14.	Jadavpur	(1) Maths (2) Chemistry (3) Production Engg. (4) Electrical Engg.
15.	Jammu	(1) Physics
16.	Jawaharlal Nehru Univ.	(1) Life Science
17.	Kalyani	(1) Botany
18.	Kerala	(1) Botany (2) Bio-Science
19.	Kumaon	(1) Geology
20.	Lucknow	(1) Biochemistry (2) Botany
21.	Madras	(1) Chemistry (2) Physics (3) Bio-physics
22.	M.K. University	(1) Bio-Science (2) Maths
23.	M.L. Sukhadia	(1) Geology
24.	Marathwara	(1) Zoology
25.	Mysore	(1) Geology (2) Zoology
26.	M.S. University of Baroda	(1) Bio-Chemistry (2) Microbiology (3) Geology
27.	Nagpur	(1) Pharmacy
28.	Osmania	(1) Geography (2) Chemistry (3) Genetics

APPENDIX-XXI (Contd.)

<i>Sl.No.</i>	<i>University</i>	<i>Departments</i>
29.	Patna	(1) Botany
30.	Panjab	(1) Pharmacy (2) Physics (3) Zoology (4) Botany
31.	Poona	(1) Chemistry (2) Maths (3) Statistics (4) Zoology
32.	Presidency Collage Calcutta – 700073	(1) Geology
33.	Rajasthan	(1) Zoology (2) Chemistry (3) Botany
34.	Roorkee	(1) Physics (2) Earthquake Engg. (3) Civil Engg. (4) Mechanical Engg. (5) Earth Sciences (Geology)
35.	Sardar Patel University.	(1) Chemistry
36.	Saurashtra	(1) Bio-Sciences.
		<hr/> Total = 96 <hr/>

APPENDIX – XXII

**University-wise List of Departmental Research Support Projects in Science, Engineering & Technology
as on 31.3.89**

<i>S.No.</i>	<i>University</i>	<i>Department</i>
1.	Aligarh Muslim University	Zoology
2.	Andhra	(1) Chemical Engineering (2) Mechanical Engineering
3.	Ahmednagar College	Bio-Chemistry
4.	B.H.U.	(1) Geology and Geophysics
5.	Bangalore	(1) Geology (2) Physics (3) Chemistry
6.	Burdwan	Physics
7.	Bombay	Chemistry
8.	Calcutta	Geography
9.	Cochin	(1) Marine Science (2) Physics
10.	Devi Ahilya Vishwavidyalay, Indore	Life Science
11.	Delhi	Mathematics
12.	Dr. H.S.Gaur Vishwavidyalya	Botany
13.	Gorakhpur	(1) Chemistry (2) Botany
14.	Gujarat	Statistics
15.	Guru Nanak Dev University	(1) Chemistry (Inorg.) (2) Life Science
16.	Indian School of Mines, Dhanbad	Geology
17.	I.I.Sc., Bangalore	(1) Micrology & Cell Biology
18.	Jodhpur	(1) Chemistry (2) Botany
19.	Kalyani	Zoology
20.	Karnataka	Physics
21.	Kumaon	Physics
22.	Lady Irwin College, New Delhi	Home Sceince (Common & Extension)
23.	Lucknow	Geology
24.	Mysore	(1) Botany (2) Statistics
25.	M.S. University of Baroda	(1) Chemistry (2) Zoology (3) Botany (4) Home-Science (Child development)
26.	Nagpur	(1) Geology (2) Zoology
27.	N.E.H.U.	Botany
28.	Osmania	(1) Geology (2) Geophysics (3) Physics (4) Botany
29.	Panjab	(1) Geography (2) Statistics
30.	Patna	Geology

APPENDIX – XXII (Contd.)

<i>S.No.</i>	<i>University</i>	<i>Department</i>
31.	Punjabi	Physics
32.	Rajasthan	Physics
33.	Roorkee	(1) Electronic Engg. (2) Electronics & Communication Engg. (3) Metallurgy (4) Mathematics
34.	Sardar Patel	Botany
35.	Sri Venkateswara	(1) Physics (2) Botany
36.	M.L. Sukhadia	Physics
37.	S.V.T. Home Science College Bombay	Home Science (Food & Nutrition)
38.	Sri Avinashlingam College of Home Science, Coimbatore	Home Science (Home Management)
		Total = 58

APPENDIX-XXIII (a)

List of UGC Curriculum Development Centres
(Science Subjects)

-
- *1. Department of Chemistry
University of Rajasthan
Jaipur.
 2. Department of Earth Sciences
University of Roorkee
Roorkee.
 - *3. The Ramanujan Instt. for Advanced Study in Mathematics
University of Madras
Madras.
 - *4. Department of Geography
Punjab University
Chandigarh.
 - *5. Department of Statistics
Gujarat University
Ahmedabad.
 - *6. Molecular Biophysics Unit
Indian Instt. of Science
Bangalore.
 - *7. Department of Biochemistry
M.S. University of Baroda
Baroda.
 8. Department of Physics
Poona University
Pune.
 9. Department of Botany
Calcutta University
Calcutta.
 10. Department of Zoology
Gujarat University
Ahmedabad.

* Indicates disciplines in which model curricula have been prepared.

APPENDIX XXIII (b)

List of UGC Curriculum Development Centres
(Humanities & Social Sciences Subjects)

-
- | | |
|---|---|
| *1. Department of Economics
University of Bombay
Bombay. | *10. Performing Arts (Music & Dance)
Sangeet Bhavan
Visva Bharati
Shantiniketan. |
| 2. Department of History
Patna University
Patna. | *11. Department of Plastic Arts
Banaras Hindu University
Varanasi. |
| *3. Department of Philosophy
Jadavpur University
Calcutta. | *12. Department of Family and
Child Welfare
Tata Instn. of Social Sciences
Deonar, Bombay. |
| *4. Department of Extension Services
Central Instn. of English & Foreign Languages
Hyderabad. | *13. Department of Hindi
Banaras Hindu University
Varanasi. |
| *5. Department of Psychology
Utkal University
Bhubaneswar (Orissa). | 14. School of Languages
Jawaharlal Nehru University
New Mehrauli Road
New Delhi. |
| *6. Department of Anthropology
Ranchi University
Ranchi. | *15. Department of Sanskrit
University of Poona
Pune. |
| 7. Department of Political Science
M.S. University of Baroda
Baroda. | *16. The Indian Law Institute
(University of Delhi)
Bhagwandas Road
New Delhi. |
| *8. Department of Education
Kerala University
Trivandrum. | *17. Department of Urdu
Aligarh Muslim University
Aligarh. |
| *9. Department of Commerce
Allahabad University
Allahabad. | |
-

* Indicates disciplines in which model curricula have been prepared.

APPENDIX – XXIV

**Grants paid to Universities during 1988-89
(Major Head-wise) Under Plan Engg. & Tech. & Section III**

(Rupees in lakhs)											
Sl. No.	Name of Universities	Development linkages between different Sectors	Schemes for Quality improvement of Edn.	Programme for quality improvement of research	Programme to Reduce disparities	Programme for improvement of Management	Total	Engg. & Tech.	Total	Section III	Grand Total,
	Central Univ.	Sector-A	Sector-B	Sector-C	Sector-D	Sector-E	Total	Sector-F	Total	Section-III	
1.	2	3	4	5	6	7	8	9	10	11	12
1.	Aligarh	2.05	80.71 *0.27	15.19	0.10	-	98.05 *0.27	82.46	180.51	-	180.51 *0.27
2.	B.H.U.	11.30	77.81 *0.04	166.23	-	-	255.34 *0.04	56.12	311.46	-	311.46 *0.04
3.	Delhi	6.37	63.06	133.49	-	-	202.92	7.00	209.92	-	209.92
4.	Hyderabad	2.80	112.64	17.76	-	-	133.20	-	133.20	-	133.20
5.	J.N.U.	5.30	516.55 *0.03	750.75	-	-	1,272.60 *0.03	-	1,272.60	-	1,272.60 *0.03
6.	N.E.H.U.	3.30	151.57	8.46	-	-	163.33	-	163.33	-	163.33
7.	Visva-Bharati	21.18	10.73 *0.06	6.93 *0.30	1.50	-	40.34 *0.36	-	40.34	0.13	40.47 *0.36
8.	Pondicherry	0.70	322.20 *35.09	0.72	1.65	-	325.27	22.20	347.47	-	347.47 *35.09
9.	Jamia Millia Islamia	7.83	27.57	1.18	86.82	-	123.40	58.05	181.45	5.00	186.45
Total		60.83	1362.84 *35.42	1100.71 *0.37	90.07	-	2614.45 *35.79	225.83	2840.28 *35.79	5.13	2845.411 *35.79

* By adjustment

APPENDIX-XXIV (Contd.)

INSTITUTIONS DEEMED TO BE UNIVERSITIES

(Rupees in Lakhs)

Sl No.	Institutions deemed to be University	Sector-A	Sector-B	Sector-C	Sector-D	Sector-E	Total	Sector-F	Total	Section III	Grand Total
1.	B.I.T.S. Pilani	0.25	40.19	5.05	-	-	45.49	18.22	63.71	0.75	64.46
2.	Banasthali Vidyapith	3.15	16.85 *0.35	-	-	-	20.00 *0.35	-	20.00 *0.35	-	20.00 *0.35
3.	B.I.T.S., Mesra, Ranchi	0.20	0.43	0.05	-	-	0.68	8.88	9.56	1.50	11.06
4.	C.I.E.F.L., Hyderabad	-	14.35	-	29.11	-	43.46	-	43.46	-	43.46
5.	Dayalbagh Edl. Instt.	4.44	13.19	5.31	-	-	22.94	4.18	27.12	-	27.12
6.	Gandhi Gram Rural	3.28	17.93	3.09	-	-	24.30	-	24.30	-	24.30
7.	Gujarat Vidyapith	12.05	29.77	2.75	-	-	44.57	-	44.57	-	44.57
8.	Gurukul Kangri	2.25	21.57	0.82 *0.22	-	-	24.64 *0.22	-	24.64 *0.22	-	24.64 *0.22
9.	I.I.Sc. Bangalore	3.00	164.47	327.87	-	-	495.34	93.82	589.16	-	589.16
10.	I.S.M. Dhanbagh	-	1.94	51.15	-	-	53.09	75.00	128.09	0.75	128.84
11.	Indian Instt. of Vet. Sciences.	-	-	0.11	-	-	0.11	-	0.11	-	0.11
12.	Jamia Millia	7.83	27.58	1.18	86.82	-	123.41	58.05	181.46	5.00	186.46
13.	Rajasthan Vidyapith	5.00	14.00	2.35	-	-	21.35	-	21.35	-	21.35
14.	School of Planning & Architecture	-	-	-	0.85	-	0.85	-	0.85	-	0.85
15.	Sh. S.S. Instt. of Higher Education	2.10	42.78	3.89 *0.09	-	-	48.77 *0.09	12.29	61.06	-	61.06 *0.09
16.	Tilak Mahavidyalaya	-	9.40	0.50	-	-	9.90	-	9.90	-	9.90
17.	Tata Instt. of Social Sciences	-	16.21	-	-	-	16.21	-	16.21	-	16.21
18.	Thapar Instt. of Engineering	-	0.10	0.09	-	-	0.19	21.50	21.69	-	21.69
	Total	43.55	430.76 *0.35	404.21 *0.31	116.58	-	995.30 *0.66	291.94	1287.24 *0.66	8.00	1295.24 *0.66

* By adjustment

APPENDIX-XXIV (Contd.)

STATE UNIVERSITIES 1988-89 (PLAN)

(Rupees in Lakhs)

Sl No.	Name of the State & State Universities	Sector-A	Sector-B	Sector-C	Sector-D	Sector-E	Total	Sector-F	Total	Section III	Grand Total
ANDHRA PRADESH											
1.	Andhra University	1.10	40.64	22.59	0.10	-	64.43	46.67	111.10	3.00	114.10
2.	Andhra Pradesh Agricultural University	-	-	0.08	-	-	0.08	-	0.08	-	0.08
3.	Andhra Pradesh Open University	-	-	0.52	-	-	0.52	-	0.52	-	0.52
4.	J.N.T.U., Hyderabad	1.28	14.40	1.04	-	-	16.72	29.82	46.54	-	46.54
			*0.04				*0.04				*0.04
5.	Kakatiya	-	47.66	5.11	1.00	-	53.77	18.95	72.72	-	72.72
6.	Nagarjuna	1.90	20.25	4.83	5.00	-	31.98	-	31.98	-	31.98
7.	Osmania	15.30	52.27	23.76	1.96	-	93.29	64.41	157.70	-	157.70
8.	Sri Krishna Devaraya	1.05	33.29	2.14	1.50	-	37.98	11.20	49.18	-	49.18
			*0.07				*0.07				*0.07
9.	Shri Parvati Mahila	2.30	-	3.11	-	-	5.41	-	5.41	-	5.41
10.	Sri Venkateswara	6.06	63.38	9.71	0.10	-	79.25	21.22	100.47	-	100.47
	Total	28.99	271.89	72.89	9.66	-	383.43	192.27	575.70	3.00	578.70
			*0.11				*0.11				
ASSAM											
1.	Dibrugarh	34.01	-	0.51	-	-	34.52	6.20	40.72	-	40.72
2.	Gauhati	2.10	28.40	9.73	-	-	40.23	-	40.23	-	40.23
	Total	36.11	28.40	10.24	-	-	74.75	6.20	80.95	-	80.95
BIHAR											
1.	Bhagalpur	2.75	45.42	6.88	-	-	55.05	-	55.05	-	55.05
2.	Bihar	0.10	9.05	0.20	-	-	9.35	-	9.35	-	9.35
3.	Birsa Agri.	-	-	0.07	-	-	0.07	-	0.07	-	0.07
4.	K.S. Darbhanga	-	7.00	-	-	-	7.00	-	7.00	-	7.00
5.	L.N. Mithila	-	0.68	0.84	-	-	1.52	-	1.52	-	1.52
6.	Magadh	2.35	40.17	0.19	-	-	42.71	-	42.71	-	42.71
7.	Patna	3.10	35.53	2.32	-	0.20	41.15	10.00	51.15	-	51.15
8.	Rajendra Agri.	-	-	0.09	-	-	0.09	-	0.09	-	0.09
9.	Ranchi	3.60	55.60	1.34	-	-	60.54	-	60.54	-	60.54
	Total	11.90	193.45	11.93	-	0.20	217.48	10.00	227.48	-	227.48
GOA											
1.	Goa University	1.00	14.33	0.18	-	-	15.51	-	15.51	-	15.51
	Total	1.00	14.33	0.18	-	-	15.51	-	15.51	-	15.51
GUJARAT											
1.	Bhavnagar	1.10	17.26	2.24	-	-	20.60	-	20.60	-	20.60
2.	Gujarat	12.29	36.68	13.49	64.91	-	127.37	-	127.37	-	127.37
3.	M.S. University of Baroda	3.05	37.80	13.22	-	-	54.07	23.41	77.48	-	77.48
4.	Sardar Patel	2.78	51.27	9.49	1.00	-	64.54	-	64.54	-	64.54
				*0.15			*0.15		*0.15		*0.15
5.	Saurashtra	0.59	15.26	3.98	1.05	-	21.68	-	21.68	-	21.68
6.	South Gujarat	0.69	60.17	4.21	0.50	-	73.57	0.23	73.00	-	73.80
	Total	20.50	226.44	46.63	68.26	-	361.83	23.64	385.47	-	385.47
				*0.15			*0.15		*0.15		*0.15

* By adjustment

APPENDIX - XXIV (Contd.)

STATE UNIVERSITIES 1988-89 (PLAND)

(Rupees in Lakhs)

1	2	3	4	5	6	7	8	9	10	11	12
HARYANA											
1.	Haryana Agricultural	0.10	0.30	-	-	-	0.40	-	0.40	-	0.40
2.	Kurukshetra	5.20	71.43	4.35	-	-	80.98	1.59	82.57	-	82.57
3.	M.D. University	0.10	42.75	3.57	-	-	46.42	-	46.42	-	46.42
	Total	5.40	114.48	7.92	-	-	127.80	1.59	129.39	-	129.39
HIMACHAL PRADESH											
1.	H.P. University	7.88	76.90	22.72	-	-	87.50	-	87.50	-	87.50
2.	H.P. Agriculture	-	-	-	-	-	-	-	-	-	-
3.	Dr. Y.S.P. University of Hort. and Forestry	-	-	-	-	-	-	-	-	-	-
	Total	7.88	76.90	22.72	-	-	87.50	-	87.50	-	87.50
JAMMU AND KASHMIR											
1.	Jammu	2.35	57.47	5.25	0.24	-	65.31	8.88	74.19	-	74.19
2.	Kashmir	4.10	60.52	1.08	-	-	65.70	-	65.70	0.75	66.45
	Total	6.45	117.99	6.33	0.24	-	131.01	8.88	139.89	0.75	140.64
KARNATAKA											
1.	Bangalore	2.60	69.56	10.62	-	-	82.78	38.16	120.94	3.74	124.68
2/	Gulbarga	1.00	52.01	0.11	-	-	53.12	-	53.12	-	53.12
3.	Karnataka	1.10	65.46	6.62	-	73.18	146.36	-	146.36	0.05	146.41
4.	Mangalore	1.00	1.10	5.73	-	-	7.83	-	7.83	-	7.83
5.	Mysore	8.10	45.45	86.54	-	-	140.09	-	140.09	-	140.09
6.	University of Agriculture Scs., Bangalore	-	0.15	-	-	-	0.15	-	0.15	-	0.15
7.	University of Agriculture Scs., Dharwad	-	0.03	-	-	-	0.03	-	0.03	-	0.03
	Total	13.80	233.76	109.62	-	73.18	430.36	38.16	468.52	3.79	472.31
KERALA											
1.	Calicut	7.10	58.78	4.01	-	0.15	70.04	-	70.04	-	70.04
2.	Cochin University of Tech. & Sc.	10.00	61.39	48.24	-	-	119.63	15.56	135.19	-	135.23
		-	*0.01	-	-	-	-	-	-	-	*0.01
3.	Gandhiji	-	52.15	-	-	-	52.15	-	52.15	-	52.15
4.	Kerala	1.70	57.38	15.64	-	0.20	74.87	-	74.87	-	74.87
5.	Kerala Agril.	-	-	1.18	-	-	1.18	-	1.18	-	1.18
	Total	18.80	229.65	69.07	-	0.35	317.87	15.56	333.43	-	333.43
		-	*0.01	-	-	-	-	-	-	-	*0.01
MADHYA PRADESH											
1.	A.P.S. University	5.14	4.11	3.11	-	-	12.36	-	12.36	-	12.36
2.	Bhopal	4.30	24.66	0.99	-	-	29.95	-	29.95	-	29.95
3.	Devi Ahilya	3.66	52.80	6.44	-	-	62.90	1.50	64.40	0.02	64.42
4.	Dr. Hari Singh Gaur	1.10	75.23	2.82	-	-	79.15	5.45	84.60	-	84.60
5.	Indira Kala Sangeet	0.05	7.30	-	-	-	7.35	-	7.35	-	7.35
6.	J.N. Krishi	-	-	0.07	-	-	0.07	-	0.07	-	0.07
7.	Jiwaji	4.10	45.98	7.08	-	-	57.16	-	57.16	-	57.16
8.	Ravi Shankar	8.26	42.06	2.52	-	-	52.84	-	52.84	0.12	52.96
9.	Rani Durgavati	7.00	44.82	5.86	2.00	-	59.68	-	59.68	-	59.68
10.	Vikram	23.85	44.36	0.89	-	-	669.10	-	69.10	-	69.10
	Total	57.46	341.32	29.78	2.00	-	430.56	6.95	437.51	0.14	437.51

* By adjustment

APPENDIX-XXIV (Contd.)

STATE UNIVERSITIES 1988-89 (PLAN)

(Rupees in Lakhs)

1	2	3	4	5	6	7	8	9	10	11	12
MAHARASHTRA											
1.	Amravati	-	0.02	-	-	-	0.02	-	0.02	-	0.02
2.	Bombay	6.20	48.36	27.90	0.02	-	82.48	47.89	130.37	-	130.37
			*0.08				*0.08		*0.08		*0.08
3.	Marathwada	14.36	48.64	14.66	2.00	-	79.66	-	79.66	-	79.66
				*0.10			*0.10		*0.10		*0.10
4.	Nagpur	2.75	20.77	5.86	2.12	-	31.50	12.60	44.10	-	44.10
5.	Poona	11.66	62.55	112.15	56.31	-	242.67	-	242.67	-	242.67
			*3.00				*3.00		*3.00		*3.00
6.	S.N.D.T.	8.12	28.94	6.66	0.47	-	44.19	66.19	110.38	-	110.38
7.	Shivaji	3.50	52.87	4.34	1.50	-	62.21	-	62.21	0.50	62.71
	Total	46.59	262.15	171.57	62.42	-	542.73	126.68	669.41	0.50	669.91
			*3.08	*0.10			*3.18				*3.18
MANIPUR											
1.	Manipur	3.10	20.85	7.38	0.75	0.20	32.28	-	32.28	-	32.28
	Total	3.10	20.85	7.38	0.75	0.20	32.28	-	32.28	-	32.28
ORISSA											
1.	Berhampur	2.54	67.32	3.28	-	13.14	86.28	-	86.28	-	86.28
2.	Orissa University of Agri. & Tech	-	-	0.04	-	-	0.04	-	0.04	-	0.04
3.	Sambalpur	1.60	3.51	1.39	-	-	6.50	13.38	19.88	-	19.88
4.	Utkal	2.85	5.92	12.93	-	-	21.70	-	21.70	-	21.70
	Total	6.99	76.75	17.64	-	13.14	114.52	13.38	127.90	-	127.90
PUNJAB											
1.	Guru Nanak Dev	0.10	52.33	7.63	-	-	60.06	-	60.06	-	60.06
				*0.02			*0.02		*0.02		*0.02
2.	Punjab	0.10	54.03	95.98	-	-	150.11	5.00	155.11	-	155.11
			*0.01				*0.01		*0.01		*0.01
3.	Punjabi	14.10	57.18	11.23	-	-	82.51	-	82.51	-	82.51
4.	Punjab Agril.	-	-	1.66	-	-	1.66	-	1.66	-	1.66
	Total	14.30	163.54	116.50	-	-	294.34	5.00	299.34	-	299.34
			*0.01	*0.02			*0.03				*0.03
RAJASTHAN											
1.	Jodhpur	0.65	3.22	9.87	8.85	-	22.59	5.30	27.89	-	27.89
2.	Rajasthan	1.70	74.48	39.47	-	-	115.65	2.00	117.65	-	117.65
			*0.04						*0.04		*0.04
3.	Sukhadia University	1.10	48.25	4.02	-	-	53.37	-	53.37	1.50	54.87
4.	Kota Open University	-	0.05	-	-	-	0.05	-	0.05	-	0.05
	Total	3.45	126.00	53.36	8.85	-	191.66	7.30	198.96	1.50	200.46
			*0.04								*0.04
TAMILNADU											
1.	Alagappa	0.05	48.05	0.07	-	-	48.17	-	48.17	-	48.17
2.	Anna	10.96	30.18	14.35	-	-	55.49	103.62	159.11	-	159.11
3.	Bharathiar	0.30	54.87	0.55	-	-	55.72	57.54	113.26	-	113.26
4.	Bharathidasan	-	28.39	0.18	-	-	28.57	-	28.57	-	28.57
5.	Madras	1.19	51.55	93.79	0.85	-	147.38	-	147.38	-	147.38
6.	Madurai Kamaraj	0.20	70.68	13.09	8.37	-	92.34	-	92.34	-	92.34
7.	Mother Teresa Women's	0.05	-	-	-	-	0.05	-	0.05	-	0.05
8.	Tamil	2.75	26.11	1.73	-	-	30.59	-	30.59	-	30.59
9.	Annamalai	2.60	49.80	45.07	-	-	97.47	30.25	127.72	-	127.72
	Total	18.10	359.63	168.83	9.22	-	555.78	191.41	747.19	-	747.19

* By adjustment

APPENDIX-XXIV (Contd.)

STATE UNIVERSITIES 1988-89 (PLAN)

(Rupees in Lakhs)

1	2	3	4	5	6	7	8	9	10	11	12
UTTAR PRADESH											
1.	Agra	2.00	50.14	5.40	0.50	-	58.04	-	58.04	-	58.04
2.	Allahabad	15.07	13.38	27.27	1.15	-	56.87	7.14	64.01	-	64.01
3.	Avadh	4.10	1.29	0.81	1.21	-	7.41	-	7.41	-	7.41
4.	Bundelkhand	0.10	0.04	0.53	-	-	0.67	-	0.67	-	0.67
5.	Garhwal	0.41	11.23 *0.07	1.52	-	-	13.16 *0.07	-	13.16 *0.07	-	13.16 *0.07
6.	G.B. Pant University of Agri. & Tech.	-	0.06	1.53	-	-	1.59	3.38	4.97	-	4.97
7.	Gorakhpur	11.56	57.33 *0.08	11.20	0.96	-	21.05 *0.08	-	81.05 *0.08	-	81.80 *0.08
8.	Kanpur	2.92	1.25	-	-	-	-4.17	-	4.17	-	4.17
9.	Kashi Vidyapith	2.75	5.85	0.23	1.50	-	10.33	-	10.33	-	10.33
10.	Kumaon	2.45	12.76	13.74	0.50	-	29.45	-	29.45	0.05	29.50
11.	Lucknow	5.10	73.93 *1.72	18.70 *0.08	1.75	-	99.48 *1.80	-	99.48 *1.80	-	99.48 *1.80
12.	Meerut	0.10	4.35	1.94	-	-	6.39	-	6.39	-	6.39
13.	Narendra University of Agri. & Tech.	-	-	0.11	-	-	0.11	-	0.11	-	0.11
14.	Rohilkhand	0.05	0.12	0.11	-	-	0.28	-	0.28	-	0.28
15.	Roorkee	2.05	17.64	-	-	-	92.15	76.45	168.60	-	168.60
16.	Sampurnand Sanskrit	1.00	5.36	2.00	0.59	-	0.95	-	8.95	0.25	9.20
Total		49.66	254.73 *1.87	157.55 *0.08	8.16	-	470.10 *1.95	86.97	557.07	1.05	558.12 *1.95
WEST BENGAL											
1.	Bidhan Chandra Krishi	-	0.25	0.18	-	-	0.43	-	0.43	-	0.43
2.	Burdwan	3.45	10.67	4.39	-	-	18.51	2.11	20.62	-	20.62
3.	Calcutta	1.30	67.78	72.54	0.10	-	141.72	15.54	157.26	1.50	158.76
4.	Jadavpur	2.45	17.01	71.00	0.10	-	90.56	74.78	165.34	-	165.34
5.	Kalyani	1.45	2.53	14.89	-	-	24.87	-	24.87	-	24.87
6.	North Bengal	4.32	12.98	3.01	-	-	20.31	-	20.31	-	20.31
7.	Rabindra Bharati	5.22	25.83	0.93	-	-	31.98	-	31.98	-	31.98
Total		18.19	143.05	166.94	0.20	-	328.38	92.43	420.81	1.50	422.31
Grand Total		472.95	5048.91 *40.89	2732.00 *1.03	376.41	-	8630.27	1344.19	9974.46 *41.92	25.36	9999.82 *41.92

* By adjustment.

APPENDIX - XXV

List of Universities and Colleges approved during 1988-89 for the Introduction of Three-Year Degree Course in Physical Education, Health Education and Sports.

UNIVERSITIES

1. Kakatiya University
2. Gujarat Vidyapith
3. Banaras Hindu University
4. Rajasthan University
5. M.S. University of Baroda
6. Lucknow University
7. Guru Nanak Dev University, Amritsar.

COLLEGES

1. The Madura Diraviyam Thayunavor Hindu College, Tirunelveli (Madurai Kamraj University).
2. Sir C.R. Reddy College, Eluru (Andhra University).
3. St. Joseph's College, Tiruchirappalli (Bharathidasan University).
4. C.R. (PG) College, Muzaffarnagar (Meerut University).
5. Anugrah Narayan College, Patna (Magadh University).
6. D.M. College of Science, Imphal (Manipur University).
7. Andhra Loyola College, Vijayawada (Nagarjuna University).
8. Ayya Nadar Janaki Ammal College, Sivakashi (M.K. University).
9. Christ College, Irinjalakuda (Calicut University).
10. Dayanand College, Ajmer (Ajmer University).

APPENDIX-XXVI

**Grants Paid to Colleges during 1988-89
(Major Headwise) Under Plan**

STATE UNIVERSITIES

Sl. No.	State University	Sector-A	Sector-B	Sector-C	Sector-D	Sector-E	Total	Sector-F	Total	Section III	Grand Total
1	2	3	4	5	6	7	8	9	10	11	12
ANDHRA STATE											
1.	Andhra University	1.08	41.02	8.85	-	29.00	79.95	-	79.95	0.96	80.91
2.	Kakatiya Univ.	-	13.21	2.29	-	-	15.50	0.10	15.60	0.15	15.75
3.	Nagarjuna Univ.	0.18	25.50	0.58	-	-	26.26	-	26.26	0.35	26.61
4.	Osmania Univ.	3.20	70.65	8.14	-	20.00	101.99	-	101.99	0.42	102.41
5.	Sree Krishnath Devaraya	-	0.08	-	-	-	0.08	-	0.08	-	0.08
6.	Shri Padmavati Mahila	-	-	0.09	-	-	0.09	-	0.09	-	0.09
7.	Sri Venkateswara	0.08	11.80	2.38	-	-	14.26	-	14.26	0.25	14.51
	Total	4.54	162.26	22.33	-	49.00	238.13	0.10	238.23	2.13	240.36
ASSAM											
1.	Dibrugarh Univ.	0.05	22.96	1.81	-	-	25.27	-	25.27	0.30	25.57
2.	Gauhati Univ.	-	39.24	2.63	0.35	-	42.22	-	42.22	0.15	42.37
	Total	0.50	62.20	4.44	0.35	-	67.49	-	67.49	0.45	67.94
BIHAR STATE											
1.	Bhagalpur	1.20	15.76	3.13	-	-	20.09	-	20.09	0.25	20.34
2.	Bihar Univ.	-	59.79	3.95	-	-	63.74	-	63.74	-	63.74
3.	K.S Darbhanga	-	-	-	-	-	-	-	0.87	0.87	0.87
4.	L.N. Mithila	-	54.72	0.83	-	-	55.55	-	55.55	-	55.55
5.	Magadh Univ.	3.68	104.07	7.76	-	-	115.51	-	115.51	0.05	115.56
6.	Patna Univ.	-	7.35	0.84	-	-	8.19	-	8.19	-	8.19
7.	Ranchi Univ.	-	69.86	5.61	-	-	75.47	-	75.47	1.00	76.47
	Total	4.88	311.55	22.12	-	-	338.55	-	338.55	2.17	340.72
GUJARAT STATE											
1.	Bhavnagar	-	3.88	-	-	-	3.88	-	3.88	-	3.88
2.	Gujarat Univ.	-	56.72	7.15	0.12	-	63.99	0.11	64.10	0.60	64.70
3.	Sardar Patel	-	7.33	1.41	0.12	-	8.86	0.03	8.89	0.10	8.99
4.	Saurashtra	-	1.88	5.20	-	-	7.08	-	7.08	-	7.08
5.	South Gujarat	-	14.00	3.73	-	-	17.73	-	17.73	0.06	17.79
6.	North Gujarat	-	0.98	1.22	-	-	2.20	-	2.20	-	2.20
	Total	-	84.79	18.77	0.24	-	103.74	0.14	103.88	0.76	104.64
HARYANA											
1.	Kurukshetra	3.79	29.65	5.21	0.21	-	38.86	0.07	38.93	0.02	38.95
2.	Maharishi Dayanand	-	48.22	8.78	-	-	57.00	-	57.00	-	57.00
	Total	3.79	77.87	13.99	0.21	-	95.86	0.07	95.93	0.02	95.95
HIMACHAL PRADESH											
1.	Himachal Pradesh	-	27.16	4.42	-	0.10	31.68	-	31.68	-	31.68
	Total	-	27.16	4.42	-	0.10	31.68	-	31.68	-	31.68
JAMMU & KASHMIR											
1.	Jammu Univ.	-	59.43	2.00	-	-	61.43	-	61.43	-	61.43
2.	Kashmir Univ.	-	13.43	3.17	-	-	16.60	-	16.60	-	16.60
	Total	-	72.86	5.17	-	-	78.03	-	78.03	-	78.03
KARNATKA											
1.	Bangalore	1.50	32.25	0.13	-	-	33.88	-	33.88	-	33.88
2.	Gulbarga	1.00	23.44	-	-	-	24.44	-	24.44	-	24.44
3.	Kamatak	-	45.27	3.74	0.25	-	49.26	-	49.26	-	49.26
4.	Mangalore	-	25.08	1.47	-	-	26.55	0.40	26.95	0.02	26.97

APPENDIX-XXVI (Contd.)

1	2	3	4	5	6	7	8	9	10	11	12
KARNATKA (Contd.)											
5.	Mysore	2.00	24.32	3.24	-	-	29.56	-	29.56	-	29.56
6.	Indian Instt. of Sc.	-	-	0.80	-	-	0.80	-	0.08	-	0.80
7.	Kuvempu Univ.	-	0.15	-	-	-	0.15	-	0.15	-	0.15
	Total	4.50	150.51	9.38	0.25	-	164.44	0.40	165.04	0.02	165.06
KERALA											
1.	Calicut Univ.	-	47.01	8.21	2.42	-	57.64	0.04	57.68	0.70	58.38
2.	Gandhiji Univ.	-	41.18	12.17	-	-	53.35	-	53.68	0.25	53.60
3.	Kerala Univ.	0.20	37.91	3.23	-	-	41.34	-	41.34	0.05	41.39
	Total	0.20	126.10	23.61	2.42	-	152.33	0.04	152.37	1.00	153.37
MADHYA PRADESH											
1.	A.P. Singh	-	29.94	2.99	-	-	32.93	-	32.93	0.02	32.95
2.	Bhopal	-	44.64	0.67	0.95	-	46.26	-	46.26	-	46.26
3.	Devi Ahilya	0.90	28.98	0.21	0.25	11.00	41.34	-	41.34	-	41.34
4.	Dr. Hari Singh Gaur	-	27.54	0.36	-	18.00	45.90	-	45.90	0.05	45.95
5.	Guru Ghasidas	0.03	3.17	-	0.50	6.00	9.70	-	9.70	-	9.70
6.	Jawaharlal Nehru Krishi	-	-	-	-	-	-	-	-	1.05	1.05
7.	Jiwaji	-	11.25	3.82	-	14.00	29.07	-	29.07	-	29.07
8.	Rani Durgavati	-	7.22	-	-	-	7.22	-	7.22	0.05	7.27
9.	Ravi Shankar	-	21.04	1.13	-	8.00	30.17	-	30.17	-	30.17
10.	Vikram Univ.	-	23.79	1.32	-	-	25.11	-	25.11	0.55	25.66
	Total	0.93	197.57	10.50	1.70	57.00	267.70	-	267.70	1.72	269.42
MAHARASHTRA											
1.	Amravati	1.10	50.08	23.82	0.25	-	75.25	-	75.25	0.52	75.77
2.	Bombay	-	86.24	11.00	0.15	-	97.39	-	97.39	-	97.39
3.	Marathwada	0.35	63.90	9.96	-	-	74.21	-	74.21	2.92	77.13
4.	Nagpur	5.99	81.34	45.70	0.45	-	133.48	-	133.48	1.07	134.55
5.	Poora Univ.	7.21	97.12	16.33	1.05	-	121.71	-	121.71	1.68	123.39
6.	S.N.D.T. Women's	-	0.63	1.30	-	-	1.93	-	1.93	-	1.93
7.	Shivaji Univ.	-	73.78	10.17	0.50	-	84.45	-	84.45	0.68	85.13
	Total	14.65	453.09	118.28	2.40	-	588.42	-	588.42	6.87	595.29
MANIPUR											
1.	Manipur Univ.	1.00	58.88	-	-	-	59.88	-	59.88	0.05	59.93
	Total	1.00	58.88	-	-	-	59.88	-	59.88	0.05	59.93
ORISSA											
1.	Berhampur	-	14.73	4.08	-	-	18.81	0.11	18.92	0.35	19.27
2.	Sambalpur	-	16.00	1.05	0.05	-	17.10	-	17.10	-	17.10
3.	Utkal Univ.	-	43.42	7.37	0.10	-	50.89	-	50.89	0.50	51.39
	Total	-	74.15	12.50	0.15	-	86.80	0.11	86.91	0.85	87.76
TRIPURA											
1.	Tripura Univ.	-	-	0.05	-	-	0.05	-	0.05	0.05	0.05
	Total	-	-	0.05	-	-	0.05	-	0.05	0.05	0.05
PUNJAB											
1.	Guru Nanak Dev	0.70	88.52	2.50	1.15	-	92.87	-	92.87	-	92.87
2.	Punjab Univ.	-	70.87	4.18	0.32	-	75.37	-	75.37	0.09	75.46
3.	Punjab Univ.	2.40	26.66	8.22	1.05	-	38.33	-	38.33	-	38.33
	Total	3.10	186.05	14.90	2.52	-	206.57	-	206.57	0.09	206.66

APPENDIX-XXVI (Contd.)

1	2	3	4	5	6	7	8	9	10	11	12
RAJASTHAN											
1.	Ajmer Univ.	1.00	41.36	5.73	-	16.00	64.09	-	64.09	0.02	64.11
2.	Jodhpur Univ.	-	-	0.12	-	-	0.12	-	0.12	-	0.12
3.	Rajasthan	-	22.41	3.83	-	-	26.24	0.10	26.34	0.02	26.36
4.	Sukhadia	-	6.41	3.06	-	-	9.47	-	9.47	-	9.47
Total		1.00	70.18	12.74	-	16.00	99.92	0.10	100.02	0.04	100.06
TAMILNADU											
1.	Anna	-	-	0.19	-	-	0.19	-	0.19	-	0.19
2.	Bharathiar	-	98.04	9.29	0.10	30.48	137.91	-	137.91	0.29	138.20
3.	Bharathidasan	-	109.70	4.68	1.05	38.00	153.43	-	153.43	-	153.43
4.	Madras	-	101.98	20.61	0.12	28.02	150.73	-	150.73	-	150.73
5.	Madurai Kamaraj	-	208.58	22.53	-	30.00	261.11	-	261.11	-	261.11
Total		-	518.30	57.30	1.27	126.50	703.37	-	703.37	0.29	703.66
UTTAR PRADESH											
1.	Agra Univ.	0.25	61.53	12.41	-	-	74.19	-	74.19	-	74.19
2.	Allahabad	-	7.40	1.31	0.32	-	9.03	-	9.03	-	9.03
3.	Avadh	7.35	57.12	3.50	0.30	-	68.27	-	68.27	0.10	68.37
4.	Bundelkhand	-	12.14	0.70	-	-	12.84	-	12.84	0.25	13.09
5.	Garhwal Univ.	-	12.94	5.18	-	-	18.12	-	18.12	0.40	18.52
6.	Gorakhpur Univ.	0.02	134.30	9.10	1.35	-	23.77	-	23.77	1.10	24.87
7.	Kanpur	0.20	11.40	6.90	-	-	18.50	-	18.50	1.15	19.65
8.	Kumaon	-	11.02	2.03	-	-	13.05	-	13.05	-	13.05
9.	Lucknow	0.20	34.90	1.14	0.40	-	36.64	-	36.64	-	36.64
10.	Meerut	-	12.32	16.10	-	0.09	28.51	-	28.51	1.50	30.01
11.	Rohilkhand Univ.	-	57.90	5.94	-	-	63.84	-	63.84	0.75	64.59
12.	Purvanchal Univ.	-	0.01	0.40	-	-	0.41	-	0.41	-	0.41
Total		8.02	291.98	64.71	2.37	0.09	367.17	-	367.17	5.25	372.42
WEST BENGAL											
1.	Burdwan Univ.	2.20	51.77	3.65	-	-	57.62	-	57.62	0.22	57.84
2.	Calcutta Univ.	0.02	89.29	16.87	6.84	-	113.02	0.04	113.06	0.27	113.33
3.	Jadavpur	-	-	-	0.06	-	0.06	-	0.06	-	0.06
4.	Kalyani	-	-	0.02	0.29	-	0.31	-	0.31	0.05	0.36
5.	North Bengal	-	18.90	0.80	0.15	-	19.85	-	19.85	0.15	20.00
6.	Vidya Sagar	-	16.77	0.06	-	-	16.83	-	16.83	-	16.83
Total		2.22	176.73	21.40	7.34	-	207.69	0.04	207.73	0.69	208.42
CENTRAL UNIVERSITIES											
1.	B.H.U.	-	0.65	0.07	-	-	0.72	-	0.72	-	0.72
2.	Delhi	17.30	99.76	11.37	4.00	-	132.43	7.94	140.37	-	140.37
3.	N.E.H.U.	0.40	6.52	2.00	-	-	8.92	-	8.92	-	8.92
4.	Pondicherry	-	5.32	0.72	-	-	6.04	-	6.04	-	6.04
Total		17.70	112.25	14.16	4.00	-	148.11	7.94	156.05	-	156.05
Grand Total (Colleges)		67.01	3647.13 *1.32	383.90	25.24	248.68	4371.96 *1.32	8.95	4371.96 *1.32	23.16	4404.07 *1.32

APPENDIX-XXVII

Statement showing Maintenance Grants (non plan) and Rucurring Expenditure (non plan) in respect of Central Universities, Institutions Deemed to be Universities and State Universities for the year 1986-87.

A. Central Universities:

(Rs. in lakhs)

State/ Universities	Non-Plan Maintenance Grants From U.G.C.	Total Non-Plan Recurring Expenditure
1	2	3
ANDHRA PRADESH		
1. Hyderabad	361.08	344.54
MEGHALAYA		
2. North Eastern Hill	669.85	623.80
UTTAR PRADESH		
3. Aligarh Muslim	1888.62	1949.54
4. Banaras Hindu	2811.65	2825.16
WEST BENGAL		
5. Viswa Bharti	521.11	N.A.
DELHI (U.T.)		
6. Delhi	1427.02	1408.94
7. Jawahar Lal Nehru	735.27	701.42
8. Indira Gandhi Open	-	-
PONDICHERRY		
9. Pondicherry	-	-

*Excludes expenditure of Rs. 69.51 lakhs from special funds.

APPENDIX-XXVII (Contd.)

B. Institutions Deemed to be Universities :—

(Rs. in lakhs)

State/Institutions Deemed to be Universities 1	Non-Plan Maintenance Grants from U.G.C. 2	Total Non-Plan Recurring Expenditure 3
ANDHRA PRADESH		
1. Central Instt. of Engl. and Foreign languages	135.21	105.22
2. Sri Sathya Sai Instt. of Higher Learning	-	39.52
BIHAR		
3. Indian School of Mines	294.54	297.75
GUJARAT		
4. Gujrat Vidyapeeth	91.26	N.A.
KARNATAKA		
5. Indian Instt. of Science	990.00	1149.42
MAHARASHTRA		
6. International Instt. for Population Population Sciences	-	44.68
7. Tata Instt. of Social Sc.	87.09	92.94
8. Tilak Maharashtra Vidyapeeth	-	28.53
PUNJAB		
9. Thapar Instt. of Engg. & Tech.	-	82.89
RAJASTHAN :		
10. Banasthali Vidyapeeth	-	105.00
11. Birla Instt. of Tech & Science Pilani	-	188.33
12. Rajasthan Vidyapeeth	-	-
TAMILNADU		
13. Gandhigram Rural Instt.	81.54	93.55
UTTAR PRADESH		
14. Dayalbagh Edu. Instt.	11.96	82.79
15. Gurukul Kangri	51.03	52.95
DELHI : (U.T.)		
16. Jamia Millia Islamia	211.40	N.A.
17. School of Planning & Architecture	-	98.54

APPENDIX XXVII (Contd.)

C. State Universities :

(Rs. in lakhs)

State/Universities	Non-Plan Maintenance Grants from State Govt.	Total Non-Plan Recurring Expenditure
1	2	3
ANDHRA PRADESH		
Andhra	738.49	1,085.65
A.P. Open	52.50	200.80
Jawaharlal Nehru Technology	354.41	358.41
Kakatiya (P)	161.74	175.27
Nagarjuna (P)	139.25	182.98
Osmania	1,119.70	1,241.82
Sri Padmavathy Mahila	29.22	27.33
Sri Venkateswara	379.79	582.25
University of Health Sciences	371.65	368.08
ARUNACHAL PRADESH		
Arunachal	-	-
ASSAM		
Dibrugarh	145.00	181.42
BIHAR		
K.S. Darbhanga Sanskrit	371.89	455.91
Magadh (P)	1,274.03	1,816.02
GOA		
Goa (P)	42.00	30.81
GUJARAT		
North Gujarat	-	-
Sardar Patel	150.65	192.64
HARYANA		
Kurukshetra	391.96	623.98
Maharishi Dayanand	237.78	332.49
HIMACHAL PRADESH		
Himachal Pradesh	345.92	358.21
JAMMU & KASHMIR		
Jammu	235.00	247.17
KARNATAKA		
Bangalore	376.01	591.16
Karnatak	459.46	637.74
Mangalore	100.00	138.64
KERALA		
Calicut	323.38	489.61
Cochin	211.90	206.54
Gandhiji (P)	-	-
Kerala	376.18	850.51
MADHYA PRADESH		
Devi Ahilya	75.90	173.87
Dr. Hari Singh Gaur	213.20	277.90
Guru Ghasidas	16.99	61.12
Indira Kala Sangcet	27.88	26.44
Rani Durgawati	108.57	227.16
Vikram	85.50	203.38
MAHARASHTRA		
Amravati	20.67	66.20
Bombay (P)	338.62	889.21
Marathwada	227.03	404.14
Nagpur (P)	297.31	475.22
Poona	319.19	715.64
Smt. Nathibai Damodar	188.50	401.00

'P' stands for provisional/subject to audit

APPENDIX-XXVII (Contd.)

State/Universities	Non-Plan Maintenance Grants from State Govt.	Total Non-Plan Recurring Expenditure
S.N.D.T. Women's		
Shivaji	220.30	409.23
MANIPUR		
Manipur	104.44	132.11
ORISSA		
Berhampur	157.91	213.23
Sambalpur	159.86	186.08
Shri Jagannath Sanskrit	-	2.27
PUNJAB		
Guru Nanakdev	408.58	495.94
Panjab	984.93	1,171.23
TAMILNADU		
Alagappa (P)	70.00	85.91
Anna	306.51	446.77
Bharathidasan	55.00	147.73
Madras	106.93	578.48
Madurai Kamraj	55.57	378.50
Mother Teresa Women's	40.00	26.89
Tamil	95.12	91.56
UTTAR PRADESH		
Avadh	0.38	65.61
Kumaon	116.70	170.72
WEST BENGAL		
Burdwan	387.45	475.07
North Bengal	262.29	292.34
Rabindra Bharti	160.64	225.87

NOTES

1. In the case of Central Universities and Institutions deemed to be universities, the maintenance grants paid by the University Grants Commission and the expenditure as reported by the Universities has been shown. In respect of State Universities, the figures given in this appendix are based on the information received from different State Universities.
2. Only the maintenance grants received by the Universities from either the University Grants Commission or State Government as the case may be and the total recurring expenditure (Non-Plan) has been given. Funds received by the Universities from sources other than State Govt. (for State Universities) and University Grants Commission (for Central Universities and Institutions deemed to be universities) have not been shown.
3. Recurring expenditure (Non-Plan) includes only items like salaries of teaching staff, administrative staff, purchase of chemicals, maintenance of equipment, conduct of examinations, maintenance of buildings and other expenditure on day to day activities.

APPENDIX— XXVIII

Details of Foreign Tours undertaken by the Chairman/Vice-Chairman/Secretary and other Officers of the Commission during the year 1988-89

Sl. No.	Name and designation of the officers	Name of the Country visited	From	To	Purpose	Remarks
1	2	3	4	5	6	7
1.	Prof. Yashpal Chairman	FRG	1.5.88	105.88	Leading UGC delegation of Vice-Chancellors	Cost of International air travel met by the UGC and other expenditure met by FRG
		Trieste, Italy	11.5.88	20.5.88	To attend UN University Advisory Committee meeting and ICTP Scientific Council meeting	Travel and Maintenance Financed by Host Institution.
		Salzburg, FRG	25.8.88	28.8.88	To attend UN Universities Advisory meeting	Expenditure met by UN Universities
		Beijing, China	14.11.88	30.11.88	Leading delegation of Vice-Chancellors and Council meeting of International Union for Pure and Applied Physics (IUPAP)	International air cost met by UGC other expenses met by China and IUPAP
2.	Prof. K.S. Murty Vice-Chairman	Yugoslavia and USSR	7.5.88	26.5.88	To attend as a member of Indian delegation for negotiating and signing the Cultural Exchange Programme.	Expenditure met by UGC
		U.K., France and Spain	28.8.88	21.9.88	To attend as a member of Indian delegation for negotiating and signing the Cultural Exchange Programme	Expenditure met by UGC
		China	12.10.88	18.10.88	-do-	-do-
3.	Prof. S.K. Khanna Secretary	Secretary has not visited any foreign country during the period 1.4.88 to 31.3.89				
4.	Shri B.R. Kwatra Joint Secretary	Yugoslavia and USSR	7.5.88.	26.5.88	To attend as a member of Indian delegation for negotiating and signing the Cultural Exchange Programme	Expenditure met by U.G.C.
		Spain and Germany	18.9.88	29.9.88	-do-	-do-
		China	19.11.88	30.11.88	-do-	-do-

APPENDIX XXIX

Enrolment in Correspondence Courses offered
by Universities during 1988-89

State/University	Title of the Correspondence Course	Enrolment		
		Men	Women	Total
ANDHRA PRADESH				
Andhra	1. B.Ed.	327	185	512
	2. B.A.	14035	7603	21638
	3. B.Com.	3208	758	3966
	4. M.A.	1484	852	2336
	5. M.Com.	726	280	1006
	6. B.Sc.	252	24	276
	7. P.G. Diploma in Cooperation and Rural Studies	84	5	89
	8. M.Ed.	80	20	100
	9. Introductory Courses ^(a)	561	199	760
Andhra Pradesh Open	1. B.A./B.Sc./B.Com. (Ist Year)	11506	5341	16847
	2. B.Sc. (II & III year)	N.A.	N.A.	1402
	3. B.Com. (II & III year)	N.A.	N.A.	2044
	4. B.A. (II & III year)	N.A.	N.A.	12684
	5. Bachelor of Library and Information Science*	40	205	245
	6. P.G. Diploma in Public Accounts*	2147	267	2414
	7. P.G. Diploma in Public Relation*	623	100	723
	8. C.P.F.N. (Cert. Programme in Food and Nutrition)	642	434	1076
U.N. Technological	1. B. Tech.*	439	21	460
Osmania	1. B.A.	337	599	936
	2. B.Com.	658	641	1299
	3. B.Ed.	373	128	501
	4. M.Ed.	78	24	102
	5. M.A.	110	150	260
	6. M.Com.	703	543	1246
	7. P.G. Diploma in Mathematics	83	26	109
Sri Venkateswara	1. B.A.	28	21	49
	2. B.Com.	9	12	21
	3. M.A.	130	61	191
	4. M.Sc.	326	56	382
	5. M.Com.	246	57	303
	6. B.Ed.	268	137	405
	7. Junior Diploma in Linguistics*	5	9	14
	8. Diploma in Public Administration*	55	8	63
	9. Cert. in Library Sc.	494	109	603
	10. Senior Dip. in Linguistics*	12	5	17

(a) Introductory course to prepare the candidates for entrance Examination for liberalised admission into B.A./B.Com. courses without any formal academic qualifications * 1987-88 data.

APPENDIX—XXIX (Contd.)

State/University	Title of the Correspondence Course	Enrolment		
		Men	Women	Total
Central Inst. of English & Foreign Languages **	1. M.A.	12	9	21
	2. P.G. certificate in the Teaching of English	412	359	771
	3. P.G. Diploma in the Teaching English	115	89	204
BIHAR				
Patna	1. Inter Arts	499	325	824
	2. Inter Com.	251	11	262
	3. B.A.	979	385	1364
	4. B. Com.	381	5	386
	5. B.A. (Hons.)	276	87	363
	6. B.Com. (Hons.)	58	5	63
Ranchi	Information not available :			
GUJARAT				
Gujarat Vidyapeeth ** (1987-88 Information)	1. M.A. in Gandhian Thought*	41	4	45
	2. M.Ed.	86	21	107
HARYANA				
Kurukshetra	1. B.A.	1130	76	1206
	2. M.Com.	259	115	374
	3. P.G. Diploma in Tourism and Hotel Management	345	30	375
	4. One Year pre-degree course	555	449	1004
Maharshi Dayanand	Information not available			
HIMACHAL PRADESH				
Himachal Pradesh	1. B.A.	283	605	888
	2. M.A.	6601	2054	8655
	3. M.Com.	3071	833	3904
	4. M.Ed.	4253	1322	5575
	5. XI class	118	13	131
	6. XII class	98	6	104
JAMMU & KASHMIR				
Jammu	1. B.A.	25	15	40
	2. B.Com.	12	1	13
	3. M.Com.	72	99	171
	4. LL.B.	295	32	327
	5. B. Ed.	324	157	481
	6. Certificate Course in Urdu	7	2	9
	7. Certificate Course in English Improvement	15	7	22
Kashmir	1. B.A.	19	3	22
	2. B.Com.			
	3. B. Ed.	248	115	363
	4. LL. B +	181	22	203
	5. Certificate Course in Hindi	10	14	24
	+ Excluding IV semester enrolment which is not available.			

* Stands for 1987-88 data.

** Institution deemed to be University.

APPENDIX--XXIX (Contd.)

State/University	Title of the Correspondence Course	Enrolment		
		Men	Women	Total
Kashmir (Contd.)	6. Certificate Course in Urdu	78	11	89
	7. Certificate Course in Library and Information Science	14	22	36
	8. M.A.	69	34	103
	9. M.Com.	33	3	36
KARNATAKA				
Bangalore	1. B.A.	214	198	412
Mysore	1. B.A.	761	680	1441
	2. B. Com.	540	212	752
	3. M.A.	4741	1673	6414
	4. Certificate Course in Kannada for Non-Kannada speakers, through English Urdu & Hindi Media	32	26	58
	5. Post Pre-University Diploma Course in Kannada	82	36	118
	6. P.G. Diploma Course in English	159	94	253
	7. P.G. Diploma Course in Journalism	237	44	281
	Open University System			
	1. B.A.*	1776	1274	3050
	2. B.Com.*	289	60	349
	3. M.A.*	3182	1305	4487
KERALA				
Calicut	1. Pre-Degree	70	24	94
	2. B.A.	326	76	402
	3. B.Com.	63	37	100
	4. M.A.	165	49	214
	5. B.A. Under open university system	2503	625	3128
	6. B.Com (Under open university system)	1495	374	1869
Kerala	1. Pre-degree	324	72	396
	2. B.A.	722	504	1226
	3. B.Com.	349	166	515
	4. M.A.	1074	605	1679
	5. M.Com.	456	115	571
MADHYA PRADESH				
Bhopal	1. B.A.	154	84	238
	2. B.Com.	58	7	65
MAHARASHTRA				
Bombay	1. B.A.	1906	1808	3714
	2. B.Com.	2089	1152	3241
	3. Diploma in Financial Management	424	106	530
	4. Diploma in Operation Research for Management	95	12	107
Poona	1. B.A.	323	160	483
	2. B.Com.	352	108	460
Shivaji	B.Ed.	55	21	76
	1. B.A.	-	7785	7785
S.N.D.T. Women's	2. B.Com.	-	295	295
	3. Improve Your English	-	25	25
	4. Cert. in Family Saving & Investment	-	23	23
	1. B.A. (Visharad)	2854	830	3684

* Stands for 1987-88 data

APPENDIX - XXIX (Contd.)

State/University	Title of the Correspondence course	Enrolment		
		Men	Women	Total
ORISSA				
Utkal (1987-88 Information)	1. B.A.	1670	1051	2721
	2. B.Com.	179	8	187
	3. B. Ed.	589	411	1000
Berhampur	B.Ed.	302	113	415
PUNJAB				
Punjab (1987-88 Information)	1. B. A.	4027	609	4636
	2. B. Com.	639	77	716
	3. M. A.	1608	1523	3131
	4. Diploma in office organisation and procedures	89	21	110
	5. Dip. in Statistics	126	51	177
	6. Dip. in population Education	40	30	70
Punjabi	1. Punjabi Praveshika	4	5	9
	2. Gyani	117	114	231
	3. B. Com.	153	16	169
	4. B. A.	1037	200	1237
	5. M. A.	2155	1495	3650
	6. M.B.A.*	134	-	134
	7. M.Phil	28	45	73
	8. M.Ed.	167	133	300
	9. Dip. Course in Library	188	320	508
	10. P.G. Dip. Course in mngt of Public Enterprises	190	22	212
	11. P.G.Dip. Course in Public Relations and Advertising	167	13	180
	12. Dip. Course in Personnel Mngt. and Industrial Relations*	167	4	171
	13. Dip. in International Marketing*	19	1	20
	14. Dip. in Marketing Management*	114	-	114
	15. Dip. in Material Management*	177	-	177
	16. Dip. in Project Management*	36	-	36
	17. Dip. in Production Management*	65	-	65
	18. Dip. in Banking*	21	-	21
	19. Dip. in Divinity	130	26	156
RAJASTHAN				
Kota Open (1987-88 Information)	1. B.A.	NA	NA	45
	2. B.Com.	NA	NA	30
	3. M.A	NA	NA	2,435
	4. M.Com.	NA	NA	1,695
	5. LL.B. Open University System	NA	NA	14
	6. Dip. in Labour Law, Labour Welfare and Personnel Management	NA	NA	NA
	7. P.G. Dip. in Journalism	NA	NA	NA
	8. Certificate in Library Sc.	NA	NA	NA
	9. B.A.	NA	NA	2131
	10. B.Com.	NA	NA	370
	11. B.Ed.	NA	NA	9000
	12. B.J.M.C.	NA	NA	997
	13. Dip. in Library Sc.	NA	NA	3829
	14. Dip. in Hotel Management and Toursim	NA	NA	1000
	15. Dip. in Mngt. (Module 1) (IGNOU)	NA	NA	1000
TAMIL NADU				
Alagappa	1. Dip. in Computer and Software Application	277	45	322
Annamalai	1. Foundation Course	457	232	689
	2. B.A.	1275	1325	2600
	3. B. Litt.	835	771	1606

* Stand: for 1987-88 data.

APPENDIX - XXIX (Contd.)

State/University	Title of the Correspondence course	Enrolment		
		Men	Women	Total
Annamalai Contd.	4. B.Sc. (Maths)	445	284	729
	5. (I) Bachelor of Academic Laws	445	22	467
	(II) B.G.L.	347	12	359
	6. B.Com.	1558	779	2337
	7. M.A.	3077	2448	5525
	8. M.Sc.	3187	1311	4498
	9. M.Com.	1843	476	2319
	10. B.Ed.	6839	6639	13478
	11. M.Ed.	3196	2395	5591
	12. P.G. Dip. in Business Administration	735	5	740
	13. P.G. Dip. in Marketing Management	774	23	797
	14. P.G. Dip. in Production Management	1238	77	1315
	15. P.G. Dip. in Personnel Management	1345	75	1420
	16. P.G. Dip. in Material Management	483	17	500
	17. P.G. Dip. in Financial Management	285	16	301
	18. Dip. in Company Law with Banking Law and practice	64	2	66
	19. Dip. in Labour Law	681	16	697
	20. Dip. in Management Law	33	2	35
	21. Dip. in Taxation Law	89	9	98
	22. Dip. in Criminology, Admn., Criminal Justice	53	4	57
	23. Dip. in Insurance Law	4	40	44
	Job Oriented Courses			
	Madras	1. Dip. in Chemical Process Instrumentation and Control	1557	23
2. Dip. in Concrete Tech. and Design of Concrete Structure.		599	6	605
3. Dip. in Maintenance Mngt.		171	4	175
4. Cert. in Automobile Technology		306	-	306
1. B.A. (Including B. Litt.)		9968	8656	18624
2. B.A.(Including B.Litt.) (Open University System)		17285	8226	25511
3. B.Com.		9422	5627	15049
4. B.Com.(Open Univ. System)		6001	1231	7232
5. B.Ed.		2055	2447	4502
6. B.Sc. (Maths.)		3010	1519	4529
7. B.Sc. (Maths.) (Open University)		1239	333	1572
8. M.A.		10851	6825	17676
9. M.Com.		4010	1990	6000
10. M.Ed.		600	437	1037
11. M.Lib. & Information Sc.		240	113	353
12. Certificate Course in Lib. & Information Sc.		507	104	611
13. Dip. in Geography		43	37	80
14. B. Lib. & Information Sc.		295	227	522
15. Dip. in Labour Law		551	40	591
16. Dip. in Taxation		268	25	293
17. Dip. in Insurance Law	44	10	54	
18. Dip. in Mercantile Law	36	7	43	
19. Dip. in Indian Constitution Law	29	2	31	
20. Dip. in Criminal Law	54	6	60	
Madurai (contd.)	1. B.A.	8833	6643	15476
	2. B.Sc. (Maths.)	971	546	1517
	3. B.Com.	4028	2573	6601
	4. B.G.L.	1284	161	1445
	5. M.A.	5306	2754	8060
	6. M.Com.	2418	984	3402
	7. B.Ed.	671	696	1367
	8. M.Ed.	555	567	1122
	9. Cert. in Journalism & Mass Communication	338	101	439

APPENDIX - XXIX (Contd.)

State/University	Title of the Correspondence course	Enrolment		
		Men	Women	Total
Open University Course				
	i. Introductory Course	555	212	767
	ii. Pre-Foundation Course	1043	350	1393
	iii. Foundation Course	1642	1164	2806
	iv. Cert. in Child Health & Family welfare	24	46	70
	v. Pre-University	118	75	193
UTTAR PRADESH				
Allahabad	1. B.A.	1981	551	2532
	2. B.Com.	394	13	407
Meerut	1. B.A.	145	98	243
	2. B.Com.	27	19	46
	3. M.A.	927	614	1541
DELHI				
Delhi	1. B.A.(Pass)	9871	11147	21018
	2. B.Com.(Pass)	7203	2283	9486
	3. B.Com.(Hons)	952	268	1220
	4. M.A.	330	851	1181
	5. M.Com.	301	439	740
	6. Special Courses in (Hindi Pol. Sc.)*	22	15	37
	7. B.A. (Hons) English	74	134	208
Indira Gandhi National Open University				
	1. B.A.	6843	2103	8946
	2. B.Com.	3157	420	3577
	3. Dip. in Distance Education	792	301	1093
	4. Dip. in Management	5045	180	5225
	5. Dip. in Creative Writing	221	89	310
	6. Cert. in Rural Development	N.A.	N.A.	287
	7. Cert. Prog. in Food & Nutrition	945	1603	2548

Note : 1 — ** Institution deemed to be University

Note : 2 — N.A. Stands for 'Not Available'.

Note : 3 — * Stands for 1987-88 data.

APPENDIX—XXX

Percentage of women enrolment to total enrolment : statewise
(1984-85 to 1988-89)

1984-85

S.No.	State/ Union territory	Total enrolment	Women enrolment	Percentage of women
1.	Andhra Pradesh	2,57,651	64,626	25.1
2.	Assam	73,961	19,843	26.8
3.	Bihar	2,36,956	34,047	14.4
4.	Gujarat	2,00,297	66,633	33.3
5.	Haryana	69,622	25,901	37.2
6.	Himachal Pradesh	17,880	4,633	25.9
7.	Jammu & Kashmir	25,004	9,269	37.1
8.	Karnataka	2,39,137	61,844	25.9
9.	Kerala	1,33,302	64,948	48.7
10.	Madhya Pradesh	2,51,382	73,406	29.2
11.	Maharashtra	4,35,307	1,43,098	32.9
12.	Manipur	9,291	3,249	35.0
13.	Meghalaya/Nagaland	8,466	3,137	37.1
14.	Orissa	70,105	14,531	20.7
15.	Punjab	1,26,348	55,162	43.7
16.	Rajasthan	1,69,587	36,241	21.4
17.	TamilNadu	2,42,609	84,398	34.8
18.	Uttar Pradesh	4,75,069	98,568	20.7
19.	West Bengal/Tripura/Sikkim	2,66,033	88,366	33.2
20.	Delhi	96,089	40,239	41.9
	All India Total	34,04,096	9,92,139	29.1

1985-86*

S.No.	State/ Union territory	Total enrolment	Women enrolment	Percentage of women
1.	Andhra Pradesh	2,72,595	68,806	25.2
2.	Assam	79,878	21,966	27.5
3.	Bihar	2,59,869	37,681	14.5
4.	Gujarat	2,06,306	68,906	33.4
5.	Haryana	73,451	28,205	38.4
6.	Himachal Pradesh	19,096	4,869	25.5
7.	Jammu & Kashmir	26,904	9,954	37.0
8.	Karnataka	2,47,507	65,346	26.4
9.	Kerala	1,38,234	68,096	49.3
10.	Madhya Pradesh	2,63,196	79,485	30.2
11.	Maharashtra	4,68,826	1,56,150	33.3
12.	Manipur	9,746	3,381	34.7
13.	Meghalaya/Nagaland	8,643	3,344	38.7
14.	Orissa	73,190	15,882	21.7
15.	Punjab	1,31,149	58,361	44.5
16.	Rajasthan	1,75,353	38,226	21.8
17.	Tamil Nadu	2,50,858	89,807	35.8
18.	Uttar Pradesh	4,85,521	1,02,444	21.1
19.	West Bengal/Tripura/Sikkim	2,80,931	95,454	34.0
20.	Delhi	99,644	42,249	42.4
	All India Total	35,70,897	10,58,612	29.6

* Estimated

APPENDIX—XXX (Contd.)

Percentage of women enrolment to total enrolment : statewise
(1984-85 to 1988-89)

S.No.	State/ Union territory	1986-87*		
		Total enrolment	Women enrolment	Percentage of women
1.	Andhra Pradesh	2,79,822	73,005	26.1
2.	Assam	81,001	23,342	28.8
3.	Bihar	2,65,095	40,040	15.1
4.	Gujarat	2,13,549	73,219	34.3
5.	Haryana	73,637	29,971	40.7
6.	Himachal Pradesh	20,250	5,174	25.6
7.	Jammu & Kashmir	29,455	10,577	35.9
8.	Karnataka	2,54,049	69,437	27.3
9.	Kerala	1,43,593	72,359	50.4
10.	Madhya Pradesh	2,72,458	84,461	31.0
11.	Maharashtra	4,78,643	1,65,925	34.7
12.	Manipur	11,046	3,593	32.5
13.	Meghalaya/Nagaland	9,205	3,554	38.6
14.	Orissa	73,637	16,876	22.9
15.	Punjab	1,36,229	62,015	45.5
16.	Rajasthan	1,80,412	40,619	22.5
17.	Tamil Nadu	2,61,413	95,431	36.5
18.	Uttar Pradesh	5,08,098	1,08,853	21.4
19.	West Bengal/Tripura/Sikkim	2,87,186	1,01,962	35.5
20.	Delhi	1,03,092	44,891	43.5
	All India Total	36,81,870	11,25,304	30.6

S.No.	State/ Union territory	1987-88*		
		Total enrolment	Women enrolment	Percentage of women
1.	Andhra Pradesh	2,89,896	77,531	26.7
2.	Assam	83,917	24,789	29.5
3.	Bihar	2,67,009	42,522	15.9
4.	Gujarat	2,25,051	77,759	34.6
5.	Haryana	80,103	31,829	39.7
6.	Himachal Pradesh	20,979	5,495	26.1
7.	Jammu & Kashmir	29,752	11,233	37.8
8.	Karnataka	2,67,009	73,742	27.6
9.	Kerala	1,48,762	76,845	51.6
10.	Madhya Pradesh	2,78,452	89,698	32.2
11.	Maharashtra	4,90,511	1,76,212	35.9
12.	Manipur	11,443	3,816	33.3
13.	Meghalaya/Nagaland	9,536	3,774	39.6
14.	Orissa	76,288	17,922	23.5
15.	Punjab	1,41,133	65,860	46.6
16.	Rajasthan	1,86,906	43,137	23.1
17.	Tamil Nadu	2,74,638	1,01,349	36.9
18.	Uttar Pradesh	5,32,518	1,15,602	21.7
19.	West Bengal/Tripura/Sikkim	2,93,710	1,08,284	36.8
20.	Delhi	1,06,804	47,674	44.6
	All India Total	38,14,417	11,95,073	31.3

* Estimated

APPENDIX—XXX (Contd.)

Percentage of women enrolment to total enrolment : statewide
(1984-85 to 1988-89)

S.No.	State/ Union territory	Total enrolment	1988-89*	
			Women enrolment	Percentage of women
1.	Andhra Pradesh	2,99,913	81,222	27.1
2.	Assam	87,235	26,281	30.1
3.	Bihar	2,73,303	43,802	16.0
4.	Gujarat	2,32,602	81,472	35.0
5.	Haryana	82,588	33,790	40.9
6.	Himachal Pradesh	22,437	5,882	26.2
7.	Jammu & Kashmir	31,256	11,638	37.2
8.	Karnataka	2,74,103	77,592	28.3
9.	Kerala	1,53,753	80,095	52.1
10.	Madhya Pradesh	2,87,240	93,862	32.7
11.	Maharashtra	5,14,809	1,83,969	35.7
12.	Manipur	11,941	3,975	33.3
13.	Meghalaya/Nagaland	10,103	3,880	38.4
14.	Orissa	78,771	18,772	23.8
15.	Punjab	1,46,574	68,832	47.0
16.	Rajasthan	1,92,990	45,054	23.3
17.	Tamil Nadu	2,83,854	1,06,377	37.5
18.	Uttar Pradesh	5,48,791	1,21,050	22.1
19.	West Bengal/Tripura/Sikkim	3,04,738	1,13,886	37.4
20.	Delhi	1,10,921	50,060	45.1
	All India Total	39,47,922	12,51,491	31.7

* Estimated

Note :— As the estimates are based on back-data, the enrolment relating to the states, some of which are having universities, have not been shown separately. The enrolment relating to Assam, Maharashtra and Meghalaya include enrolment of the new states viz. Arunachal Pradesh, Goa and Mizoram respectively. the enrolment relating to the Union Territories of A & N Islands, Pondicherry and Daman & Diu are clubbed with enrolment of Punjab, TamilNadu and Gujarat respectively. the enrolment relating to Union territory of Chandigarh is merged with that of Punjab.

APPENDIX—XXXI

SEX-WISE DISTRIBUTION OF ENROLMENTS STAGewise 1980-81 TO 1988-89

YEAR	GRADUATE			POSTGRADUATE			RESEARCH		
	T	W	%	T	W	%	T	W	%
1980-81	24,01,485	6,52,808	27.2	2,73,337	77,001	28.2	32,171	8,780	27.3
1981-82	25,88,759	7,16,249	27.7	2,85,892	81,645	28.6	34,588	9,581	27.7
1982-83	27,57,893	7,73,342	28.0	2,96,103	86,380	29.2	36,731	10,673	29.1
1983-84	29,12,487	8,25,409	28.3	3,13,110	93,728	29.9	36,249	10,615	29.3
1984-85	29,99,621	8,71,571	29.1	3,22,541	98,415	30.5	38,160	11,332	29.7
1985-86*	31,42,389	9,29,461	29.6	3,39,235	1,04,803	30.9	39,200	12,703	32.3
1986-87*	32,40,046	9,88,017	30.5	3,49,778	1,11,405	31.5	40,500	13,504	33.3
1987-88*	33,56,687	10,49,274	31.3	3,62,370	1,18,312	32.7	41,958	14,341	34.2
1988-89*	34,74,171	10,98,809	31.6	3,75,053	1,23,898	33.0	43,427	15,018	34.6

YEAR	DIPLOMA/CERTIFICATE			TOTAL		
	T	W	%	T	W	%
1980-81	45,444	9,936	21.9	27,52,437	7,48,525	27.2
1981-82	42,827	9,229	21.5	29,52,006	8,16,704	27.7
1982-83	42,366	9,811	23.2	31,33,093	8,80,156	28.1
1983-84	45,803	10,501	22.9	33,07,649	9,40,253	28.4
1984-85	43,774	10,821	24.7	34,04,096	9,92,139	29.1
1985-86*	49,993	11,645	23.3	35,70,897	10,58,612	29.6
1986-87*	51,546	12,378	24.0	36,81,870	11,25,304	30.6
1987-88*	53,402	13,146	24.6	38,14,417	11,95,073	31.3
1988-89*	55,271	13,766	24.9	39,47,922	12,51,491	31.7

* Estimated

T = Total enrolment

W = Women enrolment

N.A. = Not available

APPENDIX—XXXII

Distribution of Student Enrolment : Sex-wise and Facultywise 1980-81 to 188-89

YEAR	ARTS			SCIENCE			COMMERCE		
	T	W	%	T	W	%	T	W	%
1980-81	11,14,417	4,20,276	37.7	5,33,859	1,53,868	28.8	5,54,253	88,067	15.9
1981-82	11,90,177	4,54,990	38.2	5,78,766	1,65,666	28.6	6,28,031	1,04,964	16.7
1982-83	12,59,587	4,87,620	38.7	6,23,545	1,79,650	28.8	6,69,813	1,16,837	17.4
1983-84	13,38,106	5,17,017	38.6	6,53,092	1,89,685	29.0	7,03,638	1,31,379	18.7
1984-85	13,72,227	5,40,686	39.4	6,69,563	2,00,632	30.0	7,38,506	1,42,222	19.3
1985-86*	14,39,071	5,81,813	40.4	7,03,467	2,14,581	30.5	7,67,743	1,46,724	19.1
1986-87*	14,83,794	6,18,467	41.6	7,25,328	2,28,099	31.4	7,91,602	1,55,967	19.7
1987-88*	15,37,210	6,56,812	42.7	7,51,440	2,42,241	32.2	8,20,100	1,65,637	20.2
1988-89*	15,91,012	6,87,069	43.2	7,77,740	2,53,427	32.6	8,48,804	1,73,957	20.5

YEAR	EDUCATION			ENGG/TECH.			MEDICINE		
	T	W	%	T	W	%	T	W	%
1980-81	71,204	33,708	47.3	1,28,937	4,949	3.8	1,10,020	26,797	24.4
1981-82	71,168	34,383	48.3	1,30,189	5,866	4.5	1,13,794	29,792	26.2
1982-83	74,167	34,893	47.0	1,42,440	7,173	5.0	1,13,902	31,648	27.8
1983-84	74,679	35,337	47.3	1,53,131	8,469	5.5	1,18,989	33,676	28.3
1984-85	76,522	36,555	47.8	1,59,046	10,052	6.3	1,18,890	35,190	29.6
1985-86*	82,131	40,227	49.0	1,64,261	9,634	5.9	1,28,552	37,898	29.5
1986-87*	84,683	42,762	50.5	1,69,366	10,240	6.0	1,32,547	40,286	30.4
1987-88*	87,732	45,413	51.8	1,75,463	10,874	6.2	1,37,319	42,784	31.1
1988-89*	90,803	47,557	52.4	1,81,604	11,263	6.2	1,42,125	45,054	31.7

* Estimated

APPENDIX—XXXII (Contd...)

Distribution of Student Enrolment : Sex-wise and Facultywise 1980-81 to 1988-89

YEAR	AGRICULTURE			VET. SCIENCE			LAW		
	T	W	%	T	W	%	T	W	%
1980-81	39,231	1,311	3.3	7,648	249	3.3	1,74,374	11,948	6.9
1981-82	39,318	1,390	3.5	8,173	352	4.3	1,74,445	12,309	7.1
1982-83	39,425**	1,595	4.0	8,797	424	4.8	1,83,153	13,576	7.4
1983-84	41,588	1,719	4.1	9,268	470	5.1	1,94,555	15,156	7.8
1984-85	41,741	2,045	4.9	9,413	506	5.4	1,95,708	15,745	8.0
1985-86*	46,422	2,011	4.3	10,713	529	4.9	2,07,112	16,726	8.1
1986-87*	47,864	2,138	4.5	11,046	563	5.1	2,13,549	17,780	8.3
1987-88*	49,587	2,271	4.6	11,443	599	5.2	2,21,236	18,882	8.5
1988-89*	51,323	2,503	4.9	11,844	625	5.3	2,28,979	20,024	8.7

YEAR	DIPLOMA/CERTIFICATE			TOTAL		
	T	W	%	T	W	%
1980-81	18,494	7,352	39.8	27,52,437	7,48,525	27.2
1981-82	18,005	6,992	38.8	29,52,066	8,16,704	27.7
1982-83	18,264	6,740	36.9	31,33,093	8,80,156	28.1
1983-84	20,603	7,345	35.7	33,07,649	9,40,253	28.4
1984-85	22,430	8,506	37.9	34,04,096	9,92,139	29.1
1985-86*	21,425	8,469	39.5	35,70,897	10,58,612	29.6
1986-87*	22,091	9,002	40.7	36,81,870	11,25,304	30.6
1987-88*	22,887	9,560	41.8	38,14,417	11,95,073	31.3
1988-89*	23,668	10,012	42.3	39,47,922	12,51,491	31.7

* Estimated

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