

XVI TECHNICAL EDUCATION

A well-planned system of technical education is a pre-requisite to sustain the rapid pace of development required in our country. Such a system will be called upon to translate the imperatives of modern manufacturing process, state-of-art technology, diversified technological changes and complex training requirements resulting from these changes, into the educational planning process.

The future goals and objectives of the technical education system are to produce manpower needed to meet these diversified requirements of the user system. Directorate of Training and Technical Education coordinates its training programme to match with the policy of Government of Delhi to encourage the development and establishment of non-polluting, higher value-added and service-oriented industries.

Following are the major thrust areas requiring attention:

- Removal of obsolescence and modernisation of laboratories and workshops.
- Frequent updation of curricula to include latest development in technologies.
- Introduction of programmes in emerging areas like Computer Engineering, Microprocessors, Manufacturing Technology, Printing and Packing, Plastic, Chemical, Environmental Engineering and Technology, Fashion Technology and Public Health.
- Initiation of Continuing Education programmes to train and retrain working technicians to acquire new trends and developments.
- Concentration on development of managerial and entrepreneurial skills and innovative abilities.
- Consolidation of existing facilities and optimum utilisation of available resources.
- Improvement of quality and standard of Technician Education.
- Interaction with Industry and the Community.

For imparting technical education at undergraduate and postgraduate level, there are 4 institutions namely Delhi College of Engineering, Netaji Subhas Institute of Technology, College of Art and College of Pharmacy. For imparting training at

diploma level there are 8 institutions being run by Directorate of Training and Technical Education.

PROGRAMMES OFFERED & INTAKE

Brief details of the Programmes and Institutions with intake capacities for the session 2003-04 is given below:

DIPLOMA COURSES (FT)

DISCIPLINE	AP	AB	GB	GN	KP	MP	PP	BPI	TR	SU	AI	BH	CR	FA	GT	MI	MS	RT	SB	INW
TEST – 1																				
Computer Engg. (3 Years)	45			30	45						40			60	60					
TEST -2 (I)																				
Architectural Assistantship (3 years)		36				44							30					30		
Automobile Engg. (3 Years)			45				35													
Chemical Engg. (3 Years)				30																
Civil Engg. (3 Years)		70	75				70						60							
Construction Engg. (3 Years)	30																			
Electrical Engg. (3 Years)		70	75				70						30		30					
Electronics & Communication Engg. (3Years)				30		45	70				40		60	60	60	60				
Electronics With Specialization In (3 Years)																				
a) Digital Electronics & Microprocessor System Design	35				35								30		60					
b) Medical Electronics	15				15								30							
Instrumentation & Control (3 Years)	30												30							

Mechanical Engg. (3 Years)		12 0	13 0	30			13 0										60	60				
Mechanical Engg. With Specialization In Maintenance Engg. (3 Years)	30																					
Public Health & Environmental Engg (3 Years)					30																	
Plastic Engg./Tech. (3 Years)			30	30																		
Printing Technology (3 Years)							50															
Production Engg. (3 Years)			45																			
Tool & Die Making (4 Years)									30													
Beauty Culture (2 Years)						44																
Garment Fab. Tech. (2 Years)		30																				
Interior Design (3 Years)						50																
Library Science (2 Years)						44																
Medical Lab Tech. (3 Years)						45					30	60										
TEST-2 (ii) - Aptitude Test																						
Art for Drawing Teacher (3 Yr)									20													
Commercial Art (3 Years)						48																
Textile Design (3 Years)																						60
Fashion Design (2 years)					30																	30
TEST – 3																						
Pharmacy (2 yrs)						20					60	60										60
TEST - 4																						
Modern Office Practice																						

(3 Yrs.)																			
a) English					40		120							60					
b) Hindi					20		30												
AP - Ambedkar Polytechnic.					TR - Tool Room & Training Centre				MI - Marathwada Institute of Technology										
AB - Aryabhat Polytechnic					SU - Sarada Ukil School of Art														
GB - G.B. Pant Polytechnic					AI - Aditya Institute of Technology				MS - Maharaja Surajmal Institute of Pharmacy & Technology										
GN - Guru Nanak Polytechnic					BH - Baba Haridas College of Pharmacy & Technology				RT - Rao Tula Ram Polytechnic										
KP - Kasturba Polytechnic for Women																			
MP - Meerabai Polytechnic					CR - Chhotu Ram Rural Institute of Engineering & Technology				SB - Subramaniam Bharati College of Science & Technology										
PP - Pusa Polytechnic																			
BPI - Bhai Parmanand Institute of Business Studies					FA - Father Agnel Polytechnic				INW - International Polytechnic for Women										
					GT- Guru Tegh Bahadur Polytechnic														

In the 10th Five Year Plan the main strategy is:

- 1) Capacity expansion to meet qualitative aspects.
- 2) Introduction of courses in state-of-art technology in polytechnics.
- 3) Establishment of additional Engineering Colleges.
- 4) Establishment of additional polytechnics for emerging areas of technology.
- 5) Regular curriculum revision and development of learning resources.
- 6) Modernisation and strengthening of existing institutions.
- 7) Promotion of industry-institute-interaction.
- 8) Strengthening of continuing education programmes and entrepreneurship development (Introduction of Evening diploma courses in Existing polytechnics)
- 9) Introduction of short-term non-formal programmes in existing polytechnics for optimum utilization of the resources and internal revenue generation.
- 10) Monitoring and scientific evaluation of academic activities in the institutions.
- 11) Faculty development by way of short-term and long-term academic and industrial training programmes within the country.
- 12) Implementation of suitable schemes and provision of infrastructure in the Directorate (HQ) and in Technical institutions for future advancement in technologies, which cannot be foreseen at this stage.

I. DTE. OF TRG. & TECHNICAL EDUCATION

1. Strengthening of the Directorate (Rs.32.25 Lakhs)

The success of the plans and schemes envisaged for growth of technical education largely depends upon a sound mechanism, comprising of functions such as planning, executing, coordinating, controlling, monitoring and evaluation. This necessitates strengthening of the Directorate of Training and Technical Education, which is entrusted with the responsibility of efficiently managing various organs.

Whereas in sixties, there were only four polytechnics under this Directorate with a limited intake, today it has to control 8 Diploma level institutions and 4 degree level colleges with a considerable increase in the number of disciplines offered and students admitted. However, the staff structure at the Directorate (Headquarters) has not been correspondingly revised. It is, therefore, essential that Directorate (Hqrs.) be strengthened to manage the institutes.

Directorate of Training and Technical Education, Delhi is headed by the Principal Secretary who is a senior IAS officer and an Ex-Officio Principal Secretary of the Department dealing with entire Technical Education Programmes in the NCT of Delhi, besides craftsman training and Apprenticeship Programme. To assist the Principal Secretary, there is one Special Secretary belonging to I.A.S. and one Joint Secretary (T&TE) who is senior P.C.S. officer and an Ex-Officio Joint Secretary of the Department. With the increase of number of institutes, student strength and number of staff in polytechnics based on AICTE norms, the workload of Administration Branch, Academic Branch & Planning Branch of Directorate has been considerably increased. It is, therefore, proposed to create one Legal Cell to deal effectively all the court cases and maintain co-ordination with Government Counsel. It is also proposed to create one internal audit cell for timely submission of all audit paras and to provide guidance to the institutions in audit matters. In the Directorate (Hqrs.) there is also need for one Librarian and one Library Attendant for the present Library set up.

Presently the pay scale of the post of Dy. Director is Rs.10000-15200. Also, there are three posts of Asstt. Directors in the pay scale of Rs.10000-15200. The post of the Dy. Director occupies a higher place in the hierarchy. It is, therefore, desirable that the scale of the approved post of Dy. Director should be Rs.12000-16500 and this scale should be extended to the existing post of Dy. Director also. Post of Joint Director (Tech) is in the pay scale of Rs.12,000-16,500 and Deputy Director post also carry the same pay scale. To maintain proper hierarchal level it is proposed to attach special pay of Rs. 400 with the post of Joint Director (Tech). It is essential to take up the work of modernization of office by introducing complete Computer Information System.

It is also approved to privatise the sanitation and security services at the Directorate (HQ), as also Board of Technical Education, Aryabhat Polytechnic and Meera Bai Polytechnic and is proposed to introduce privatization of security and sanitation services in other institutes also.

For country like India with its more than 80% of the population living in villages and in urvab slums it is essential that development achieved in the field of science and technology be harnessed for ameliorating the living conditions of the poor.

Viewed against this background Govt. of India, had launched various programmes for the uplift of rural people and other disadvantaged section of the society with a view to generate employment, alleviating poverty and improving the quality of life in Rural Areas and Urban Slums. In addition to the already existing programmes, it was felt that the involvement of Technical Institution s in the rural development will go a long way to supplement the efforts by utilising the expertise and infrastructure available in the Polytechnic.

Objective of community Polytechnics is to provide non-formal training to the local people in basic skills, knowledge and attitude to adopt any occupational activity leading to self-employment. Training can be imparted for up gradation of skills in their own field for adoption of modern technology. Efforts are also made to develop the entrepreneurial capabilities.

At present the Department of Training and Technical Education is implementing the scheme of Community polytechnic through Direct Central Assistant provided by Govt. of India, M/O Human Resources Development. Community polytechnic scheme have been implemented in GB Pant Polytechnic, Aryabhat Polytechnic, Meerabai Polytechnic and Kasturba Polytechnic. Extension Centre at various locations have been opened by the Department in association with the Non-Government organisation and with the slum department , Rural Development of MCD & Govt. of Delhi.

So far 41 Community Polytechnic Extension Centres have been set up to provide training to the people at their doorsteps. The Direct Central Assistance provided is not sufficient to increase the quality coverage of Community Polytechnic for which there is an increasing demand in Delhi. It is, therefore, essential to strengthen and set up a cell in the Directorate(HQ) for effective, monitoring of the community polytechnic scheme for which following posts have already been created.:

Project Officer	1	Rs.10,000 - Rs.15,000
Attendant-cum-Chowkidar	8	Rs.2,550 - Rs.3,200

An outlay of Rs.32.25 lakhs have been approved for Annual Plan 2004-05.

2. Strengthening of Board of Technical Education {Rs.99.25 lakhs}

The Board of Technical Education was established in 1961 with the objective of conducting examinations for award of certificate/diploma in various Engineering, Non-engineering courses being conducted by the government and privately managed affiliated institutions.

The Board of Tech. Education carries out functions such as: -

1. Approval of courses and curriculum..
2. Making arrangements for conduct of examinations.
3. Awarding Diploma/Certificates for various courses.
4. Affiliating Institutes for conduct of courses.

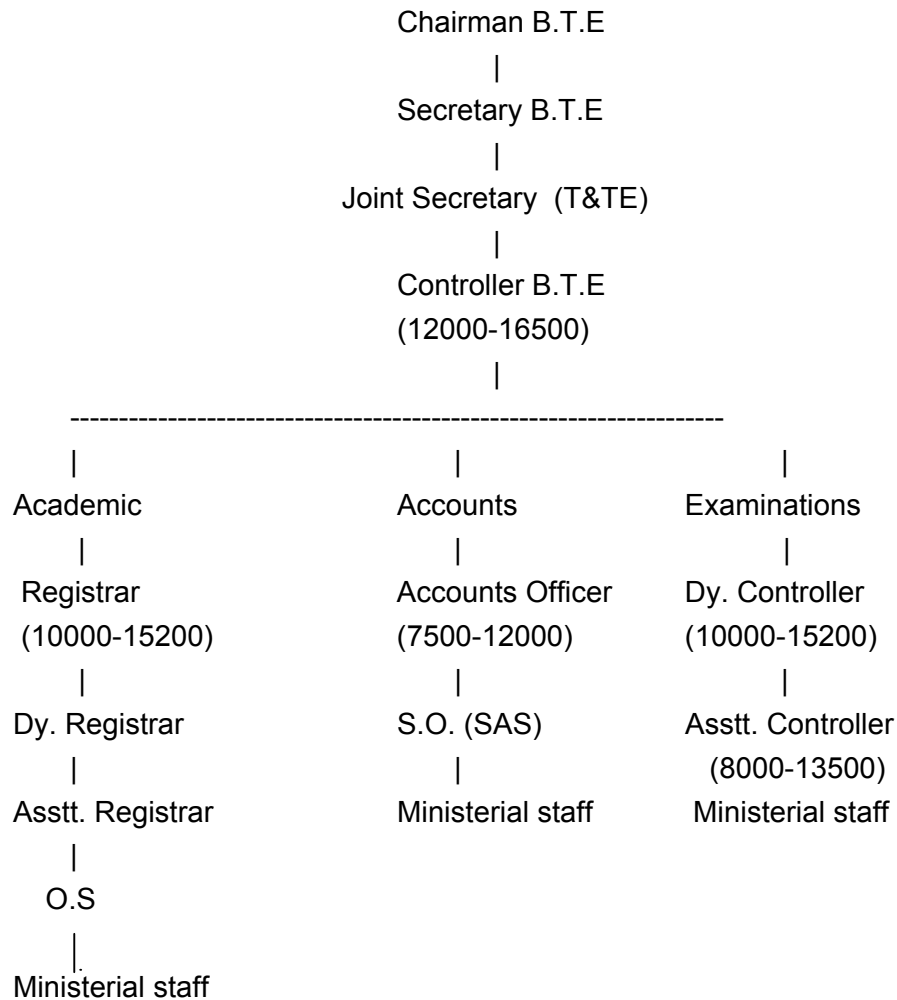
5. Monitoring of training and standards of education in the institutions.
6. Laying down norms for admission to courses of study.

Integration of evaluation with the process of teaching and learning with a view to diagnosing the weaknesses and deficiencies in education needs immediate attention. This requires analysis of results, regular monitoring and evaluation of institutions to ensure that they are imparting education as per prescribed norms. This has gained added importance due to addition of many privately managed affiliated institutions and many more still waiting and clamoring for affiliation with Board of Technical Education. Further, in view of the fact that All India Council for Technical Education has prescribed certain norms for technical institutions, Board of Technical Education is expected to play a crucial role in qualitative improvement of technical education. This is possible only when Board of Technical Education can ensure that the institutions adhere to the prescribed norms in terms of infrastructural facilities and a sound management system. Even for the conduct of examination, the present system is under heavy strain as previously the Board was to conduct examination on Annual Pattern for a few Engineering and Non- engineering courses but now with the introduction of complete carry over system on semester pattern with six year as upper limit for passing three years diploma course the process of computation of results has become very complex.

Board of Technical Education, Delhi is at present conducting examination for 10 Government Institutions, 10 privately managed affiliated institutions and 2 autonomous institutions. The examinations are conducted for award of certificate/diploma for 45 courses of varied nature for about 12,000 candidates. Question papers for about 550 subjects are to be set and printed every six months.

The existing staff structure of the Board is, therefore, quite inadequate to handle and cope with the work of examination, curriculum revision, affiliation and monitoring of the standards of education in the affiliated institutions etc.

The following structure of the Board has been envisaged to meet the above objectives:



Board of Technical Education is dealing with about 4000 examiners and has a budget of Rs.25 to 30 lakhs under the sub-head “professional services” for payment of honorarium to paper setters/examiners/ moderators/examination superintendents and printers for printing of question papers. The Board also recovers revenue in the form of Examination fee from the candidates. All this necessitates a thorough scrutiny of all the accounts and the procedures as well as strict secrecy.

For modernisation of BTE office, it is approved to purchase one FAX machine with a dedicated telephone line, internet connection as well as latest software and computer system to ensure that results of all examinations are declared within three or four week. Therefore, this department proposed for creation of the following posts in the Board of Technical Education: -

1.	Programmer	1	Rs.8000-13500/-
2.	Accounts Officer	1	Rs.7500-12000/-
3.	Data Entry Operator (Group-C)	2	Rs.5000-8000/-
4.	Data Entry Operator (Group-B)	1	Rs.4500-7000/-
	Total	5	

Approved Outlay 2002-2007			Approved Outlay 2004-2005 (Rs. in lakhs)		
Revenue	Capital	Total	Revenue	Capital	Total
250.00	00.00	250.00	99.25	00.00	99.25

3. Replacement and Modernisation of Machinery and Equipment (Rs.60.00 Lakhs)

One of the high priority areas of Technician Education is the removal of obsolescence and modernisation in the current and futuristic advancement in science and technology. Most of the equipment has outlived its utility and needs replacement. Some equipment has become outdated due to the advent of new processes and technologies and requires substitution. For modernization, there is need to undertake technology forecasting and technology assessment studies and establish laboratories with equipment pertaining to emerging technologies. Modernization of laboratories and workshops is also undertaken as a consequence of changes in curricula taking place from time to time to cope with the upcoming technologies. The widespread use of computers in various fields has necessitated setting up of computer laboratories in each institution to provide training in the use of computer for various applications. Use of sophisticated and advanced control system in an increasing way demands that students are well conversant with their use. Thus the objectives of the scheme would be:

1. To replace the obsolete machinery and equipment which have outlived its life with the latest type, and
2. To provide additional modern/ sophisticated equipment due to advancement in technology.

3. To equip the laboratories and workshop with support facilities matching with the equipment procured.

To achieve the above objectives and to provide physical facilities, modern equipment and machinery will be procured by the institutions under the Directorate during 2004-2005.

An amount of Rs.60.00 lakhs is approved for this scheme for Annual Plan 2004-05.

4. **Continuing Education & Entrepreneurship Development and interfacing with Industries. (Rs. 15.00 lakhs)**

Continuing Education Programmes

The National Policy of Education & Programme of Action formulated by Government of India, M/o H.R.D. envisages continuing Education and distance learning.

Presently evening diploma courses are running in G.B. Pant Aryabhat polytechnic and Pusa Polytechnic, in order to provide vertical mobility for I.T.I. Pass students. Taking into consideration the demand and utility for evening courses it is proposed to introduce diploma courses in civil, electrical, mechanical, electronics in Pusa, Ambedkar, Guru Nanak Dev and Kasturba Polytechnics in a phased manner during the 10th Plan period.

Since 2001-02 Part Time evening Diploma courses in Automobile Engineering and Printing Technology have been introduced in Pusa Polytechnic. Teaching faculty would be engaged on part-time basis. The rates of Honorarium to part time lecturers and in-charge of evening diploma courses have been enhanced since 2001-02.

Entrepreneurship Development Programme

Entrepreneurship Development Programme has been recognised as an effective human resource development tool. This programme is primarily meant for developing the first generation entrepreneurs, who on their own cannot become successful owners of enterprises. EDPs can motivate newcomers for taking up self employment and entrepreneurial career institutions. Students mostly opt for wage employment career which contribute to unemployment. Institutionalising EDPs in the institutions can divert 10% of the students towards self-employment. Directorate of Training and Technical Education proposes to set up Entrepreneurship Development Cell in technical institutions. The function of EDP will be :

- To inculcate entrepreneurship values and providing training inputs.
- To organise entrepreneurship resource camps.
- To introduce curriculum on entrepreneurship development as an elective subject.
- To organise short-term courses by inviting experts from organisations to provide necessary guidance to students.
- To set up their own industries.

Interaction between engineering institutions and industry is one important objective as laid down in the New Policy on Education, 1986 of Govt. of India. At present the technical institutions and industry work in isolation and the linkage is not so strong as it should be. An ideal situation would be that a technical institution is attached to an industry in the same way as a medical college is attached to a hospital. However, close interaction between institutions and industry can be effectively brought about. A meaningful collaboration can be beneficial both for the institutions and the industry.

The following activities to some extent are being undertaken where some sort of interaction between industry and institute exists:

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1. Arranging industrial visits for students.
 2. Industries contacting institutes for recruitment.
 3. Teachers deputed for QIP in industry.
 4. Inviting people from the field for guest lectures.
 5. Industrial/ in plant training of students.
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The interaction between industry and institute cannot take place until and unless concrete efforts are made in that direction. The existing interaction needs to be enhanced and extended to widen its perimeter. Various collaborative activities that can be initiated and constraints visualized are identified as under:

1. **Exchange of staff:** Executives and engineers from industry can be invited to work as guest faculty in the institutions. They can deliver lectures on specialised topics and can associate with the faculty of the institute for accomplishing certain research projects assigned to the students. They can undertake certain projects in the institute. Similarly staff from the institute can spend some time during vacations or for further period in the industry to work in collaboration with the staff there, so that knowledge could be shared to achieve certain tasks.
 2. **Consultancy offered by institutions:** Under this activity the institutions can provide consultancy to the industry with the expertise available in the institutions. The institutions can help solve the problems encountered by the industry. The faculty can advise regarding manpower requirement, quality control, process control, layout etc. and can undertake research projects. An effective partnership between the faculty of institution and industry can provide an environment which will promote innovations. Faculty has creative ideas and knowledge reservoirs whereas industry has resources and means to put ideas in to practical shapes.
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3. **Practical Training for students and staff:** It is important that theoretical knowledge is supplemented by practical experience. The Students must be exposed to real life situations and the industrial culture. Students must be able to correlate theoretical knowledge with practical applications. At present this is being done through short stints of practical training in industry during vacations. This training is hardly adequate and more time should be devoted. The curriculum should provide sufficient time and weightage for practical training. There should at least be one semester reserved for such training. The industry will have to be liberal in allowing the students to receive training for long periods. The industry can involve students in solving its problem, and assigning them certain functions to be carried out in the industry. Such training if not properly monitored or supervised will lose the effectiveness and would not serve the desired purpose. So it is essential that some staff members are also associated with it.

Training for Technical Personnel : The institutes can devise and conduct short term training programmes and continuing education programmes for technical personnel of industry to enhance their knowledge and thus improve career prospects.

5. Feed back on curriculum and training needs : Industry can give valuable feed back to the institution regarding the shortcomings and gaps noticed in the students during their performance in the industry. The students lacking in certain theoretical or practical aspects of study at the institute can be reflected in the feedback given to the institutes so that suitable modifications can be incorporated in the curriculum.

Separate cell at the Directorate of Training and Technical Education shall be created for manpower planning and forecasting the need of trainees.

Administrative hurdles and rules and regulations regarding acceptance of consultancy fees will be sorted out. For accepting production work a system of estimates, evaluation of cost and proper accounting will have to be evolved.

In order to implement this scheme effectively, it is essential to purchase one Van under the scheme for co-ordination with industries and along with creation of one post of Driver.

An amount of Rs.15.00 lakhs is approved for this scheme for Annual Plan 2004-05

5. Re-organization , Restructuring and strengthening of existing facilities in Polytechnics. (Rs.105.00 lakh)

All India Council for Technical Education has specifically accepted the recommendations of Madan Committee regarding revised staffing pattern of Polytechnics. Ministry of Human Resource Development, Govt. of India has accorded approval for implementation of revised structure for Delhi polytechnics Ministry of Human Resource Development, Govt. of India directed that these recommendations will be implemented in phased manner 40:40:20 in three years. Subsequently additional posts as per recommendations of Madan Committee had been created and the process to fill these posts has already been initiated. It is also approved to implement other recommendations of AICTE (Dogra Committee's recommendations etc.) during the Plan period.

The objectives of the scheme is:

- 1) To improve the standard & quality of training in the polytechnics
- 2) To revitalize and motivate the faculty to enable them to tackle the challenges posed by the ever-growing field of technology.

Career Advancement avenues as per recommendations of Dogra Committee have been provided to faculty members. Grant of benefits of career advancement to Lecturers is an ongoing process since all the Lecturers who fulfill the requisite conditions are to be granted senior scale of Rs.10000-15200 and selection grade of Rs.12000-18000. Moreover as recommended by Dogra Committee, AICTE pay scales are to be granted w.e.f. 1.1.86.

The concept of library as a place for storing and issuing of books is outdated. A wide variety of learning resources comprising graphic records in the form of books, periodicals, films, slides, microfilms etc. has brought a radical change in the concept of library. Now it has become a workshop where an individual can interact with the media to be successful in his pursuit of knowledge. It is, therefore, imperative to extend all possible means to ensure proper environment, accessibility and exposure of graphic tools to the user. The institutions must give priority to library development side by side with laboratory development. The greatest constraint in this regard is lack of necessary funds. The polytechnics, at present, have a very limited stock of books and journals. There is a need for large number of reference books, technical encyclopedias, technical dictionaries, directories, handbooks, yearbooks and similar sources for consultation.

The organizational set up of library also needs improvement. The staff provided at present is quite inadequate to manage the multi-faceted activities of the library. The libraries and learning resource centres of all the institutions will be reinforced by providing technical journals (Indian and Foreign) books in Science, Engineering and Technology and other facility such as audio visual aids, educational films, video cassettes, CDs, computer aided programmes, CAD/CAM packages produced by Technical Teachers Training Institutes, UGC, ISTE and other educational research centres and from other proprietary item manufacturers.

In view of the facts stated above it is desirable to create one post of Librarian in the scale of Rs. 8000-13500 in each polytechnic in addition to the post of Librarian and Library Attendant in each polytechnic.

It is also proposed to computerize the libraries of the polytechnics which necessitates provision of additional infrastructure in terms of computers and peripherals

Institutions in Delhi provide for 15% seats for outside students. In addition to this, a considerable number of students nominated by various states and foreign nationals also seek admission. There is an increasing demand for hostel facilities by local students because the workload of studies in technical

institutions is very taxing and students can devote full attention with residential facilities. They get more opportunities for mutual interaction and, thus, can discuss their difficulties

Programme of Action for Implementation of National Policy on Education has also indicated that every technical institution should provide for hostel facilities to the extent of 100% for girl students and at least upto 50% for boy students. The hostels should be equipped with furniture and all other basic amenities should be available for proper living and comforts. The inmates should have facilities for mess and recreation. Presently only G.B. Pant Polytechnic, Meera Bai Polytechnic and Kasturba Polytechnic have their own hostel buildings. Pusa Polytechnic students are sharing the hostel facilities of ITI Pusa hostel. The accommodation and amenities in all these institutions are far from adequate. In the existing hostels about 300 students can be accommodated. In the 10th plan strengthening of existing hostels and expansion of facilities will be taken up. Presently the hostel at Kasturba Polytechnic is accommodating around 50 girl students of Kasturba polytechnic, Aryabhat Polytechnic and Guru Nanak Dev Polytechnic. For the proper maintenance of hostel and care of hostellers, two more posts of Hostel Attendants are to be created in each hostel.

The scheme also envisages consolidation of existing facilities and optimal use of resources for getting maximum returns of the investment made on Technical Education in previous Plans. Considering the high investment that goes into the setting up of a new technical institution, it will be desirable to fully utilize the space and equipment in the existing institutions rather than allowing proliferation of new institutions in conventional courses of study. Land, especially in a metropolis, is a costly component. So, greater consideration must be given to optimum utilization of available space in the existing institutions. Vertical expansion and construction of extension block as per building-by-laws can be made. Efforts will be made to expand the facilities for training in laboratories and workshops. Additional tools and equipment will be made available to supplement the existing facilities. Similarly, it is proposed to make up the inadequacies of staff by creating additional posts.

During 8th & 9th Five Years Plan period number of disciplines has increased in the existing polytechnics. The student strength has also been increased Teaching posts as per AICTE norms have also been created in the polytechnics. However, the requisite number of Technical Supporting staff required to manage labs and workshop and ministerial staff in the existing polytechnics has not been created so far. Further there is need to modernize the working of office and computerize the academic cell. It is, therefore, proposed to strengthen the existing infrastructure in the polytechnics. E-mail and Internet service has already been provided to all the polytechnics. Department has already conceptualized a proposal for computerization of students data and pay roll of the staff. The infrastructure for increased interaction with the higher learning institutions and industry is also proposed to be provided in each polytechnic in a phased manner. Thus, to strengthen industry-institute-interaction and interaction with higher technical institutes like IIT etc., additional requirement to cover the shortages of technical supporting staff and ministerial staff for each institution has been worked out tentatively as under: -

G.B. Pant Polytechnic:

1.	Assistant Programmer	1	5500-9000
2.	Data Entry Operator Gr.B	2	4500-7000
3.	Head Clerk/ Assistant	1	5000-8000
4.	Lab. Technician/ WSI	6	5000-8000
5.	Lab Attendant	6	3050-4590
6.	U.D.C.	1	4000-6000
7.	L.D.C.	1	3050-4590
8.	Sweeper	3	2550-3200
9.	Asstt. Storekeeper	1	4000-6000
10.	Chowkidar	3	2550-3200

Meera Bai Polytechnic:

1.	Office Supdt.	1	6500-10500
2.	Assistant Programmer	1	5500-9000
3.	Data Entry Operator Grade B	2	4500-7000
4.	Lab Technician/ WSI	4	5000-8000
5.	Lab Attendant	4	3050-4590
6.	U.D.C.	1	4000-6000
7.	L.D.C.	1	3050-4590
8.	Daftary	1	2750-4400
9.	Asstt. Storekeeper	1	4000-6000

Pusa Polytechnic:

1.	Programmer	1	8000-13500
2.	Assistant Programmer	1	5500-9000
3.	Data Entry Operator Gr. B	2	4500-7000
4.	Asstt. Store Keeper	1	4500-7000
5.	Lab Technician/ WSI	4	5000-8000
6.	Lab Attendant	4	3050-4590
7.	Head Clerk/ Assistant	1	5000-8000
8.	U.D.C.	1	4000-6000
9.	L.D.C.	2	3050-4590
10.	Sweeper	4	2550-3200
11.	Chowkidar	3	2550-3200
12.	Cleaner	4	2550-3200

Aryabhat Polytechnic:

1.	Assistant Programmer	1	5500-9000
2.	Data Entry Operator Gr. B	2	4500-7000
3.	Head Clerk	2	4500-7000
4.	Lab Technician/ WSI	4	5000-8000
5.	Lab Attendant	4	3050-8000
6.	L.D.C.	1	3050-4590

Bhai Parmanand Institute of Business Studies:

1.	Asstt. Programmer	1	5500-9000
2.	Data Entry Operator Gr. B	2	4500-7000
3.	Asstt. Storekeeper Gr. B	1	4000-6000
4.	Lab Technician/ WSI	6	5000-8000
5.	Lab Attendant	6	3050-4590
6.	Head Clerk/ Assistant	1	5000-8000
7.	U.D.C.	2	4000-6000
8.	L.D.C.	2	3050-4590
9.	Cleaner	6	2550-3200

Ambedkar, Guru Nanak Dev & Kasturba Polytechnics (each)

1.	Librarian	2	5000-8000
2.	Workshop Technician	6	5000-8000
3.	Assistant Programmer	1	5500-9000
4.	Data Entry Operator, Gr. B	2	4500-7000
5.	Head Clerk/ Sr. Steno	1	4500-7000
6.	Cleaners (Lab/ Workshop)	4	2550-3200
7.	Mali	1	2550-3200
8.	Peons	2	2550-3200
9.	Duplicating Machine Operator	1	3050-4590
10.	Lab Attendant	6	3050-4590
11.	Asstt. Storekeeper	2	4000-6000

The work of privatisation of security and sanitation services at Ambedkar polytechnic, Guru Nanak Dev Polytechnic and Kasturba polytechnic has already been accomplished. Two more polytechnics i.e. Aryabhat polytechnic and Meera Bai Polytechnic as well as the Dte. (HQ) and B.T.E. are also going to be covered under privatisation of security and sanitation services during the year 2004-05 since the proposal for the same has been approved by the Finance Department. Department would also explore the possibility of awarding the work of security and cleanliness to private agencies for remaining polytechnics also such as Pusa

polytechnic, G.B.Pant Polytechnic and Bhai Parmanand Institute of Business Studies. In case the proposal for privatisation of sanitation and security of these institutions is approved, the proposal for creation of additional posts of sweeper and Chowkidars shall be dropped.

In the existing polytechnics in Delhi, there are over 100 laboratories and workshops related to physics, chemistry, civil, electrical, mechanical, electronics, computer, instrumentation and control etc. The reasons for the establishment of this maintenance system are (a) lack of skilled manpower, (b) paucity of appropriate tools and equipment for repair facilities in the local/ nearby (c) non-availability of repair facilities in the local/nearby areas, (d) cumbersome financial procedure for undertaking repairs of equipment.

With the introduction of specialised courses in the polytechnics, a number of specialised laboratories equipped with modern and sophisticated equipment will come up in the coming years. These are required to be properly installed at various locations in the buildings. In the absence of a separate unit within the system it will not be possible to maintain these laboratories and workshops in good condition and this in turn would create a severe hindrance in the learning process of the students apart from low utilization of equipment.

Presently the maintenance of civil works is handled by the P.W.D. for which separate annual funds are allocated. The procedure followed consists of awarding of work by PWD for annual repairs of buildings to contractors. There is no provision for day-to-day maintenance of the civil works with the result that the immediate repairs have also to wait till the time when annual repairs are undertaken. There is therefore a need to set up a unit for maintenance of buildings and equipment for attending to day-to-day repairs as well as for undertaking essential preventive maintenance.

Such a step will substantially increase the utilization factor of the available equipment. This activity will also improve the skills of the students due to the availability of essential repair equipment in the laboratories and workshops. The buildings or any other civil work wanting repairs will be attended to immediately

resulting in increased useful life as well as cleanliness of the campus. The unit will also undertake repair of furniture. Activities of the unit would be: -

- i) To assess the requirements for tools, spares and consumables needed for the repair and maintenance of lab and workshop machinery.
- ii) To carry out day-to-day repair and maintenance of buildings, labs and workshops.
- iii) Shifting and installation of equipment.
- iv) Procure raw material, tools etc required for repair and maintenance.
- v) Engage labour/ technicians on daily wage basis, if required for specialised jobs.
- vi) Set up procedure and schedule for repairs of specialised equipment by the central units.

The Technical Education system should not confine itself to producing only technical knowledge and skill in the student but should also strive towards physical, intellectual and aesthetic development of his personality. He should inculcate besides scientific and technical temper democratic, moral and spiritual values. Efforts should be made to create interest of students in hobbies, games and sports and promote habits for health care, mental application, management of time and conservation of physical, mental and emotional energy. Institutions must provide congenial environment and good working conditions in which students live and study. The students should not get a feeling that they have to agitate for securing facilities of drinking water, cycle sheds, timely supply of text-books, well cooked meals in hostels, etc. Other legitimate facilities like inexpensive canteen, well-managed cooperative store, recreation centre, sports facilities, medical facilities etc. should also be available in the institutions. The students should be encouraged to involve themselves in some useful activities like joining hobby clubs, arranging technical exhibitions, organizing quiz competitions and seminars. Under the scheme strengthening of these facilities will be undertaken by providing good common room, renovation of canteen, purchase of water coolers, establishment of a medical room with provision of a visiting doctor, construction of a cycle/ scooter shed and provision of playground.

Physical facilities in the form of required items identified by Head of the Institutions in consultations with students union conforming to the objectives of the scheme shall be provided to institutions in a phased manner depending on the priorities.

Performance Improvement and Development of Staff through incentive and motivation are basic needs of an educational system. There is a continuous need of training and retraining of teachers to develop professional / personal abilities and resourcefulness. The training needs which may be in the area of academic development, personal development. Pedagogical development, conceptual development, diversely changing values, learning styles etc. shall be accomplished by deputing the staff judiciously to various training programmes like induction training, in-service training, conference, seminars, workshops etc. The staff will be sponsored for industrial training as well as for higher studies.

Training profiles of all the teachers will be maintained indicating the area of specialization, subjects of study, practical training received and other related information. The teachers on the basis of their profile will be identified for sponsorship to various training programmes. In addition to short-term training programmes and practical training, teachers will be encouraged to acquire higher qualifications through long-term continuing education programmes. The quality improvement programme which is presently applicable to degree institutions is proposed to be extended to Polytechnic teachers who are deputed to pursue higher studies.

Teachers who will be required to undergo long term programmes for improving their qualifications will have to be provided training reserves so that teaching work in the institutions does not suffer. Leave and training reserve to the extent of 10% of the total sanctioned staff will have to be provided in each institution. In addition to the above it is proposed to sponsor the teachers to various short duration and long duration training programme/workshops or seminars.

Emerging technologies are essential for the national development and technical advancement. Such areas include degree level new engineering programmes in specialization like Biotechnology, Bioinformatics, Automobile Engineering,

Metallurgy and Material Science, Mechatronics, Environmental Engineering, Dairy Technology etc.; new engineering programmes at the diploma level in areas like Biotechnology, Energy Technology, Environmental Engineering (which is already available for girls should be made available for boys also), Food Technology etc.; certificate level programmes in areas such as Computer Accountancy including usage of Business Machines, Salesmanship and Marketing, Sanitary Inspection, Medical Equipment Servicing, Computer Maintenance, Audio-Visual Equipment Servicing including colour TV, VCRs, Stereos, etc. The need for trained manpower in the new emerging areas has been recognized at the National level itself and this is applicable to the National Capital Territory of Delhi. Govt. of India based on the statistical data has also identified some critical areas where weakness exists, e.g. computer science, electronics, printing technology, market technology, maintenance engineering, instrumentation etc. based on frequent demand for trained manpower. These courses will be introduced in various institutions during 10th Plan period.

It is proposed to discontinue all the Post Diploma courses except Refrigeration and Air-Conditioning.

An amount of Rs.105.00 lakhs is approved for this scheme for Annual Plan 2004-05.

6. Strengthening of facilities for the students of SC/ST/OBC/Minorities (SCP) (Rs. 4.50 Lakhs)

There is a great need for specifically oriented educational effort for reducing disabilities of SC & ST students, which cannot be removed only by the provisions for reservation. It has to be recognized that the majority of these students, often suffer from the after-effects of childhood inadequacies and lack of confidence in realizing their academic potentials. These factors often work against their adjustment in the stream of higher education, professional work and their performance vis-à-vis others. So some programmes for enhancing the competence of SC/ST students have to be initiated and appropriate steps need to be taken to fully integrate these young people with the others.

This scheme has been initiated to provide increased facilities for SC/ST category students so that they can be motivated to pursue their studies without much of dependence on their parents. During the 9th Plan suitable provision was made to arrange extra coaching before or after the normal working hours to these students to make up the deficiencies, if any, experienced by them. . The same provision is to be carried during 10th Plan period. In addition to this, these students will be provided with textbooks and other costlier learning aids required during studies.

To organise special coaching programme separate part-time staff will be required who will be recommended as per norms.

An amount of Rs.4.50 lakhs is approved for this scheme for Annual Plan 2004-05

7. Renovation/Addition/ Alteration required in the Existing Institutional Buildings (Rs.50.00 lakhs)

For maintaining the Govt. technical institutions functioning under this Directorate, additions, and alterations are required in various labs, workshops and class rooms & improvement of other facilities. Raising of boundary walls, providing generating sets, compound lights, establishment of computer labs, installation of new equipment and machinery, development of playgrounds, construction of mini stadium, air conditioning of labs, construction of cycle stand, scooter and bus garage, improvement of drainage system, improvement of canteen and providing tiles in kitchen, bathroom, exhaust fan in kitchen as per norms of CPWD and providing wire mesh door, in staff quarters as per norms are the various items of works required to be undertaken in the 10th Five Year Plan. Under this proposal all the polytechnics including their hostels as well as residential staff quarters, as also Bhai Parmanand Institute of Business Studies, office building of Directorate of Technical Education, Board of Technical Education shall be covered. Further complete renovation of workshop block of Pusa Polytechnic would also be taken up during 10th Plan

An amount of Rs.50.00 lakhs has been approved for Annual Plan 2004-05

**8. Setting up of three Government Polytechnic/ Institutions in Delhi
(Rs. 200.75 lakhs)**

There are eight Government Diploma level institutions in Delhi, out of which two are exclusively reserved for women while others are co-educational. The intake capacity in these institutions is about 2200 students per annum and there is a mismatch between the demand and supply positions of technical personnel prevailing currently in Delhi. The study conducted by the Institute Applied Manpower Research for the Directorate of Training and Technical Education Delhi had also indicated a growing need for technical personnel at Diploma level in various Engineering branches. There is a great rush of admission seekers in the polytechnics. Every year nearly 18 – 20 thousand apply for admission in these institutions. Further the industrial growth in Delhi has also taken a leap and may become necessary to introduce more courses suited to the requirement of industries and in the specialised areas. Taking into consideration the geographical dispersal of the existing institutions it is proposed to establish three more polytechnics/ institutions in Delhi to cater to the needs of a wider population base.

Courses approved to be offered in these polytechnics are such as Electronics & Electrical Communication, Computer Engineering, Satellite Technology, Dairy Technology, Tool & Dye Design, Environmental Engineering, Architecture, Pharmacy, Medical Lab Technology, Fashion Designing, Information Technology, M.O.P, Electronic Engg. etc.

Land for the Co-educational polytechnic has already been identified in the ITI Jaffarpur campus. The setting up of the co-educational polytechnic in the ITI campus will form an integrated campus. Canteen, Library and Computer Centre would be common facilities for the ITI and polytechnic in the campus. SFC memo for the construction of the building at Jaffarpur campus has already been approved .

The possession of land at Dwarka for the integrated ITI & Polytechnic for the disabled has been taken over from Delhi Development Authority. 10 Acres of land has been allotted at Dheerpur to this department for relocation of ITI Subzi

Mandi, the premises of which were taken over by DMRC. It was proposed to set up a Polytechnic also along with the ITI at Dheerpur with common facilities of Playground, Canteen etc.

An amount of Rs.200.75 lakhs has been approved for Annual Plan 2004-05

9. Introduction of Short-term Computer Based and other Courses in the Existing Institutions (Rs.1.50 lakhs)

Computer Training is now a part of curriculum for each discipline in polytechnics. Therefore, computer labs have been set up in each institution with latest hardware and software. The infrastructure of providing training in computers is already available in all institutes functioning under this directorate. Taking into consideration the demand of trainees in the field of computers, particularly in private sectors, short-term computer courses have already been introduced in Kasturba Polytechnic. It is now proposed to cover other Polytechnics under the same scheme. It is also approved to introduce short term computer based course (A, B, C & O levels) in some of the Polytechnics for which approval and recognition of Department of Electronics and AICTE would be obtained in due course. Additional posts would also be created at appropriate levels as per the requirement and the response from public for these courses. In this way the computer labs and infrastructure already created in Polytechnics would be fully utilised. The short term courses which have been introduced on self supporting pattern at Kasturba Polytechnic will be introduced in other Polytechnics also to enhance the internal revenue generation in technician education sector. Additional furniture and software as per the requirement would also be added in the respective labs. Further the following Fast Track Courses have been identified at various degree/diploma level:

1. Secretarial Practice & Office automation.
2. Library automation
3. Manufacturing Automation
4. Refrigeration & Air-Conditioning
5. Repair & Maintenance of Educational and commercial instruments

- (a) CRO
- (b) Signal Generator
- (c) VTVM
- (d) Power Supplies
- 6. Repair & Maintenance of domestic electronic gadgets. (Transistor, Tape recorders, TV, VCR, Music Systems)
- 7. Repair & Maintenance of domestic electrical gadgets. (Washing machines, coolers, convectors, Food Processors, Geysers Hot cases.)
- 8. Computer awareness, assembly, repair & maintenance.
- 9. MS Office 2000
- 10. Micro Processor & Micro Controller Applications
- 11. WINDOWS NT & LINUX
- 12. Computer Networking & Internet
- 13. Web Designing
- 14. V C ++ & Oracle 8i
- 15. VB & Oracle 8i
- 16. JAVA
- 17. Accountancy & e-Commerce

An amount of Rs.1.50 lakh is approved for this scheme for Annual Plan 2004-05

10. Integrating persons with disabilities in the main stream of Technical & Vocational Education (1.00 Lakh)

In accordance with “National Policy on Education-1986” and “The persons with Disabilities Act 1995”, the Ministry of Human Resource Development envisaged a centrally sponsored scheme for upgrading some of the selected polytechnics to integrate persons with disabilities in the mainstream of technical and vocational education. The scheme pivots on giving competency based non-form/skill development programmes to existing illiterate adults with disabilities.

Major objective of the scheme

- To promote education and training of persons with disabilities by integrating them in the mainstream of technical and vocational education and skill development programmes through formal and non-formal programmes.
- To identify the persons with disabilities in the suitable geographical catchments area of polytechnic.
- To identify suitable employment oriented education and training programmes for the disabled.
- To design need and competency based curricula for the disabled.
- To prepare/procure/develop suitable physical, human and informational resources, for effective implementation of the scheme.
- To sensitize administrators, planners, faculty, staff and students and community at large about the problems and capabilities of the students with disabilities and to create suitable environment in polytechnic.
- To develop innovative educational technologies and approaches for education, training and rehabilitation of youth with disabilities.
- To evolve suitable method and practices for monitoring the scheme.

Targets and Education strategies

The scheme proposes to train 25 persons with disabilities for formal diploma programme and 100 disabled for non-formal vocational programmes. Whereas the diploma holders will be mainstreamed with regular students, the vocational training/skill development programmes will be focused towards persons with disabilities in and around the polytechnic to provide them wage or self-employment opportunities in their own vicinity.

No separate permanent staff will be recruited for the scheme and it will be managed and implemented with the total involvement of existing regular staff with provision for honorarium and engagement of Consultants/Experts/Trainers as per the need on short and contractual basis.

Adequate emphasis in the scheme will be placed on different aspects of the guidance and counseling, besides making all the training programmes competency based with focus on development of employable skills. The knowledge component will normally be directed towards the essentials for developing the competencies.

The guidance and counselling will be comprehensive to include pre-admission guidance, professional and medical counselling on continuous basis during the period of training and facilitation for placement and post employment assistance.

Budget and Funding

Education and Training of persons with disabilities is extremely a complex, challenging and difficult task. In the present scenario of the country, it is seen that a vast majority of disabled belong to very poor families who cannot afford to incur any expenditure on education and training of their disabled wards. Further, a few parents who can afford such expenditure are also seen to be reluctant to spend on the handicapped children, considering it as a dead investment because of the social stigma attached to the disabled children. In order to bring them to the training centers of the polytechnic, it is essential to make adequate infra-structural and budgetary provision for meeting the special needs of the disabled and the total expenses of training.

The polytechnics will be provided non-recurring grants for equipping with special infrastructure for enhancing the effectiveness of training of persons with disabilities. Recurring budget will also be provided as per norms for payment of honorarium and other miscellaneous expenditure for the conduct of the programmes. The state governments will reimburse for the cost of scholarships, transportations, books and uniform allowances and other incidental, if any, as admissible. All the students with disabilities admitted to formal and non-formal programmes will be exempted from tuition fee. Polytechnics will provide free lodging to those students who require such facilities.

An amount of Rs.1.00 lakh has been approved for Annual Plan 2004-05 for this scheme.

11. Expansion of Existing Facilities of Bhai Parmanand Institute of Business Studies (Rs. 40.75 lakhs)

Bhai Parmanand Institute of Business Studies was set up to impart training in various diploma and post diploma programmes in the field of Modern Office Practice, Management, Business Administration etc. MCA (full time) programme has already been introduced in the year 2000-01 in this institute. Modernisation

of machinery and equipment, strengthening of existing facilities to students, industry- institute interaction, strengthening of library facilities etc. in respect of Bhai Parmanand Institute of Business Studies are to be achieved under this scheme.

An amount of Rs.40.75 lakhs has been approved for this scheme for Annual Plan 2004-05.

12. Setting up of Engineering College at Geeta Colony (290.00 Lakh)

Department also proposes to setup one more Engineering College in Geeta Colony, to cater to the training needs of the residents of trans-Yamuna area for which land measuring 4.36 hectares has already been allotted. Payment towards cost of land has been made to DDA and possession of land has been taken. The Degree level engineering courses being run at Ambedkar Polytechnic and MCA course being conducted in Bhai Parmanand Institute of Business Studies will form a part of this Engineering College and will be shifted to this college as and when the buildings are ready for occupation.

An amount of Rs.290.00 lakh has been approved for this scheme for Annual Plan 2004-05.

II. DELHI COLLEGE OF ENGINEERING

1. Construction of New Buildings for Delhi College of Engineering at Bawana Road (Rs.503.00 lakhs)

Delhi College of Engineering has completed 62 years of its service to the nation, contributing approximately 21,500 engineering graduates and post graduates, who have taken up positions of responsibility both in the manufacturing and the service sectors. During the last six decades, the college has retained its focus on quality education and research in engineering and technology. The college has been instrumental in setting up some of the national projects such as IIT, Delhi, School of Planning and Architecture, both the institutes of national importance. It has also contributed to the growth and development of College of Art, College of

Pharmacy and Netaji Subhash Institute of Technology (formerly Delhi Institute of Technology). Presently college caters for 9 U.G. programmes, 11 P.G. programmes, besides full time Ph.D. research in all the branches of engineering and technology. Thus, the DCE's academic commitment is almost three times that of a normal engineering institution. The non-residential nature of the campus and the limited space available for the growth and expansion at the Kashmere Gate, has inhibited DCE's growth and its further development in such a manner as to take the role of a deemed to be university in the years to come, it was necessary that the college be planned and built on modern lines with all necessary facilities and shifted to a larger complex. For this purpose, the then Delhi Administration had acquired 163 acres of land at Bawana Road, near Sector-17, Rohini. The original EFC memo amounting to Rs. 2699.8 lakhs was approved by the Ministry of HRD, Government of India during the year 1985.

During the Seventh Plan period, the plot of land had been duly developed and boundary wall was constructed. On 23rd May, 1989, the Hon'ble Vice-president of India, laid down the Foundation Stone of the new campus heralding the actual construction activity to start. Subsequently, a revised EFC memo. for Rs. 7019 lakhs was submitted to the Ministry of HRD, Government of India in the year 1989-90 on account of cost escalations and certain variations in built up areas. Further, a revised updated EFC memo. for 10105 lakhs, on account of further escalation of cost, was submitted to Government of India by the Department of Training & Technical Education during the year 1994. The provisions in estimates included in the revised EFC memo. for 10105 lakhs also changed subsequently due to changes in the designs, observations of DUAC and the local bodies, which resulted into approval of the individual building plans and schemes. Considering the requirements for completion of the project, incorporating the necessary modifications further suggested by the college, it was considered necessary to further revise the EFC memo. to project the correct up-to-date anticipated cost. Accordingly, the 3rd revised EFC memo. based on final requirements and plans for Rs. 14309 lakhs was submitted to the Government of Delhi for obtaining administrative approval and expenditure sanction for all the works of the project. However, on the advice of the administrative Department, certain plans incorporated in the EFC, were temporarily set aside and another EFC memo. for Rs. 12752 lakhs was submitted on October 28, 1999. Finally, the SFC memo. for Rs. 127.01 crores was approved by Government of Delhi on 12.9.2000.

- 1.1 The following building works, which were included in the EFC memo. for Rs. 14309 lakhs were temporarily set aside while submitting revised EFC memo, for Rs. 12752 lakhs with the idea to take up these in the Tenth Five Year Plan in the IIInd Phase of construction. These are:
1. Shopping Complex
 2. Community Centre
 3. Security Quarters
 4. Students Activity Centre
 5. Sports Complex (Stadium)
 6. Integrated telephone & LAN services and
 7. Establishment for maintenance unit for DCE New Campus.
- 1.2 Further since the college has shifted to its new campus, new UG programmes in the areas of Information Technology (intake 60), Polymer Science & Chemical Technology (intake 40), Environmental Engineering (intake 30) have been added. In addition the intake of UG programme in Electronics & Communication Engineering has increased from 40 to 90, of Computer Science & Engineering from 20 to 60 and of Production Engineering from 20 to 30. The intake of the PG programmes (11 in number) has also been increased to 18 in each programme with the approval of the AICTE. As such, the intake at UG level has gone up from 320 at Kashmere Gate to 550 in the new campus and the PG intake has also increased from 75 at Kashmere Gate to 162 in the new campus.
- 1.3 Considering the quality of education imparted at DCE and its contribution to the S & T capacity building for the country, it has been planned to further increase the intake at UG level from the present level of 550 to 1100 in the next 4-5 years by starting new programmes at UG level in the areas of high relevance in the country. These include B.E. level programme in Bio-technology, Automobile Engineering, Aerospace engineering and Food Technology. Further, new PG programmes have also been planned to be added in the areas of high relevance to the country as with the growth of the economy and the technology intensive

industrial environment the PG out turn has assumed a much higher significance to support the national policy of technical education for promotion of PG programmes in institution of high standing such as, Delhi College of Engineering. As such, DCE has planned to introduce new PG programmes in Bio-technology, Bio-informatics, Information Systems Management, VLSI Design & Embedded Systems, Software Engineering and Computer Integrated Manufacturing, Opto-mechatronics, Disaster Management, Infrastructure Engineering and Management and Innovation & Technology Management. Such an expansion of educational facilities at DCE is in line with the growth of DCE as a centre for excellence in education and research in the country to attain the status of a Deemed to be University, an objective with which the new campus was developed. This has necessitated construction of new academic blocks for the academic departments which have been newly added and the ones which are planned to be added in the coming years and additional unit of hostels to accommodate the increased strength of students.

1.4 The Works Completed so far: -

- A. **Institutional Complex** comprising of Administrative Block, Academic Blocks for Electrical, Electronics & Communication, Computer Science & Engineering, Civil Engg., Mechanical & Production Engg. and Science Block for Applied Sciences and Humanities Departments are completed during the VIII & IX Plans period. The institutional complex is fully functional from 1996-97 onwards.
- B. **Residential Complex:** The work of construction of Type-I (60 Nos.), Type-II (105 Nos.), Type-III (45 Nos.) Type-IV (60 Nos.), Type-V (56 Nos.) & Type-VI (1 Nos.) have been completed. Transit Hosted with 20 flats completed during VIII plan period and these are being utilized for accommodation of faculty and staff of DCE.
- C. **Boys & Girls Hostels:** Construction of 5 Boys hostels with the capacity of 900 students, one Girls hostel with capacity to

accommodate 70 students, one Married students hostel with 15 seats and a Transit Hostel of 20 seats have been completed during the last VIII & IX Plan periods and these are being fully utilized.

- D. **Other Buildings:** Construction of Central Workshop, Central Library, Computer Centre, PWD office & Health Centre, Electric Sub-stations, Gate House, Canteen, telephone exchange for intercoms and Sports facility comprising of 2 tennis courts, 2 volleyball courts, 2 basketball courts, football & hockey play fields and 400 meter athletics track have also been completed. These buildings are also being fully utilized.

The Buildings/Premises under construction/to be taken up shortly :

1. Lecture-Theatre-cum-seminar Hall (pile work has already begun)
2. P.G. Hostel.
3. Construction of a Girls Hostel of 180 capacity
4. Two Boys Hostels each of 180 capacity.
5. Internal works of civil engg. Laboratories.
6. Construction of Academic Blocks for Polymer Sc. & Chem. Technology, CSE & IT Dept., Bio-technology and Aerospace Engineering Departments.
7. Construction of Centres of Excellence for Bio-informatics, Innovation and Technology Incubation and Fibre Optics & Optical Communication, Clean Energy Technologies.
8. Raising of the height of the boundary wall
9. Land Scaping
10. Development of rain water harvesting system
(Development of existing natural lake)

**Construction Work to be taken up during the Plan Year 2004-05
(Rs. 503 lakh)**

1. **PG Hostel for 50 seats:** The building plans have already been approved in the EFC memo and the detailed estimates are under preparation with

Consultant Architect. The construction work will be taken up during 2004-05 and will be completed by December 2005.

2. **Lecture Theatre-cum-Seminar Hall:** The contract has already been awarded, piling work has begun. The construction work will progress in 2004-05. The target date for completion is October 2004.
3. **Internal Work of Civil Engineering Lab:** The work is urgently required to make the material testing lab., heavy engineering concrete lab. and hydraulics laboratories in Civil Engineering Department operational. The planning is completed and the work will be taken up and completed in 2004-05.
4. **Girls Hostel of 180 capacity:** The college campus presently has only a 70 seater girls hostel while the girls students population is around 300. The college being located far away from the city, the hostel accommodation for the girls is in great demand. It planned to construct a new girls hostel of 180 capacity during 2004-05.
5. **One Boys Hostel** of 180 capacity is also planned to be constructed during 2004-05.
6. **Raising of the height of the boundary wall:** The new campus of Delhi College of Engineering is surrounded by villages and slum area on both sides and open fields on the other side. Since the Campus has been designed as a mini township housing academic as well as residential units and that at present approximately 1100 students including nearly 200 girls students live in the campus, provision of the boundary along with grills had been made in the original EFC memo and it was constructed before the work of construction of other buildings in the premises were taken up. But, because of development of the adjoining areas and the raising of the height of the roads across the boundary, the height of the boundary wall constructed for the campus has become inadequate, making the campus property vulnerable for theft and intrusions. The campus houses large number of the laboratories, with modern and costly equipments. The officers of the AR department, Govt. of NCT of Delhi who had visited the campus to assess the requirement of

security guards and sanitation workers for deployment in the campus, had made the recommendations to raise the height of the boundary wall to 10 ft. to avoid intrusion from outside of the campus. Therefore, to make the campus more secure from all sides, it is also proposed to raise the boundary around the institutional complex up to 10 ft. during the Plan Year 2004-05.

7. **Integrated LAN Services:** Delhi College of Engineering being a premier institution is required to have its local area network backed by ISDN LEASED LINE and V-SAT in the present age of advance information technology. The provision for LAN services was not included in the original EFC memo because of primitive state of development of Information Technology during the mid 80's. It is therefore, proposed to lay Fibre Optics backbone connecting all necessary premises and CAT-6 cabling inside the premises during the Annual Plan 2004-05.
8. **Maintenance (Additions & Alterations):** To meet the functional requirements of various laboratories resulting from the rapid changes in Academic Curriculum, some changes in the existing structures are required to be made by way of additions and alterations. Such works do not come either under the capital works (Major Head 4202) or under the normal maintenance works (Minor Head 2059) done by PWD. Therefore, the provision of the suitable amount which is necessary for such a large campus has been made during the Plan Year 2004-05.
9. **Security & Surveillance:** The college has several buildings like computer center, library, computer laboratories of the various departments etc. where costly equipments, books and intellectual properties of the college are kept. Such premises are required to be provided with electronic security and surveillance mechanism which involves audio-visual monitoring systems to safeguard the property. Accordingly, provision for installation of security and surveillance systems in these buildings have been made during the Plan Year.

10. **Establishment:** During initial stage of the project for speedy co-ordination/monitoring, one post of Project Officer in the scale of Rs. 10,000-15,200 and one post of Driver in the pay scale of 3050-4590 (revised) was created. But, it was found that one officer is not enough to discharge the entire responsibilities which are associated with such a large project. First phase of the project is almost going to be completed soon, the Project Officer is looking after the duties and responsibilities of the Estate Officer of college also, which in itself needs a full-fledged officer to look after the work. In view the enormous responsibilities and work attached with the project office, it has been proposed that the post of the Project Officer be upgraded and re-designated as Project -Coordinator-cum-Estate Officer in the scale of pay of Rs.12,000 -18,000. It is also proposed to create one post of LDC in the scale of pay of Rs.3050 – 4590. The proposal for the same is under submission to the AR Dept.

Physical Targets:

- The following buildings and their internal works are to be completed.
 1. Lecture-cum-theatre hall
 2. P.G. hostel building
 3. Internal works of Civil Engg. Laboratories (LW4)
 4. Raising of the boundary wall
 5. Integrated LAN & Campus Networking.
 6. Installation of Security and surveillance system.

Works to be initiated in 2004-05

1. One Girl Hostel of 180 capacity.
 2. One Boys Hostel of 180 capacity.
 3. Academic Blocks for new department
- Details of the work to be undertaken in the year 2004-2005

CIVIL WORKS

SN	Name of the Work	B.E. for 2004-05
		Rupees in Lakhs
1.	Completion of Lecture Theatre cum Seminar Hall	Rs.175.00

Employment Generation	No. of Persons 2004-05
Group A	1
Group B	--
Group C	1
Group D	2

An amount of Rs.503.00 lakhs has been approved for this scheme for Annual Plan 2004-05.

2. Modernisation of machinery and equipment for existing courses: (approx. Rs.400.00 lakhs)

Great emphasis has been given on modernization and removal of obsolescence in the national policy on technical education. The college, being old, naturally has some equipment which are old and out-dated, and call for replacement by new and sophisticated machines and equipment, so that, the students gain hands on experience on the modern machines and equipment that they have to deal with their professional career. Secondly, the national policy on education calls for deployment of various educational technology tools including multimedia and networked laboratories and classrooms for more effective and efficient teaching-learning process. Such educational technology tools including multimedia and advanced laboratories equipments need to be procured. Another very important aspect is training of technical supporting staff in handling such sophisticated equipment in workshops, laboratories, drawing offices etc. Provision, therefore, is being made for the expenditure involved in training technical supporting staff. A 35 seater mini bus would be very much useful from the point of view of mobility of personnel in actually arranging special training to the staff in the use of sophisticated machinery and equipment by National Physical Laboratory, Central Water Commission, National Thermal Power Corporation, and other knowledgeable industries located around Delhi.

Accordingly, the activities related with the development & modernization of existing laboratories and setting up of new labs are proposed to be taken up by

various Academic Deptts. during the Plan period 2004-05, some of them are given here under:

Computer Engg. Department:

The Computer Engineering Department has planned to develop a new laboratories in the areas of software engineering, networking technologies and VLSI design & embedded system. This requires procurement of 5 workstations, servers, licensed design software tools, VLSI design software and simulation software during the Plan Year 2004-05.

Electronics & Communication Department:

The department has planned to equip its existing labs. with the latest kit, software, computers, analyzers etc. as well as to set up some new laboratories to cope up with the requirement for increased intake which has raised from 40 to 90. Simulation S/W, OTDR, AVR, LAN Trainers, DSP Kits, Microwave benches, functional generators, spectrum analyzer are proposed to be purchased during the year.

Information Technology Department :

It is a new department created after introduction of the UG programme in IT in the year 2002-03. The infrastructure and the facility for the department are to be created. In order to fulfill the needs, the department has proposed to set up four labs. viz. Embedded system lab., Satellite Communication Lab., Web Engineering Lab. and Multimedia Production Lab. Satellite trainer, reflector antenna and other antenna measurement instruments micro strip antenna, fabrication set up etc., System software are to be procured to develop the new labs.

Electrical Engg. Department:

The department has seen a significant growth over the last 6 decades specially because of the rapid advances. The department has developed laboratories

such as, Electrical Machines Lab., Power System Lab., Instrumentation & Control System Lab. for use of UG & PG students and research scholars. The department has planned to procure computers, DC supply, Drivers, Ammeters, Voltmeters, Watt mess, Rheostalis, Distribution planning software, DSP kit, Altenator set, AC & DC motors with loading arrangements, FPGA kit, consumables, Relays, Oil Test kit, Power system software packages, Power suppliers, ACs, Stabilizers etc. to strengthen the labs. and laboratories of the department during the current plan year 2004-05.

Civil Engineering Department:

The department being the oldest department its laboratories require major modernization of equipments. Transportation laboratory, concrete design & testing labs, environmental engineering lab are to be provided with latest equipments. The college has planned to take up the work of quality testing of Delhi roads and it is also proposed to set up quality testing laboratory for water & air quality, so that, the college laboratory could be utilized for professional training of the students and are further utilized for quality testing for Govt. of Delhi and other organizations. Structural design software is also proposed to be procured to improve the quality of design training for the students.

Mechanical & Production Engg. Department

The department of Mechanical Engineering has well equipped laboratories such as, Instrumentation, Experimental Stress Analysis Lab., Strength of Materials, Fluid Mechanics, IC Engines, Refrigeration & Air conditioning, automotive Engineering, Robotics, Welding Technology Lab, Automation & Flexible Manufacturing Systems (FMS) Lab, Heat Transfer & Solar Energy. In the area of Production Engineering also it has labs. in Science of Engineering Manufacture, Welding Lab., Sand Hoting Lab. & Metal Cutting Lab, Metrology, Industrial Engineering, Automation and FMS. To further strengthen the above laboratories with new machines and equipments the department has planned to procure KNEE type Milling machines with special accessories for experimental and research work. Testing equipments, EDM, FMS with CNC machines, Robots, Pallets, Synergic MIG welding machines, Welding robot complete with off line

programming sensors and other accessories and instrument for testing multi channel DPO, ICE Plant Trainer, Absorption system, gasfire units, Benz, Manometer, Gear pump and other along with computers, AERENA to strengthen the existing labs. during the plan year 2004-05.

Applied Chemistry and Polymer Technology

The department started a BE programme in Polymer Science and Chemical Technology in 1998. Many laboratories viz. Material Science, Polymer Synthesis, Polymer Chemistry & Petro Chemical Tech., Polymer Processing, Polymer Testing, Fiber Technology and Head & Mass Transfer Labs. established in the department are to be developed by adding new equipments during the plan year.

Applied Physics Department :

The department of Applied Physics is providing a sound science base for engineering disciplines. It offers a part-time M.Sc. programme in Applied Physics. The department has proposed to convert its part-time into full-time M.Sc. programme. A new M.E. programme in Fiber Optics & Optical Communication is expected to start from the next academic session 2004-05. The department is also offering Ph.D. programme in the area of Fiber Optics & Optical Communication, Material Science & Ceramics and Thin Film Technology. To further enhance research and develop activities in the department, it has proposed to procure the following items (i) 35 KV compact X-ray machine, (ii) Erbium Doped Fiber Amplifiers kit (iii) Optical Spectrum Analyzer (iv) 4284A-precision LCR Meter (v) RT-66A Standard Ferroelectric Test System. The modernization scheme for the Senior Physics Lab. serving to the UG students is prepared which mainly includes computer based data acquisition and making & characterization of semi-conductor devices. Besides, other lab. equipments relevant to the programme are also planned to purchase during the Plan Year 2004-05.

Project & Caretaking Office:

Besides development of the laboratories, it is equally important to develop the necessary infrastructure to place the equipments and to maintain them. The Project Office has been providing infrastructure and support in the form of (i) Providing internet connectivity to the various centres and departments, (ii) providing local area network (Fiber Optics backbone as well as wireless wi-fi) (iii) additions & alterations to the laboratories to make them suitable for setting experiments & installation of machines (iv) providing the facilities for clean-air rooms (v) providing fixed furniture & other related accessories (vi) modernization of the classrooms (vii) creating the facilities of Committee Room in every department to facilitate R&D activities. The provision to meet expenditure on such items has also been made in the scheme during the plan year.

Manpower requirement:

It is proposed, to create the following positions to meet the requirement of the manpower to operate the newly added sophisticated equipments / software and new proposed labs. which are to be created by the academic departments during the plan period.

1.	Sr. Technical Assistant/ Mechanic-A	3	Rs.6500-10500
2.	Tech. Assistant/ Mechanic –C Grade ‘A’	4	Rs. 5000-8000
3.	Lab. Attendant/ Cleaner	4	Rs.2610-4000
4.	Driver	1	Rs.3050-4590
	Total	12	Posts

Physical Target

Machinery, robotics, hardware/software, LAN trainer, 35 KV compact X-ray machine, Erbium Doped Fiber Amplifiers kit, Optical Spectrum Analyzer, 4284A-precision LCR Meter, RT-66A Standard Ferroelectric Test System etc. are to be purchased for all the Departments. Training of 10 technical staff to be arranged, 12 posts of technical staff proposed to be created proposal for which has already been submitted to the Government.

Financial Outlays

2004-05	(Rs. in lakhs)
	400

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	20

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	380

Employment Generation

No. of Persons	2004-05
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Group A	0
Group B	3
Group C	5
Group D	4
Total	1

This scheme has taken into account Modernisation of workshops and laboratories, induction of educational technology tools for effective and efficient teaching-learning process and also updating the skills and training of technical supporting staff. An amount of Rs.400.00 lakhs is approved for this scheme for Annual Plan 2004-05.

3. Faculty Development (Rs.15 lakhs)

A renewed emphasis is to be given to faculty and teaching staff development to meet the aspirations of the national educational policy. The AICTE scales of pay at par with the recommendations of the Dogra Commission have been implemented in the college which provides for book grant to the extent of Rs.3,000/- per year per teacher. The same also provides for meeting expenses of attending national seminars for every teacher once in a year and also attending International seminar/conference for every teacher once every three years. Additionally, the AICTE scales of pay provides for re-imburement of 75% subscription towards membership of the various international professional societies/institutions to every teacher. All these activities involve expenditure, the provision for which has been made in the scheme:

Industry institute interaction needs to be developed in a big way as it is very important for improving the quality of instructions in an engineering institutions and making them more relevant to the end user. For this purpose most of the teachers will have to be sent for exposure training in large medium industries for a period of 3-4 months at a stretch. Similarly certain people from the industry will have to be encouraged to spent 3-4 months at this college participating in laboratories and normal teaching work of the college. This need for such an interaction has been high lighted at numerous form for the last number of decades, but the country has not succeeded in evolving suitable mechanism to implement it. However, there is no escape as it remains is pre requisite for the technological advancement of the country. The team sent to the industries would be requested to be paid TA/DA . Similarly the persons visiting forms the industries for this institution will have to be paid consolidate amount as remuneration and TA/DA etc. It is proposed to sent 10 teachers during the plan period 2004-05.

Physical Target

About 130 teachers to be benefited

Financial Outlays

2004-05	(Rs. In lakhs)
	15

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. In lakhs)
	15

Non-Recurring (Revenue)

2004-05	(Rs. In lakhs)
	Nil

An amount of Rs.15.00 lakhs is approved for this scheme for A.P.2004-05.

4. Students Welfare (approx. Rs.10 lakhs)

Under this scheme, better amenities are provided in the boys' common room, girls' common room, hostel common rooms, hostel mess, college canteen etc. Due to increase in student population in the campus over the years and due to increase in the intake in the existing disciplines, and the new courses introduced recently, there is a shortfall in student amenities in the campus at present; and it is proposed to augment the same during the Xth plan period 2002-07 It is proposed to provide facility like study table, cot and chair , easy chair, molded chair, television sets , music system, computer system with internet facility, Jim library facility and warden office with all necessary office requirement during the Plan as indicated below:

Physical Target

About 1200 students to be benefited.

Financial Outlays

2004-05	(Rs. In lakhs)
	10

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. In lakhs)
	Nil

Non-Recurring (Revenue)

2004-05	(Rs. In lakhs)
	20

5. “Creation of Centres of Advanced Studies, Research and Extension Services” (Rs.30 lakhs)

The advantages of Science and Technology advances can be meaningfully transferred to the people if these are effectively assimilated both in our man power development strategies as well as transformed in terms of technologies and know how to the industries. The pace at which these advances are taking place, especially in the areas of advanced and appropriate technologies, make it imperative that specific focus and attention be given to those technology areas which are highly relevant to the development of our nation. These areas include Fibre Optics & Optical Communication, Advanced Automotive Engineering & Fuel Technology, Polymer Science and Technology, VLSI Design & Embedded Systems, Microwave Integrated Communication Networks; Computational and experimental mechanics; Seismic safety initiatives; Advanced research on clean-energy technologies, Techno-Entrepreneurship development and Innovation Management and Technology Incubation. Centres of Excellence in the above areas are to be established in DCE to significantly enhance industry institution

interactions and provide technology development support to the industries of our country.

DCE, which has attained a level of maturity in engineering education and research both at UG and PG levels is poised for development of specialized centers of excellence. It is considered highly desired that the role of this college be enhanced in the direction of providing effective linkages with the industry and professional bodies. The creation of Centres of Advanced Studies and Research proposed below are primarily conceived from the objective of enhancing the R&D base at DCE and eventually transform DCE into a knowledge-enterprise. These centers shall primarily cater for:-

1. Research and Development in the specific areas of technology.
2. Industrial liaison and consultancy services.
3. Specialized short term and long-term courses for practicing Engineers and Teachers of Engineering Institutions.
4. To support the existing Post-graduate Programmes and to launch new specialized Post-graduate Programmes in areas of relevance.
5. To provide effective linkages with industry and professional bodies.

**5(a) Centre of Advanced Studies & Research in Automotive Engineering
(Rs.5 lakh)**

DCE has demonstrated its innovation and research potential in the automotive engineering area by developing bio-diesel processing unit and design and development of Formula Student Car and All Terrain Vehicle which have achieved national and international recognition. In fact, the Formula Student Car designed and developed by DCE Team has begged the Fisita Best Design Endeavour Award in a worldwide competition in UK in 2003 and the All Terrain Vehicle has participated in the SAE International Competition at South Africa. The college has planned to establish an advance centre for automotive research which shall have strong linkages with the industry and shall focus on cutting edge technologies to support the growth of automobile sector in the country. The proposed centre shall have a bio-fuel technology division, engine technology

division and a vehicle technology division. The focus will be on development of future fuel and hybrid vehicle development. The centre shall also support the proposed UG & PG programmes in this and related areas in Mechanical Engineering.

1.	Professor	1	16400-22400
2.	Lecturer	1	8000-13500
3.	Senior Tech. Assistant	1	6500-12000
4.	Technical Asstt.	1	5000-8000
5.	LDC	1	3050-4590
6.	Lab Attendant	1	3050-4590

Total **6**

Physical Target:

Creation of 6 posts and part of infrastructure is to be developed for the center

Financial Outlays

2004-05 (Rs. In lakhs)
5

Details of Plan outlays

Recurring (Revenue)

2004-05 (Rs. In lakhs)
2

Non-recurring (Revenue)

2004-05 (Rs. In lakhs)
3

Employment Generation

(No. of persons)

2004-05

Group A	2
Group B	1
Group C	2
Group D	1
Total	6

5(b) Centre of Advanced Studies & Research in Environmental Engineering (approx. Rs.5 lakhs)

Population growth and rapid developments in Industrial and Utility Sectors have created a serious problem of Environmental Pollution in our country. The need for studies and research in this emerging area cannot, therefore, be over emphasized.

There is enough scope for all-round development of bio-techniques for pollution abatement and rectification. For example, floating and semi-submerged weeds like Water Hyacinth, duck weeds, reeds etc. can be effectively used for treatment and self purification of various industrial wastes like Tobacco waste,

Dairy waste, Vanaspati waste, Slaughter House waste, Sugar mill waste, steel mill waste and a host of other organic and inorganic wastes. Similarly, bacteria of various types occurring aerobically, anaerobically or facultatively can be used as static or dynamic filter media for treating a large number of domestic and industrial wastes. Development of Trickling filter along with it's various recent modifications. Activated sludge process and its subsequent modifications, Dispersed growth aeration techniques, Tube filters(aerators) are only a few that are receiving attention of he Environmental Engineers. Fluidized bed techniques suitable for Indian conditions are still to be experimented and developed. Membrane filtration technique which is rapidly gaining ground is the synthetic version of the natural bio-cell wall permeability mechanism(osmosis).

Delhi College of Engineering has introduced Environmental Engineering as a Post-graduate Programme since 1973. A large number of post-graduates with specialization in Environmental Engineering has come out from this institute and are occupying important positions in government, semi government and private organizations in India and abroad. The college has three laboratories mainly catering to the needs of Environmental Engineering. One is meant for Under-graduate students, one for Post-graduate students, housing sophisticated instruments and the third a semi-open complex, where the Post-graduate students perform various indoor and outdoor experiments. The students are mainly engaged in meaningful field research and every year innovative methods of pollution control are presented in the form of M.E. thesis work. About 12 works – all new, were carried out with Water Hyacinth alone. A couple of them are receiving field trials in full-scale plants with encouraging results. Similarly, two works were completed on fluidized bed techniques. On Tubular Aeration Technique, one work has been completed and a couple of other innovations are going on. A number of Ph.D. research works are in progress for evolving an optimized technique of Physic-Chemical – Biological combine system of wastewater treatment.

With the above background it is most appropriate to open a centre of excellence in Environmental Engg. with special emphasis on Pollution Control in the Delhi College of Engineering during the X th Five Year Plan period. The Manpower requirement for the Cell during the year is indicated below:

1.	Professor	1	Rs.16400-22400
2.	Lecturer	1	Rs. 8000-13500
3.	Technical Assistant	1	Rs. 5000-8000
4.	LDC	1	Rs. 3050-4590
5.	Lab Attendant	1	Rs. 3050-4590
	Total	5	

Physical Target

Creation of 5post and part of infrastructure is to be developed.

Financial Outlays

2004-05	(Rs. In lakhs)
	5

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	1

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	4

Employment Generation

	No. of persons
	2004-05
Group A	2
Group B	nil
Group C	2
Group D	1
Total	5

5(c) Advanced Centre for Techno-Entrepreneurship Development (Rs. 2 lakh)

The unemployment and underemployment amongst the educated youth cannot be eradicated unless employment generating entrepreneurial efforts is made by the technically qualified engineers. However, it is necessary that the productivity of such ventures, which would be in small and medium scale, should be high. Therefore, the Production System studies specially suited for small and medium scale ventures need to be carried out and developed. This is in accordance with the national policy of Science and Technology and also the national policy of industry. It is, therefore, proposed that an advanced centre for Entrepreneurship Development be set up in the college under the Department of Production and Industrial Engineering. The centre will be imparting short-term courses

pertaining to entrepreneurship to our students and others, conduct Entrepreneurship Development Programmes (EDP) for engineering graduates, besides providing consultancy services to entrepreneurs in and around Delhi. The centre will offer an optional course on entrepreneurship in our BE programmes.

The total manpower required for running this centre is indicated below:

1.	Professor	1	14300-22400
2.	Steno Group C	1	4000-6000
3.	Peon-cum-Farash	1	2550-3200

Total **3**

Physical Target:

To create awareness about the programme among the students.

3 posts to be created

Financial Outlays

2004-05 (Rs. in lakhs)
2

Details of Plan Outlays

Recurring (Revenue)

2004-05 (Rs. in lakhs)
1

Non-recurring (Revenue)

2004-05 (Rs. in lakhs)
1

Employment Generation

	No. of persons 2004-05
Group A	2
Group B	Nil
Group C	2
Group D	1
Total	5

5(d) Centre for Innovation Management and Technology Incubation (Rs.3 lakhs)

This centre shall be interdisciplinary for research and development in the area of technology, production and process management. The positions of Professor, Lecturer, Technical Assistant, LDC and Peon cum Farash (One each) have to be created during the year in the scales of pay as mentioned for other centres.

Physical Target

Creation of 5 posts to be completed and part requirement of machinery equipment and consumables to be made

Financial Outlays

2004-05	(Rs. in lakh)
	3

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	1

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	2

Employment Generation

	No. of persons
	2004-05
Group A	1
Group B	Nil
Group C	3
Group D	1
Total	5

5(e) Centre for Research in Information Technology (Rs.5 lakhs)

This Centre is proposed under the Department of Computer Engineering for research and development in the area of Information Technology. Due to the rapid development in area of the Information Technology, India needs to produce trained manpower in this area. The vital source of generating revenue through export of software related to information technology. The Govt. of India has already proposed to increase manpower in this field. The Dept. of Computer Engineering feels, it is appropriate time to start BE and ME program with specialization in Information Technology. BE (Information Technology) with an intake of 60 students has started academic session 2002-2003. The centre will also start ME (Information Technology) in future. Besides this, the centre will also undertake different R & D projects sponsored by Govt. organizations and industries. CAD work station is proposed to be procured during the Plan year.

The following personnel would be required to man this Centre during the plan year:

1. Professor	1	16400-22400
2. Lecturer	1	8000-13500
3. Technical Asstt.	1	5000-8000
4. LDC	1	3050-4590
5. Lab. Attendant	1	3050-4590
6. Peon-cum-Farash	1	2550-3250
Total	6	

Physical Target

Creation of 4 posts to be completed. Internet lab and computer networking lab are proposed to be developed with all necessary equipments

Financial Outlays

2004-05	(Rs. in lakhs)
	5

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	1

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	4

Employment Generation

	No. of persons
	2004-05
Group A	3
Group B	nil
Group C	2
Group D	1
Total	6

5(f) Centre of Advanced Research on Clean-Energy Technologies (Rs. 5 lakhs)

This Centre is proposed to be interdisciplinary for advanced studies and research in the area of appropriate energy systems. A technology park will be developed as a part of Center's activities besides providing teaching support on advanced topics in energy systems.

Biogas as an alternate fuel for running energies is being developed. Solar devices are to be inducted in a big way. Other experimental works on other

alternative fuels for running engines is proposed to be carried out in the energy centre.

The following personnel would be required to man this Centre:

1.	Professor	1	16400-22400
2.	Tech. Asst.	1	5000-8000
3.	Steno Grade III	1	4000-6000
4.	LDC	1	3050-4590
5.	Peon-cum-Farash	1	2550-3200
	Total	5	

Physical Target

2004-05- posts to be created and a part of machinery and consumables to be procured.

Financial Outlays

2004-05 (Rs. in lakhs)
5

Details of Plan Outlays

Recurring (Revenue)

2004-05 (Rs. in lakhs)
1

Non-recurring (Revenue)

2004-05 (Rs. in lakhs)
4

Employment Generation

	No. of persons 2004-05
Group A	1
Group B	nil
Group C	3
Group D	1
Total	5

5 (g) Centre of Relevance and Excellence in Fiber Optics and Optical Communication: (Rs. 5 lakhs)

There is rapid development in the area of telecommunication systems and stress is being put on Optical Fiber based telecom systems and network. Keeping in view, this fact, Applied Physics and Electronics and Communication Engineering Department have proposed to open a centre for imparting education and research in this area. The proposal for establishing this centre is already approved and is supported by a programme called MISSION REACH under Technology Vision 2020, Department of Science and Technology, Government of India. This centre will run courses in this emerging technology besides carrying out advance level interdisciplinary research and development work. As per terms and conditions of the TIFAC, entire recurring expenditure and non-recurring expenditure up to 50% of the project cost are to be met by the college which includes maintenance of the machinery, equipment and consumables, salary, TA/DA of the staff monitoring the scheme, books, generals, telephone, fax, internet facility and publication materials related with the course.

Activities of centre:

- (1) To run courses related to Fiber Optics and Optical Communication courses at BE/M.Sc./M.E. level.
- (2) To run separate program at M.E. level in the area of Optical Communication.
- (3) To take-up advance research in the area of light wave propagation through optical fibers, optoelectronic devices and multiple access techniques in Optical Communication system.
- (4) To take up sponsored R & D projects from Government/industrial organization.
- (5) Establish collaboration with leading laboratories and scientists across the Globe with an objective to emerge a centre of excellence in the field of Fiber Optics and Optical Communication.

The centre will also get support from the Department of Science & Technology, Government of India and other leading telecom companies which will be 50% of the non-recurring expenditure.

The following personnel would be required during the plan year.

1.	Professor	1	Rs.16400-22400
2.	Lecturer	1	Rs. 8000-13500
3	Senior Technical Assistant	1	Rs. 6500-12500
4.	Technical Assistant	1	Rs. 5000-8000
5.	UDC	1	Rs. 4000-6000
6.	Lab Attendant	1	Rs. 3050-4590
	Total	6	

Physical Target

Creation of five posts to be made and part infrastructure to be developed.

Financial Outlay:

2004-05 (In lakhs)
5

Details of Plan Outlays

Recurring (Revenue)

2004-05 (In lakhs)
2

Non-recurring (Revenue)

2004-05 (In lakhs)
3

Employment Generation

No. of persons

	2004-05
Group A	2
Group B	Nil

Group C	2
Group D	1
Total	5

An amount of Rs.30.00 lakhs is approved for this scheme for A.P.2004-05.

6. Strengthening of Book Bank & Library Innovation (Rs.60 lakhs)

The library services at Delhi College of Engineering are provided to student, staff & faculty member for updating their knowledge and supporting the research, and teaching learning activities. These services are provided through a central library and departmental libraries. The advancement of technology is at such a fast pace that the present library facility is just not sufficient and requires complete; modernization with innovations. Keeping this aspect into consideration, it is necessary that the knowledge base of the library is updated regularly by way of adding new literature in the form of text books, reference books, reports, proceedings, abstracts & indexes, encyclopaedias, data books, standards (National & International) Journals, & online databases. Apart from adding the new literature, the basic literature is also to be procured for the new courses along with current one. Some new section and services are also to be started to make the library services of ISO 9001 standard.

Accordingly, New Services and Sections of Text boo for teachers and students , CD Rom and on line accesses to engineering and scientific data base are proposed to be started during the X plan period. The existing services and section viz book bank, reference section, additional reading section are to be strengthened. Automation of library services are to be completed up to some extent.

To make library facilities automated, apart from the data entry & purchase of databases, the requisite up-to-date hardware & software shall also be required, which will consist of computer system, Library automation and office management software systems, leased line , internet connection & other accessories. This shall also require the web page designing for access through Internet & Intranet.

The library facilities are not being provided only to daytime teaching faculty and research scholars, but also being made available to part time faculty and students of the evening programme, which is conducted between 6 p.m. to 9 p.m. The approval of the Finance department has recently been secured for opening of the library of all the five days for three hours in the evening to cater to the requirements to the part time faculty and the students. The present staff strength sanctioned for the college is not even adequate to meet the requirement of the library for day time faculty and students. Further the opening of library for part time faculty and students on regular basis, which is at the moment proposed to be provided with the assistance of existing staff on remuneration basis cannot be continued for a longer duration without regular staff. To meet the manpower requirement of the library, the adequate number of trained library staff with suitable positions will be required . The following positions are proposed to be created during the Plan period 2004-05

1.	Dy. Librarian	2	6500-10500
2.	Documentalist	2	5500-9000
3.	Assistant Librarian	2	4500-7000
4.	Computer Operator	4	4000-6000
5.	Stenographer	1	4000-6000
6.	UDC	1	4000-6000
7.	LDC	1	3050-4590
8.	Library Attendant	6	2610-3540
9.	Peon	1	2550-3200
	Total	20	

Physical target

6 posts are to be created, part of the hardware/ software both & journals are to be procured. Two new sections to be created and existing sections to be strengthened.

FINANCIAL OUTLAY

2004-05 (Rs In lakhs)
60

Recurring(Revenue)

2004-05 (Rs. in Lakhs)
45

Non-recurring(Revenue)

2004-05 (Rs. in Lakhs)
15

Employment Generation	No. of posts
Group A	-
Group B	2
Group C	2
Group D	2
Total	6

7. Part-time Degree Courses (Rs.40 lakhs).

Due to persistent demand from in-service diploma holders in engineering for an avenue to upgrade their knowledge and qualification, the Parliament in 1980 decided that part-time degree courses shall start in Delhi College of Engineering. The University of Delhi formulated a 5 year part-time B.E.(Tech.) Degree Programme for the purpose. Accordingly, the proposal with staff and financial requirements was submitted to the government. In 1980, some of the teaching posts were sanctioned and duly created. The first batch of 120 part-time students was admitted in 1982-83. The batch passed out in 1987 and, as a result, many of them got departmental promotions and some have secured new posts with higher pay scales.

Another batch of 45 students, 15 each in discipline of Civil Engg., Mechanical Engg. and Electrical Engg. were admitted in 1989. In 1990, for the first time, University of Delhi had introduced an Entrance Examination for admission to these courses and the students were admitted from the merit list. The college is regularly conducting B.Tech. Entrance Examination in the month of July of every year from 1991, the no. of entrants in the examination has almost double, 120 students are being admitted each year. These students are employed in approved engineering works/organization in NCR Delhi and its contiguous industrial towns. At present there are about 500 students who are undergoing teaching instructions. Every year, nearly 1000 students compete for 120 seats (30 each in Civil Engg., Mechanical Engg., Electrical Engg. and

Electronics Engg.). From the academic year 1996-97 the 5 year B.E.(Tech.) course has been revised to 4 year B.Tech. course.

The student intake for the part time courses are being increased in a phased manner and the annual intake at the end of plan period 2002-2007 is expected to reach a level of 210 as per the details indicated below:

- (i) Civil Engineering – intake 30 per year.
- (ii) Electrical Engineering – intake 30 per year.
- (iii) Electronics & Communication Engineering – intake 30 per year.
- (iv) Mechanical Engineering – intake 30 per year.
- (v) Production & Industrial Engineering – intake 30 per year(proposed).
- (vi) Computer Engineering – intake 30 per year(proposed).

It is proposed to start B Tech. Part-time course in Computer Engineering during the X Plan with an annual intake of 30 students.

- (vii) Environmental Engg : in take 30 per year (proposed)

The programme is presently run with the help of regular and part time faculty engaged from the outside. The sanctioned posts of 8 Asst. Professors and 14 Lecturers are not enough to meet the requirement of the 500 students admitted under the programme. As per the AICTE norm, the teacher-student ratio has been prescribed as 1 to 10 and accordingly the 48 teaching position are required to run the programme. Thus, there is shortage of 26 teachers as on date which is met by engaging teachers from the outside on part-time basis. It has been felt that quality of teaching imparted by the part time teachers and the level of responsibility towards student and institution is not up to the mark. To ensure good standard of teaching and equip the programme with talented faculty members, it is inevitable that additional position of faculty be created to cope up the work requirement of the programme.

The following additional manpower would be required for this programme during 2002-2003.

1.	Professor	4	Rs.16400-22400
2.	Asst. Professor	6	Rs. 12000-18000
3.	Lecturer	6	Rs. 8000-13500

Total **16**

Physical Target

16 posts to be created. The guest faculties are to be engaged as per requirement of the programmes.

Financial Outlays

2004-05 (Rs. in lakhs)
40

Details of Plan Outlays

Recurring (Revenue)

2004-05 (Rs. in lakhs)
30

Non-recurring (Revenue)

2004-05 (Rs. in lakhs)
10

Employment Generation

	No. of persons
	2004-05
Group A	16
Group B	Nil
Group C	Nil
Group D	Nil
Total	16

8. Establishment of Modern Computer Centre and Networking renamed as “ Computerisation of infrastructure of DCE “ (Rs.60 lakhs)

With the importance of computer application in the various fields of industrial and commercial establishments, training of engineering students in computer software has become absolutely essential. Facilities for computer education and software development are to be provided in all engineering institutions as suggested by the national education policy, Government of India. With this objective, computer training has been made compulsory for all the Under-graduate and Post-graduate students. A new computer centre building has been built and handed over. It is yet to be made functional. Computing facilities in the centre will cater the students, faculty and other staff of the college. The entire new campus is proposed to be networked using state of art technology involving gigabit fibre optic networks. This will incorporate acquisition of the latest networking platforms that will include the then available modern hardware as well as the software. The systems such as Main Server (quad processor), Standby Server, Networking switch hub etc., Database server, PCs', Printers and software in adequate numbers as per requirement of the centre are to be procured.

The centre has presently, been sanctioned 2 posts of programmer, 1 post of console operator and 3 posts of data entry operator. Two more positions of

system engineer and system analyst, (1 each), which were created for the centre, have to be revived. The following additional positions are required to be created to cater the manpower requirements of the centre:

1.	System Manager	1	16400-22400
2.	Sr.System Analyst	1	12000-18300
3.	Technical Asstt.	1	5500-9000
4.	Computer Operator	1	4500-7000
5.	Junior Tech. Asstt.	1	4000-6000
6.	Laboratory Attendant	1	3050-4590
	Total:	6	

Physical Target

Creation of 6 posts to be made & computer hardware/software & printers etc.to be procured.

Financial Outlays

2004-05	(Rs. in lakhs)
	60

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	10

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	50

Employment Generation

Group A	2
Group B	Nil
Group C	3
Group D	1
Total	6

9. Expansion of Educational Facilities (Rs. 30 lakhs)

To meet the shortage of technical manpower in the emerging areas of technology, the following courses are proposed to be either spilled over to X th Year Plan from the IX Plan or started afresh during the year 2004-05.

B.E. COURSES (Under Graduate Degree Programme)

- (i) **COMPUTER ENGG.** – Present intake is 20 per year which has been enhanced to 60 per year from academic session 2001-2002. It is proposed to enhance the intake 90 per year during the year 2004-05.
- (ii) **PRODUCTION & INDUSTRIAL ENGG.** – Present intake is 20 per year, which has been enhanced to 30 per year from the academic session 2001-2002. The Intake is proposed to be enhanced to 60 per year in the year 2004-05.
- (iii) **ENVIRONMENTAL ENGG.** – The present Intake is 30 per year. The programme was started from the academic session 1998-99. It is proposed to continue the program during the next five year plan 2002-2007. The faculty positions and the lab supporting staff posts, which could not be created during the ix th plan period, are proposed to be created during the year 2004-05.
- (iv) **POLYMER SCIENCE & CHEMICAL TECH.** – The programme was started with intake of 40 from the academic session 1998-99 with the approval of AICTE and University of Delhi. The Programme is proposed to be continued during the x th plan period. The faculty positions and position of the technical staff which were taken up for its creation during the ix th plan period, it is proposed to be taken during the year 2004-05.
- (v) **ELECTRONICS AND COMMUNICATION ENGG:-** intake 40 per year; BE Programme Electronics and Communication Engineering with intake of 40 was started along with the approval of the University of Delhi and Ministry of H.R.D. The intake of the programme has now been enhanced from 40 per year to 90 per year from the academic session 2001-2002. No additional post of faculty and

technical supporting staff has been sanctioned to cope up with the requirement of manpower for the enhanced intake of 50. It is therefore proposed to create the faculty positions and positions of the technical supporting staff for the programme during the year 2004-05.

- (vi) **AUTOMOBILE ENGG.** : It is proposed to start a new BE course in Automobile Engineering during the Plan Period. The Department of Mechanical Engineering, which has been with the college from the very beginning, has seen a considerable growth in as much as that its original intake of 20 at UG level course in Production and Industrial Engineering. The Department is also conducting ME degree level programmes since 1972 in Thermal and Production Engineering besides catering to Ph.D. research programmes. The Department has well equipped laboratories, such as Instrumentation, Strength of Materials, Fluid Mechanics and machinery, Experimental stress analysis, I.C. Engines, Refrigeration and Air Conditioning, Automotive Engineering, Robotics, Welding, CIM, Automation, FMS.

The Automobile industries in India have come a long way now and sky is the limit for its growth in the conceivable future. Keeping this in mind a new UG Programme in Automobile Engineering has been forged in consultation with many experts from the academics and industries. The scheme for BE in Automobile Engineering, as proposed, is a state-of-art scheme, and not just one of those run-of-the mill type. It is proposed to start the programme with an intake capacity of 60 during the plan period.

- (vii) **INFORMATION TECHNOLOGY:**

A new BE programme in Information Technology with the approval of AICTE has been started from academic session 2002-2003 with an intake of 60 per year. It is proposed to enhance this intake to 90 per year. There is no sanctioned post to run this programme. To cater this programme 3 Professors, 6 Asst. Professors and 15 Lecturers are required to be created. Besides, the position of Technical supporting staff i.e. 6 Sr. Tech. Asst, 18 Tech. Asst, 10 Lab Attendant and 6

Ministerial staff as per the AICTE norms are required to be created for the programme during the plan year.

(VIII) Bio-technology, Aerospace engineering and Food Technology.

Considering the quality of education imparted at DCE and its contribution to the S & T capacity building for the country, it has been planned to further increase the intake at UG level from the present level of 550 to 1100 in the next 4-5 years by starting new programmes at UG level in the areas of high relevance in the country. These include B.E. level programme in Bio-technology, Aerospace engineering and Food Technology with intake of 60 each which are proposed to be started from the session 2004-05..

M.E. COURSES (Post-Graduate Degree Programme)

(i) M.E. POWER APPARATUS & SYSTEM

Intake 15 per year – course is approved by the University of Delhi and is to be spilled over to the X Plan (Admission to 5 semester part-time M.E. in Power Apparatus & System is continuing for the past several years).

(ii) M.Sc. APPLIED PHYSICS

Intake 15 per year – course approved by the University of Delhi and is to be spilled over to Plan (Annual intake of 10 students for 5 semester part-time M.Sc. in Applied Physics is continuing for the last several years).

Delhi College of Engineering is admitting 10 students every year for employed scientists in and around Delhi on a part-time basis to the course of M.Sc. in Applied Physics. Admission to this course has continued for the last several years and thus the lab. Facilities exist and naturally the course is approved by the University of Delhi. The college proposes to continue this course and extend to full-time students during the Plan period with an intake of 15 students per year. It is proposed to start the full-time course of M.Sc. in Applied Physics with

emphasis on material science and electronics. It is also proposed to create the positions of the faculty and technical supporting staff to meet the laboratory and technical facilities of this program.

(iii) **ME (Computer Engineering)**

Due to Computer Software and Communication Engg. Industries boom in the global market, the manpower requirement in these fields have increased manifold. Indian software and its specialists have been in great demand all over the world. The Indian experts in these fields are now taking leading role globally. So, Delhi College of Engineering feels that to cater, for the demand, it must start the new post-graduate courses in computer Engineering. It is proposed to start the programme with an intake 15 during the plan period. To run this programme effectively, the posts of 1 Professor, 1 Asst. Professor and 1 Lecturer are required to be created.

(iv) **M.E. (MICROWAVES AND OPTICAL COMMUNICATION ENGINEERING)**

There is a need for basic infrastructure development in the area of Microwave and Optical communication due to the boom that is totally place in the area of networking using Microwave and Optical Communication. The internet revolution needs the basic communication like that mainly involves microwave satellite and optical communication. The manpower requirement needs to be upgraded in these areas as these are the basic infrastructure for the I.T. Industry.

The area of Microwave and Optical Communication, being the thrust infrastructure requirement in the demand in the above area, it is proposed to start a new PG programme in this specialized field with an intake of 15 during the Plan Period. To run the programme, the post of 1 professor, 1 assistant professor and one lecturer during the plan is required to be created.

(v) **M.E. INFORMATION TECHNOLOGY :**

Intake 15 per year. The course is to be approved by the University of Delhi and AICTE. It is proposed to start this course during the Plan.

(VI) ME in Bio-technology, Bio-informatics, Information Systems Management, VLSI Design & Embedded Systems, Software Engineering and Computer Integrated Manufacturing, Opto-mechatronics, Disaster Management, Infrastructure Engineering and Management and Innovation & Technology Management (intake 18 each)

New PG programmes have also been planned to be added in the areas of high relevance to the country as with the growth of the economy and the technology intensive industrial environment the PG out turn has assumed a much higher significance to support the national policy of technical education for promotion of PG programmes in institution of high standing such as, Delhi College of Engineering. As such, DCE has planned to introduce new PG programmes in Bio-technology, Bio-informatics, Information Systems Management, VLSI Design & Embedded Systems, Software Engineering and Computer Integrated Manufacturing, Opto-mechatronics, Disaster Management, Infrastructure Engineering and Management and Innovation & Technology Management. Such an expansion of educational facilities at DCE is in line with the growth of DCE as a centre for excellence in education and research in the country to attain the status of a Deemed to be University, an objective with which the new campus was developed.

Ph.D. PROGRAMMES

The College has suitable expertise in several areas of Science and Technology to guide doctoral level research. Keeping this into consideration, the Ph.D. programme was formulated during the 8th plan period 1992-97. It was proposed to admit 12 Ph.D. students with scholarships on full time basis for a period of 3 years. The programme was spilled over to 9th five year plan, 1997-2002, wherein, it was proposed to admit 25 Ph.D. scholars on full time basis for 3 years with scholarship as approved by the Govt. of India, in various disciplines in emerging areas of technology and science. The Ph.D. programme has been found very useful for the students interested in research and development activities. The programme is proposed to be continued during the 10th plan period 2002-2007 also. Seeing the demand of the students, it is proposed to admit 50 scholars during the 10th five year plan for full time 3 years programme.

The scholarship amount has been enhanced from Rs. 6000/- to Rs. 7000/- per month for M. Tech. Holders and from Rs. 5000/- to Rs. 6000/- per month for B. Tech./M.Sc./ holders with increment of Rs. 500/- per annum.. The duration of scholarship has also been increased from 3 to 4 years. The contingency grant will be raised from Rs. 7500/- to Rs. 10000/- per annum as per direction issued by the Ministry of HRD in their policy framework circulated to all technical institutes and notified by AICTE. It has been enforced w.e.f. 1.8.03 The total number of Ph.D. scholars at any point of time will be limited to 50 during the 10th five year plan period. The period of programme may be extended by a year subject to recommendation of the Board of research studies on the work performance of the candidate during the proceeding three years. The scholar will be entitled to get the scholarship at the same rate during the extended period, as notified at the time of admission.

The students have to visit various industries for Project study and to upgrade their skills and to acquire practical knowledge of working in the industries. Besides, they undertaken journey for making surveys and training which a part of their academic curriculum. To support these activities the college needs to replace an old bus which has already been condemned by the Transport Authority by a new one during the Annual Plan 2004-05.

The following teaching and laboratory posts are proposed to be created during the Plan for consolidation and expansion of educational facilities under the above scheme :

1.	Professor	10	Rs.16400-22400
2.	Asst. Professor	20	Rs. 12000-18300
3.	Lecturer	40	Rs. 8000-13500
4.	Hardware Engineer	04	Rs. 7500-12000
5.	Technical Assistant/Mech. Grade 'A'.	33	Rs. 5000-8000
6.	Jr. Technical Assistant/ Mech. 'C'	41	Rs. 5000-8000
7.	Lab Attendant/Cleaner	47	Rs. 2610-4000
	Total	195	

Physical Target

The position of Professor-10, Asst. Professor-20, Lecturer-40, Hardware Engineer 4, Tech. Asst.-33, Jr. Tech. Asst.-41, Lab. Attendant-47 to be created . In the absence of regular faculty, guest teachers will be engaged. 162 students will be benefited through ME Programmes and 25 students will be benefited through Ph.D Programmes.

Financial Outlays

2004-05	(Rs. in lakhs)
	30

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	20

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	10

Employment Generation

	No. of persons
	2004-05
Group A	70
Group B	04
Group C	74
Group D	47

Total	195
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10. Coaching Classes for SC/ST Weak Students (under special component plan) (Rs.2 lakhs)

There is need for separate intensive coaching for students belonging to SC/ST and other weaker sections of the society. Such classes are quite regularly

arranged in the college, normally before or after office hours on working days and approximately 200 students benefit from this coaching. The programme has been proved to be very beneficial for the students during the last one decade. The expenditure proposed under this scheme is meant for providing remuneration to the teachers engaged for taking coaching classes, stationery, books and other miscellaneous items. It is proposed to continue the scheme during the 2002-2007 Plan period. The outlay proposed for the scheme is as under

Physical Target

About 60 students are expected to be benefited

Financial Outlays

2004-05	(Rs. in lakhs)
	2.00

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	2.00

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	Nil

11. Strengthening of General and Hostel Administration (Rs.45 lakhs)

Having started as a technical school in 1940/1941, the college has gradually acquired the status of one of the leading engineering institutions in Northern India. It now not only caters to the teaching and training of undergraduate courses but also imparts instructions at postgraduate level in several specializations. Besides, full-time research leading to Ph.D. is also under active considerations in various areas of engineering and applied sciences. The college undertakes the responsibility of continuing education; and B.E. Tech

Part-time courses at undergraduate level and part-time postgraduate courses are offered to serving engineers for the said purpose.

The existing Administrative structure was designed long time ago to cater to the needs of the college when it had only three degree level courses with an annual intake of 180. The College presently caters 13 UG level programmes and 10 PG level programmes. The intake under UG programme has gone up to 550 whereas under PG programme it has raised at the level of 162. Therefore, it is proposed to strengthen the General and Hostel Administration and also to revise the staff structure for educational administration by creation of post of Director, Registrar, Deputy Registrar and Asstt. Registrar, Financial Adviser and Security Officer, including the Examination Cell (the Examination Cell is provided under the plan head "Examination Cell"). It is proposed to restructure the posts of technical staff in view of Prof. T.D. Sachdeva committee report, which is already under consideration of the government.

Since the present state of General Administrative set up in the college is not fully conducive for further growth and development of technical education as envisaged under the New Education Policy, it is proposed to strengthen the same under the X Five Year Plan in the following manner:

1. **Registrar:** – It is proposed to create the post of Registrar in the pay scale of Rs. 16400-22400. He/She would be the responsible for looking after the entire Administrative work arising out of academic departments, services, hostels, establishments etc. This particular linkage is totally absent in the college today and thus making the workload of the Head of the institution exceedingly heavy and tiring.
2. **Deputy Registrar:** – It is proposed to have one Dy. Registrar(Administration) and one Dy. Registrar(Academic) in the pay scale of Rs12000-18000. At present the college has one Administrative Officer in the pay scale of Rs.10000-15200. It is now proposed to upgrade the post of Administrative Officer to the scale of Rs12000-18300 with the changed designation of Dy. Registrar (Administration). This up gradation is quite justified in view of the fact that the DR(Admn.) would look after the

work of (i) Asstt. Registrar(Legal), (ii) Asstt. Registrar (Purchase), (iii) Asstt. Registrar(Stores), (iv) Asstt. Registrar(Public Relations) and (v) Hostel Superintendent. Asstt. Registrar(Legal) would be a newly created post. Asstt. Registrar(Purchase) would also be a newly created post. Asstt. Registrar(Stores) would be an upgraded post corresponding to the existing post of Stores Officer. Asstt. Registrar (Public Relations) would be a newly created post. The post of Hostel Superintendent exists.

3. **Asstt. Registrars:** – It is proposed to have a few Asst. Registrars in the pay scale of Rs.8000-13500. As mentioned above, the following posts are proposed to be newly created, namely A.R.(Public Relations). A post of Stores Officer in the scale of Rs.6500-10500 exists in the college and it is proposed to upgrade the same to Rs.8000-13500. This is fully justified due to significant increase in the activity of the college as mentioned earlier. A post of Dy. Administrative Officer(D.A.O.) in the scale of Rs.7450-11,500 exists in the college which is proposed to be upgraded to Rs.8000-13500 with the designation Asst. Registrar (Academic)/Admn. Officer. This is also fully justified in view of the significant increase in the intake at the Under-graduate level over the last several years.
4. **Security Officer and Assistant Security Officer:**– The college in its new campus is a large establishment having highly priced intellectual property, machine and equipment besides a campus on a plot of 163 acres to support academic and residential requirements. The security and safety of college property and its inhabitants is of paramount importance. A post of Security Officer and Assistant security officer is proposed to be created during X Plan to cater for these functions.
5. **Hostel Supdt. And Asstt. Hostel Supdt:-** The Hostel administration is presently deficient in manpower. The College at its Kashmere Gate site was having two hostels with a capacity of accommodation of 360 students. It was being supervised by the wardens designated from amongst the faculty members. No separate post of warden was sanctioned hitherto. One post of Hostel Superintendent in the scale of pay of Rs.6500-10500 was created during the VIII plan period 1992-97. Now, the new campus

of the college has provisions of 5 Boys Hostel, 1 Girls Hostel, Transit and PG Hostel for accommodating more than 1000 students. With a view to strengthen the administration and upkeep of the hostels, each hostel is required to be manned by an official of the level of Assistant Hostel Superintendent, LDC, one peon cum Farash. Besides, one more post of Hostel Superintendent is required for proper upkeep and supervision of all the boys hostels, girls hostel, Transit Hostel, Married Students Hostel and PG Hostel. Accordingly, it is proposed to create additional post of one hostel superintendent and the positions of assistant hostel superintendent, LDC, Peon cum Farash during the plan for proper conduct of the hostel management.

6. **Security & Sanitation Services:** – The new campus of the college, which is spread over an area of 165 acres, is residential in nature. It has a provision of 5 Nos. of Boys Hostels, 1 Girls Hostel, Transit Hostel, Married Students Hostel in addition to academic buildings, Library, Computer, Workshop Building and various centres which are coming up fast in the campus. Therefore, more man power in regard to cope up with the requirement of security and sanitation is required which cannot be met with the limited number of chowkidars and safai karmacharis presently working in the college on regular basis. With a view to strengthen the security of the government property, machines and equipment and to provide the campus a proper sanitation and environment to meet the minimum requirement of the existing campus. In view of this it has been decided to continue with the engagement of 50 security persons and 35 safai armchairs from private agencies subject to change depending upon the taking up of additional buildings by the college during the year.

The following plan posts are proposed to be created during 2004-05 :

<u>S.No.</u>	<u>Name of the post</u>	<u>No. of post</u>	<u>Scale of pay</u>
1..	Registrar/ Chief Administrative Officer	1	16400-22400
2.	Dy. Registrar (Admn.)/ Sr. Admn. Officer	1	12000-18000

3.	Dy. Registrar (Academic)/ Sr. Admn. Officer	1	12000-18000
4.	Asst. Registrar/Admn. Officer	5	8000-13500
5.	Security Officer	1	8000-10500
6.	Asst. Security Officer	1	6500-8000
7.	Hostel Supdt.	1	6500-10500
8.	Asst. Hostel Supdt.	4	5000-8000
9.	U.D.C.	7	4000-6000
10.	L.D.C.	3	3050-4590
11.	Peon-cum-Farash	10	2550-3200
	Total	35	

An amount of Rs.45.00 lakhs is approved for this scheme for A.P.2004-05

Employment Generation

	No. of persons
	2004-05
Group A	09
Group B	02
Group C	14
Group D	10
Total	35

12. Strengthening of Examination Cell (Rs. 5 lakhs)

Being convinced regarding the dire need of an Examination Cell in the college, Delhi Administration created five posts for this purpose on 12.7.1990. In the meantime, the University of Delhi decided to introduce the mode of Combined Entrance Examination (CEE) for admission to B.E. courses for the candidates passing Board Examination from schools located in Delhi. The CEE was conducted on 2.6.1990 and the college had to provide massive support in

organizing this big task. Again, the University of Delhi introduced Entrance Examination for admission to B.E. (Tech.) Part-time Degree Course and the college was asked to conduct this Entrance Examination taking the complete responsibility. This Entrance Examination for the first time conducted on 15.7.1990. The number of CEE bulletins sold was around 9000 and the same for B.E.(Tech.) Part-time Entrance Examination was about 1100. Both these entrance examinations were conducted successfully. In addition, the University of Delhi has handed over the semester examination work to the college in a big way and the college is executing this work for the last several semester examinations. Lastly, the Faculty of Technology, University of Delhi, has passed a flexible type of examination reform for the B.E. courses, which takes into its stride continual evaluation of a student throughout the semester in accordance with the guidelines of the national Educational Policy of the government. Adequate space has now been provided for proper functioning of the examination cell at the new campus of the college. The positions of one Dy. Admn. Officer (Exams), one Consol operator, one Data Entry operator were sanctioned for the cell during the 8th plan period. These are not adequate to meet the manpower requirement of the cell. Considering this point, the following manpower is proposed for the Cell during annual plan 2004-2005.

1.	Console Operator/		
	Asst. Programmer	1	Rs. 5500-9000
2.	Data Entry Operator	1	Rs. 4500-7000
3.	LDC	1	Rs. 3050-4590
4.	Messenger	1	Rs. 2550-3200
	Total	4	

Physical Target

4 posts to be created and part infrastructure to be developed.

Financial Outlays

2004-05 (Rs. in lakhs)

5

Details of Plan Outlays

Recurring (Revenue)

2004-05	(Rs. in lakhs)
	3

Non-recurring (Revenue)

2004-05	(Rs. in lakhs)
	2

Employment Generation

	No. of persons
	2004-05
Group A	1
Group B	Nil
Group C	Nil
Group D	1
Total	2

III. DELHI INSTITUTE OF PHARMACEUTICAL SCIENCES & RESEARCH (Rs. 700.00 lakh : (Capital 594 lakh) : (Rs. 103 lakh)

Delhi Institute of Pharmaceutical Sciences & Research , formerly known as , College of Pharmacy is an Institute dedicated to providing high quality education programmes of distinction from graduate to post graduate and doctoral levels . It also imparts Diploma in Pharmacy course .

Delhi Institute of Pharmaceutical Sciences & Research serves the public by preparing pharmacists to improve health care outcomes through pharmaceutical care . The curriculum employs new technology and other methods to promote student learning and stimulate a life long learning process .

Students develop competencies required to function effectively and efficiently in a changing as well a challenging health care environment . Faculty and students contribute significantly to the body of knowledge and provide service for the profession . The Institute fosters research and creative professional activity by uniting faculty and students in acquiring and applying knowledge in clinical , community and professional settings

Delhi Institute of Pharmaceutical Sciences & Research , synonymous with dynamic in innovation and intellectual challenge , is one of the best Pharmacy Institute in India , with an enrollment of approximately of 425 students .

The Institute is capitalizing on its strengths in such areas as academic innovation , comprehensive clinical training and flexible education delivery systems .

Founded in 1964 as a part of Kashmere Gate polytechnic , has moved to the present campus in 1979 . To date , the Institution has graduated over 3000 alumn .

The Institute campus encompasses the Main building , an animal house , a herbal garden , a canteen , Hostel , playground , a guest house and 44 residential quarters for the staff .

All the courses are recognized by the Pharmacy Council of India (PCI) and All India council for Technical Education (AICTE) . Guest lectures by eminent sciences are held regularly at the Institute .

Course	Year	Duration	Intake capacity
B,Pharm	1971	4 years	45
M.Pharm			
Pharmacology	1979	2 years	5
Pharmaceutics	1979	2 years	5
Hospital Pharmacy	1982	2 years	5
Quality Assurance	1999	2 years	5
D.Pharm	1964	2 years	90

The major researches thrust are Screening and development of

- Anti-fertility agents
- Hepatoprotective / Anti-hepatotoxic agents
- Antidiabetics
- Anti-inflammatory

Development of novel drug delivery systems are also fields of research interest of some faculty members .

The institution has been identified as nodal cell of northern India by AICTE for continuing Pharmacy education for teachers of various Pharmacy Colleges of India Under these program Institute is conducting Ph.D , M.Pharm and short term education programs.

The Institute has been declared as a separate department of Delhi Government . Power has been vested to the Principal as Head of the Department , vide order No. F 57/2/95 –SB dated 11.09.95 by the Joint Secretary , Services , Govt of NCT of Delhi .

A huge research work has been initiated in the Institute . These international standard research work has produced many Ph.D and M.Pharm thesis . Recently , Institute one work has been recommended for US patent by department of science and Technology with due permission from LG of Delhi . Eight more work is under consideration with DST for US patent . More , research and development proposals are in the pipeline . Because of this large number of sophisticated instruments are need . Therefore provision for more funds are required in the sub head of Machines and equipment Major Head 2203 Demand No 06 1.(1) (1) (1) (6)

Construction of the following has been proposed in the forthcoming financial year 2004-05

1. Eight storied Post Graduate Block attached to the current building towards back.
2. Type VI quarters and Type V quarters
3. Another storey on the top of animal house

4. Semi permanent structure on the roof of library
5. Canteen block

Provision of Rs 597 Lakhs has been approved and Rs. 103.50 lakh in the Capital head under Revenue head during 2004-05.

IV. NETAJI SUBHAS INSTITUTE OF TECHNOLOGY

INTRODUCTION

To meet the growing demand for the manpower in the field of high level engineering and technology, the then Delhi Administration, on the approval of the Ministry of Human Resource Development, Govt. of India, vide their letter No.F23-28/80-T-5 dated 30.12.83 started a new College of Engineering with the name of "Delhi Institute of Technology" in July, 1983 as a Government Department. Subsequently, the Institute was granted autonomous status in May, 1986 and was registered as a "Society" on 12.07.1987. Through a Gazette Notification dated 13.02.1997, the "Delhi Institute of Technology" was renamed as "Netaji Subhas Institute of Technology".

The Silicon Revolution that had started churning out new fascinating and intelligent devices since mid-seventies, has cast profound influence on the state-of-art in the fields of Electronics, Telecommunication, Computer, Information Technology, Instrumentation and Manufacturing Systems. In this context, Netaji Subhas Institute of Technology (formerly Delhi Institute of Technology) has been conceived not just as any other Engineering College but as a unique Institute to fill the gaps, which remained unattended so far in the national system of Technical Education.

The Institute has been given academic autonomy within the framework of Delhi University on the lines of other sister Institutions. Acquiring the status of "Deemed-to-be-University" by the Institute is a goal. In the very near future.

Pending development of its own campus, this Institute started functioning in the Campus vacated by the Food & Craft Institute, Old.I.G.Block, KashmereGate, Delhi. A land measuring 145 acres was acquired at Pappankalan (Dwarka) for the construction of independent Campus for the Institute. Till July'98, the Institute was functioning at

Kashmere Gate and after that it has been shifted to its new Campus. The Administrative Block, Academic Block and other major development activities are almost complete. **'Science and Technology Entrepreneurs' Park (STEP)** is also to be established in an integrated fashion alongside the Institute's Campus.

Presently, 420 students are being admitted every year in undergraduate programmes leading to the award of degree of B.E. (Electronics & Communication Engineering) , B.E. (Computer Engineering) , B.E. (Instrumentation & Control Engineering) B.E. (Manufacturing Process & Automation Engineering) and B.E. (Information Technology). At present **the total strength of the students is 1645**. Three Postgraduate M.Tech.Courses in the field of M.Tech (Signal Processing) , M.Tech.(Information Systems) & M.Tech. (Process) are being offered presently in addition to Ph.D doctoral Programmes. Further expansion of Postgraduate courses and R & D activities are to be taken up in a phased manner.

The objectives of the Institute are:

- (i) To provide for excellence in instruction at the Undergraduate and Postgraduate levels and undertaking and sponsor research in such branches of Engineering and Technology, Applied Sciences and Management Science as the Institute may think fit, and for the advancement of learning and dissemination of knowledge in such branches according to the provision thereof in the Rules and Regulations of the Institute with primary emphasis on emerging Technology;
- (ii) To set up a Science and Technology Park;
- (iii) To organize and undertake extramural teaching and extension services;
- (iv) To undertake industrial and R &D consultancies;
- (v) To lend support in identifying and starting small scale industry in and around the Institute through Entrepreneurship Programmes;
- (vi) To undertake Technology Transfer programmes;

- (vii) To develop suitable programmes for effectively utilizing the built-in infrastructure facilities in the Institute;
- (viii) To establish linkage between the Institute, Industries, R & D Organisations and other Universities/Institutes of higher technical education for teaching and research programmes in India/Abroad;
- (ix) To enrich mental, spiritual, cultural, and physical potentialities of the students;
- (x) To enthuse a sense of values worthy of the Democratic norms of India.

Besides, the Institute envisages to integrate the following activities also:

- (i) Integration of Science and Technology Entrepreneurs' Park with the overall objectives of the Institute; and
- (ii) Institutional categorization of R & D activities through advanced Labs/Centres at three levels, viz. (a) Mission; (b) Thrust; and (c) Blue sky (Open ended research).

The R & D activities of Universities and Institutes by and large fall in the area of Blue sky i.e. open ended research which no doubt is essential for the growth of knowledge, civilization and future of mankind but is not normally addressed to the present day to day problems. Therefore, in addition to the normal research activities in the Blue sky area, emphasis will be on thrust and mission areas. For example, if Computer is thrust area, development of say PCB around a particular Processor with complete specifications and a time schedule could be a classified Mission. On the other hand, Optical Computing could belong to Blue sky. A conscious effort will be made so that a certain research effort in the Blue-sky area migrates to the Thrust and Mission areas under the Technology Transfer Programme. The recommendations of the 44th meeting of Central Advisory Board on Education held in sep'88 have been envisaged to be integrated through Divisions, Schools, Centers and Sciences & Technology Entrepreneurs' Park.

Instruction programmes have been divided into Undergraduate, Postgraduate and Doctoral programmes with a provision of cross migration for different disciplines.

Postgraduate programmed would be tailored and run in co-operation with Industries and R &D Organisations as far as possible. Special courses of variable duration and modular nature would be developed. Research and Development Centers have been conceived to build special thrust and to undertake execution of certain Missions in chosen areas.

The academic scheme at NSIT provides for organization into Units of Divisions and Schools. Divisions are organic aggregation of wide areas which are the most important thrust areas and which would need the maximum investment and resources. A particular Division would consist of various groups and subgroups of identified areas of specializations. The schools are the aggregation of areas which are pointed and peaked to some extent but they also play their independent roles and are in no way subsidiary to the main Engineering Divisions. Divisions and Schools are complementary in their functions and at the same time autonomous in implementing their programmes in a co-ordinated manner.

Besides the Science & Technology Entrepreneurs' Park, the academic activities would be located in the Divisions and the Schools as given below:

a) Divisions

1. Electronics & Communication Engineering.
2. Computer Engineering.
3. Instrumentation and Control Engineering.
4. Manufacturing Processes and Automation Engineering.
5. Information Technology Engineering

b) Schools

1. Applied Sciences.
2. Humanities and Social Sciences.
3. Management and Entrepreneurship.

Undergraduate (B.E) Programmes of 4-year duration would admit 100 students in each Division and provide specialization in various streams by means of optional courses. Management studies to students of the Undergraduate and Postgraduate Programmes would be offered by the School of Management and Entrepreneurship.

The School of Humanities and Social Sciences would provide support courses in all the Programmes and undertake research programmes related to societal and Demographic issues of development.

Science & Technology Entrepreneurs' Park (STEP) has been conceived to have a relationship with the Institute on the lines similar to the relationship that Hospital has with a Medical College.

1. CONSTRUCTION OF NEW BUILDINGS IN NSIT (Rs. 600 Lacs)

A land measuring 145 acres for the development of independent campus was acquired at Dwarka in the 8th Plan. Delhi Development Authority has approved the Master plan of Netaji Subhas Institute of Technology in the year 1994. All statutory approvals from various concerned department viz. MCD,DUAC, National Airport Authority and Fire Office have been obtained.

As per the approved Master Plan of the Institute, it is proposed to carryout the construction in Three Parts as per detail given below:-

art-I (Phase-I & II): -

S.No	Name of Buildings	Area (sq. mtr.)	Status
1.	Administrative Building	5393	Completed
2.	Academic Block-4,5,6 & 8a	29759	Completed
3.	Library and Computer Centre	1952	Completed
4.	Boys Hostel	5712	Completed
5.	Married Students Hostel	3743	Completed
6.	Sub-Station Building	1206	Completed
7.	Faculty/Staff Quarters i) Type-I - 32 Nos. ii) Type-II – 56 Nos iii) Type-III- 24 Nos. iv) Type-IV- 28 Nos. v) Type-V – 28 Nos vi) Type-VI- 1 No.	15680	Completed
8.	Development/Bulk Services	Job	Completed

Total area of the above buildings is 63445 sq. mtr.

The works under Phase-I & II have already been completed.

An amount of Rs.600.00 lakhs is approved for this scheme for A.P.2004-05.

2. STRENGTHENING OF NSIT (Rs. 290.00 Lacs)

FACULTY

SN	NAME OF THE POST	EXISTING POSTS	PROPOSED UNDER 10 TH FIVE YEAR	PAY SCALE
1	PROFESSOR	22	13	16400-22400
2	ASSTT.PROFESSOR	36	34	12000-18300
3	LECTURER	69	76	8000-13500

STABLISHMENT SECTION

SN	NAME OF THE POST	EXISTING POSTS	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	REGISTRAR	--	01	16400-22400
2	PS TO CHAIRMAN, BOG	--	01	6500-10500
3	ASSTT. REGISTRAR	01	01	8000-13500
4	SUPERINTENDENT	--	02	6500-10500
5	SR.STENOGRAPHERS	--	01	5000-8000
6	UDC	01	02	4000-6000
7	LDC	03	02	3050-4590
8	DESPATCH RIDER		01	3050-4590
9	RECORD KEEPER	--	01	3050-4590
10	ATTENDANTS	02	04	2550-3200

MEDICAL CELL

SN	NAME OF THE POST	EXISTING POST	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	LADY DOCTOR	--	01	8000-13500

LEGAL CELL / VIGILANCE CELL

SN	NAME OF THE POST	EXISTING POST	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	LAW OFFICER/A.R.	--	01	8000-13500
2	SUPERINTENDENT	--	01	6500-10500
3	UDC	--	01	4000-6000
4	LDC	01	02	3050-4590
5	ATTENDANT	--	01	2550-3200

ACADEMIC SECTION

SN	NAME OF THE POST	EXISTING POST	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	ASSTT. REGISTRAR	01	01	8000-13500
2	SUPERINTENDENT	--	01	6500-10500
3	ASSISTANT	--	02	5500-9000
4	UDC	02	02	4000-6000
5	LDC	02	04	3050-4590
6	ATTENDANT	01	03	2550-3200

EXAMINATION CELL

Sno	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	CONTROLLER OF EXAMS	--	01	12000-18300
2	ASSTT. REGISTRAR	--	01	8000-13500
3	ASSISTANT	--	01	5500-9000
4	DATA PROCESSOR	01	01	4000-6000
5	LDC	--	01	3050-4590
6	ATTENDANT	--	02	2550-3200

LIBRARY

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	LIBRARIAN	--	1	16,400-22,400
2	ASSTT.LIBRARIAN	2	2	8000-13,500
3	ALLIED POSTS	--	10	6500-10500

FINANCE

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	ASSTT. ACCOUNTS OFFICER	--	02	6500-10500
2	UDC	04	02	4000-6000
3	LDC	02	02	3050-4590
4	ATTENDANT	01	02	2550-3200

STORE & PURCHASE SECTION

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	ASSISTANT	--	02	5500-9000
2	HEAD CLERK	01	01	5000-8000
3	SR. STORE KEEPER	--	01	5000-8000
4	PURCHASE ASSISTANT	--	02	4500-7000
5	UDC	02	01	4000-6000
6	LDC	--	01	3050-4590
7	ATTENDANT	01	02	2550-3200

GUEST HOUSE

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	GUEST HOUSE KEEPER	--	02	3050-4590
2	HELPER	--	02	2550-3200

HINDI CELL

Sno	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	HINDI OFFICER	--	1	6500-10500
2	HINDI TRANSLATOR	--	1	4500-7000
3	HINDI STENOGRAPHER	--	1	4000-6000
4	LDC	--	1	3050-4590
5	ATTENDANT	--	1	2550-3200

HOSTEL

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	SUPERINTENDENT	--	1	6500-10500
2	MESS SUPERVISIOR	--	1	4500-7000
3	CARETAKER	--	5	4000-6000
4	LDC	--	1	3050-4590
5	ATTENDANT	--	5	2550-3200

PRO

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1	ASSTT. EDITOR	--	1	5000-8000
2	UDC	--	1	4000-6000
3	LDC	--	1	3050-4590
4	ATTENDANT	--	1	2550-3200

HORTICULTURE

Sno	NAME OF THE POST	EXISTING	PROPOSED UNDER 10 TH FIVE YEAR PLAN	PAY SCALE
1.	HORTICULTURE OFFICER	--	1	10,000-15,200
2.	LDC/TYPIST	--	1	3,050-4590
3.	ATTENDANT	--	1	2550-3200

DEPARTMENT OF PHYSICAL EDUCATION

SN	NAME OF THE POST	EXISTING	PROPOSED UNDER 10TH FIVE YEAR PLAN	PAY SCALE
1	STORE KEEPER CUM CLERK	--	1	3050-4590
2	PART TIME COACHES FOR ATHLETIC FOOTBALL, BASKET BALL, TENNIS, YOGA	--	4	5000/PER MONTH
3.	GYMNASIUM ATTENDANT	--	1	2550-3200
4.	GROUND MEN	--	1	2550-3200
5.	PEON CUM HELPER	--	1	2550-3200
6.	SWIMMING COACH	--	1	3050-4590
7.	LIFE GUARD	--	1	2550-3200

An amount of Rs.290.00 lakhs is approved for this scheme for A.P.2004-05.

3. PROCUREMENT OF MACHINERY & EQUIPMENTS/ FURNITURE (Rs. 450.00 Lacs)

To keep pace with the expanding academic activities, it is proposed to establish a chain of advanced laboratories in addition to modernizing the existing one. New branches of academic programmes in Post Graduate streams and a B.E. programme in Bio-technology are likely to be inducted from the coming academic session. For this purpose a sum of Rs. 450.00 Lacs has been approved for the financial year 2004-05.

4. SETTING UP CENTER FOR ELECTRONICS DESIGN & TECHNOLOGY (CEDT) (Rs. 1.00 Lacs)

For setting up Centre for Electronics Design & Technology (CEDT) a sum of Rs. 1.00 Lacs has been approved for the financial year 2004-05.

**5. SCIENCE AND TECHNOLOGY ENTREPRENEURSHIP PARK (STEP)
(Rs. 1.00 Lacs)**

While drawing up the 9th five-year plan it was envisaged that the setting up of STEP will be delayed for a number of reasons. It was pointed out that the main campus would be ready by the end of 1999, and also that senior level will need to be positioned. In spite of the fact that some of constraints mentioned above are still continuing some activities have been planned in the year 2004-2005 to meet major objective of STEP viz. To create trust and confidence among academic/research institutions and Industrial Enterprises': -

'Help financial institutions in the monitoring of Industrial Enterprises financed by them Students will be actively involved in this process.

- a. Direct interaction with Industrial Enterprises through their associations and encourage students to under-take development work for them. STEP will support such development work financially also.
- b. Arrange short duration training course and week-end workshops for students on management/ technology related topics
- c. 2-3 day meets of engineering students in which they share their experiences in industry with students from other engineering colleges and institutions
- d. Identify talented students and help them develop as entrepreneur.
- e. Holding of workshops and seminars, for generation of newer ideas and for increasing participation from all partners viz. industry, academic/research institutions and financial institutions.
- f. Any other activity, which encourages entrepreneurship amongst students.

An amount of Rs.1.00 lakhs is approved for this scheme for A.P.2004-05.

6. CONTINUING EDUCATION PROGRAMME (CEP) (Rs. 3.00 Lacs)

During the 9th five-year plan several short-term courses as well as lectures have been organized under this Programme. Teachers from science colleges from different parts of the country as well as working engineers have benefited from this Programme. As part of industry-institute interaction, few courses on computer hardware have immensely benefited NSIT technicians, so much so that the Institute has saved considerable amount provided for AMC of computers and their peripherals. Further the same technicians, who received training in the above-mentioned programme, help in the running of computer courses for SC/ST candidates under the SCP Programme. Steps have already been taken to induct competent manpower at senior level in order to expand the scope of this Programme.

Some of the activities proposed under this program are as given below:

- a. Engaging faculty members to write monographs on theory courses and lab exercises. Such monographs will be useful in organizing training programs for teachers of various science colleges and polytechnics. In the next phase this facility will be extended to the faculty of science colleges and polytechnics as part of their training program.
- b) Organise courses for practicing engineers, managers and executives working in industries. In some cases this may require augmenting of laboratory facilities of the institute, and also enhancement of the skill of technicians.
- c) Organise skill development courses for unemployed youth in such disciplines as computers, electronics equipment maintenance etc. for improving their job potential. Such course shall be run on payment basis.
- d) Organise training course for faculty and technicians to augment their skill in the maintenance of laboratory equipments.

An amount of Rs.3.00 lakhs has been approved for this scheme for A.P.2004-05.

7. MATERIAL & SUPPLIES (LIBRARY & BOOK BANK) (Rs80.00 Lacs)

A. Recurring Budget:

The Institute is in process of starting a new B.Tech. course in “Biotechnology” and two M.Tech. Courses on Mechatronics and Industrial Electronics again from academic session 2004. In addition, the institute has enrolled a good number of research scholars for Ph.D. programmes consisting of internal faculty members as well as some students on full time basis. Keeping this development in mind Institute’s requirement for research & high standard academic journals will grow considerably, Therefore, in the age of information explosion, central library requires at least Rs. 88 lakhs to meet its recurring budget towards existing journal subscriptions and new additional journals for the above mentioned new upcoming areas and their management as is shown below.

	2002-03 (in Lakh)	2003-04 Sanction Budget (in lakh) by NSIT	2003-04 additional RE (in lakh) proposed to NSIT	2003-04 Expenditure under process (in lakh)	Already proposed 2004-05 Budget (in lakh)
Other than IEEE Journals Print (recurring nature)	34	*44	*14	45.8	45
Racks, Binding of Books and Journals, Lib. Stationary, Newspaper/Magazine etc.		1	2.5	1.5	4
On-line Full text database (IEL) along with IEEE ASPP print journals	15	**	**	18.4	26
On-line bibliographic Database	7.5		8	7.2	9.5
New on- line database (ACM Digital Lib.)				2.2	3
Science On-line					
Sum	56.5	45	24.5	75.1	87.5

(Note for above table : During 2002 –03 the figures or * and ** are collective)

B. Non Recurring:

Central Library has experimented by providing the facility of Internet access to Library users round the clock in its small size of lounge which has been widely praised and is very popular among students and faculty. Even the visitors who have come to attend Summer or Winter short term courses have praised for this facility. Now when more floors are going to be available to the Central Library, this facility is planned to expand in more wider perspective with at least 50 numbers of additional computer terminals, committee room, audio visual section, and NSIT library wants to expand not only towards books and journals but also towards a library of original software to be used by our students and faculty and its related management. Central Library has also initiated a project of automation to equip itself with the state-of-the-art technological development. Bar coding and computerization of the books catalog has already been done and smart card based user access is planned for the next year. Now a days many educational broadcasting channels have started coming which requires very good audio-visual facilities.

Of course this requires good amount of initial budget which may have long term financial and technological benefit to the Institute and society. Keeping view of this thought, Central Library requires another Rs. 72 lacs for the financial year 2004-05 as Non- recurring Budget. Following is the detailed break up.

	2002-03 (Lakh approx)	2003-04 Sanction Budget (lakh) by NSIT	2003-04 additional R.E (lakh) proposed to NSIT	2003-04 Expenditure under process (in lakh)	Already proposed 2004-05 Budget (in lakh)
Books (except Biotech) (1) [for six COE, ECE, ICE, IT, MPAAE, SASc) Approx.	11 [1+2+3+4]	12	18	12	20
Books Biotech (2) New Dept.2004-05		0.5		1	5
Reference Source/ Lib. Tools (3)		0.5	2.5	0.5	7
Books of general Interest (4)		0.5	0.5		1

Computers, Printers & portable data collection terminals and related software.	0.44	1		1	3
Chairs, Tables and other furniture	-----	0.5			2
UPS (10 KV), TV and photocopier machine	-----		10	5	12
Air conditioners to meet urgent requirement of Computer related systems (for the time being Installation of Centralized Air conditioner is not getting materialized).					
Network management and other Software	-----		4		5
CD NET (Servers & related Software)	-----		9		10
Property Counter, Partitions, Notice Boards	-----		3.5	0.5	4.5
Balance Payment of Journals			3	3	
Venetian Blind Curtain					2
Racks for floors extension					
Sum	11.5 Approx	15	50.5	23	71.5
Grand Total					159

Based on the above justification the total requirement in the head Material & Supplies (Library & book bank) is Rs. 245.00 lacs. However, Presently an amount of Rs. 80.00 lacs is approved for the scheme (2004-05).

Department of Physical Education

1. Department of Physical Education would like to organize the Athletic meet of the Professional colleges in the Delhi region.
2. Department of Physical Education would like to organize a seminar on yoga & meditation for the staff & students.
3. Physical fitness programmes for students
4. Self Defense training for the students of NSIT
5. Netaji Subhas open cross country Race
6. Faculty Development & student Welfare and collaboration (Rs. 15.00 Lacs)

In pursuance of the objectives No.3 (viii) of the Institute as set out in the Memorandum of Association which reads as follows: -

" To establish linkages between the Institute , Industries, R & D organisations and other Universities/ Institutes of higher technical education for teaching and research programmes in India and abroad. "

Faculty Development is a very important activity for upgrading the existing knowledge and to keep pace with the latest scientific and R&D activities throughout the Globe. This can only be achieved by sending/sponsoring the faculty to national and international conferences, seminars and meets and also by exposing them to the international academic culture by encouraging faculty exchange programs, sending people on sabbatical, inviting people on sabbatical and encouraging intellectuals and experts in various field in the latest & emerging areas of technology to come to NSIT and interact with the faculty.

Therefore, the activity requires a substantial amount of financial assistance. Though presently a request for an amount of Rs. 15.00 lacs is being made, but a further request through RE to substantiate the effort will be submitted later.

**8. AWARDS OF SCHOLARSHIP/RESEARCH ASSOCIATESHIPS
(RS. 25.00 LACS)**

The Scheme for merit/merit-cum-means scholarships is proposed to be introduced for students. Certain awards are also proposed to be extended to deserving students. Associateships according to U.G.C norms are also proposed to be awarded therefore a sum of Rs 100 lacs has been earmarked for these activities of the 10th plan period.

An amount of Rs.25.00 lakh is approved for this scheme for A.P.2004-05

9. TRAINING PROGRAMME FOR PERSONS BELONGING TO WEAKER SECTION (SCP) (Rs.5.00Lacs)

During the 9th five-year plan, the Institute has initiated number of training programmes for SC/ST of NSIT students and for outside SC/ST category candidates, who have passed 10+2 exams. Briefly, the activities under CEP have been:-

1. Extra coaching classes for NSIT students in the evenings/ week-ends and even during vacations
2. Computer hardware courses for SC/ST category outside students, who have passed 10+2 exams.
3. Computer literacy and personality development courses for SC/ST category outside students, who have passed 10+2 exams.
4. Any other activity which can improve employability of SC/ST candidates. Basic idea is to impart various skills to SC/ST candidates, which

improve their employability in the market. In the forth-coming plan skills for which laboratory facilities can be arranged at NSIT would be imparted through short duration courses. There is a genuine need to include courses on the repair of household equipments, motor winding, workshop practices and personality development. Steps have already been taken to induct competent manpower in order to expand the scope of this programmed.

An amount of Rs.5.00 has been approved for A.P.2004-05 for this scheme.

10. INSTITUTE NETWORKING SCHEME (Rs.30.00 Lacs)

The detailed justification and break-up of items is as follows:-

1. Dell Latitude

Cisco Switch requires a computer console for detecting the cause of failure. It is not physically possible to keep a number of computer consoles dedicated for so many switches. Moreover, providing computer console for each switch will not be economically viable solution in comparison to Dell Latitude which can moved anywhere to help in diagnosing the cause of switch failures or connectivity failure and Hence the Institutes proposed to purchase the Dell Latitude Computer.

2. DVD Rom / CD Writer

INS has got a large number of original CD's and they are used quiet frequently Regular use of the original CDs spoil the CD surfaces and lessens life-time of CDs and Hence it is very important to have DVD ROM/CD Writer.

3. HP Scanjet 7450 C Scanner

INS is also required to update website and therefore in process, the new documents have to be scanned on regular basis and Hence Scan jet Scanner is very important to do the assigned job properly.

4. Web Camera With USB Port/ Head Phones

This equipment will be used for establishing video conferencing to help in the network related development activities. Head phone and TV Tuner Card are also for the same purpose.

5. UTP E Cats Patch Cord 20 ft

Institute has got pre-fabricated cords of very small lengths. Which being short can't be used for providing connectivity at the desired place and Hence this cable is very important to meet the near further needs of the Institute network.

6. Websense Software

This software will protect the Institute users from Accessing unwanted sites and hence will help us by having much better control on the type of the data flow through internet.

7. Bandwidth Control

Bandwidth Control Software/Hardware helps in managing/distribution of the Institute bandwidth in most efficient manners.

8. Photocopier

INS needs to interact with vendors, suppliers for regular maintenance work. Our system requires to keep records of the communications. Apart from this, INS also need to download/upgrade technical documents to study for improvising the Institute Network. Therefore this equipment is very important. INS is facing lot of problems without this equipment.

9. Server Dual Processor(HP/Compaq/Dell)

INS purchased Trend Micro Enterprise, which requires four servers for Office Scan Server, Control Manager and Applet Trap. One more server will be required for Installation of web sense software, in case of its purchase.

10. 512 MB UDB Flash Disk

This is the data transfer USB Flash Disc, which has very less wear-tear, portable, easy to use.

SN	Item Description	Qty	Rate(Rs.)	Justification
1.	Hostel Connectivity	1	30,00,000	Our Institute proposes to provide internet connectivity in every hostel in the beginning at a centralized place with upgrade ability option to provide connectivity in every room o the hostel. This will help the students to do their assignments even after office hours and submit online. All IIT's/ IIS have provided such facility and is a step to make our institute an excellent learning place.
2	Servers (3 RISC based machine alongwith Cache Server)(Web , Mali, Ftp & Cache Server)	3+1	30,00,000	As per our experience, the SGI has monopoly in the sense that the spares of SGI are nor available in the open market and the side- effect o their monopoly gets reflected in their services. This has been discussed at every level at our institute. Another important issue is that the 3 rd party software has stopped giving support and upgrades for SGI produdcts. For example Netscape #Enterprise servers, Java etc.
3	Two Switchers- 3524 XL Layer-2	2	1,50,000	These switches were short from the beginning and certain parts of the institute's blocks 4 & 5 & Admin . are still not on the network. Hence this is the minimum requirement.
4	Cisco RAS (16 Port)	1	2,50,000	We have one RAS Server of 16 ports and there are approximate 54 faculty houses having the internet connection through the intercom. 16 links are not sufficient to provide fairly good service to 54 faculty houses. We should keep in mind that the internet connectivity to faculty is also important after office hours and this helps in quality teaching & also helps in research.

Based on the above justification the total requirement in the head, Institute Networking Scheme is Rs.67.50 lacs. However an amount of Rs. 30 lacs has been approved for the scheme during 2004-05.

**11. FACULTY DEVELOPMENT & STUDENT WELFARE AND COLLABORATION
(RS.15.00 LAKHS)**

In pursuance of the objectives No.3 (viii) of the Institute as set out in the Memorandum of Association which reads as follows:-

“To establish between the Institute, Industries, R&D organisations and other universities / Institutes of higher technical education for teaching and research programmes in India and abroad.”

Faculty Department is a very important activity for upgrading the existing knowledge and to keep pace with the latest scientific and R&D activities throughout the Globe. This can only be achieved by sending / sponsoring the faculty to national and international academic culture by encouraging faculty exchange programs, sending people on sabbatical, inviting people on sabbatical and encouraging intellectuals and experts in various field in the latest & emerging areas of technology to come to NSIT and interact with the faculty.

An amount of Rs.15.00 lakh is approved for this scheme for A.P.2004-05.

V. COLLEGE OF ART

College of Art is situated at 20-22, Tilak Marg, New Delhi, and is administrated by the Government of Delhi. It is an Institution for advanced training in Visual Arts (both creative and applied) leading to the Bachelor of Fine Art (B.F.A.) and Master of Fine Art (M.F.A.) degrees of University of Delhi.

The College had got the approval of the Delhi Administration and University of Delhi to start the long due Masters Courses in Specialization's viz., Painting, Sculpture, Applied Art, Photography, Printmaking and History of Art. Out of these Specialization's, the College has since introduced the Master of Fine Arts

Courses only in Painting, Sculpture and Applied Art with the intake capacity of maximum of seven for each and introduced Post-Diploma Courses for Deaf & Dumb students, one each, in the three specializations i.e., Painting, Sculpture and Applied Art.

Considering the importance of developing such an important Institution, that too in the Capital city, and unique amongst its kind in the Country, it is imperative to make all efforts and provide possible resources to it at this point. Progress and achievements in this area will feed and substantially improve the manpower to provide quality contribution for social, cultural and industrial schemes of our country.

The following are the Schemes which are approved by the Planning Commission. All these schemes are continuing ones except the "Introduction of New Courses of Studies."

(1) DEVELOPMENT OF EXISTING COLLEGE BUILDING AND CONSTRUCTION OF ADDITIONAL BLOCKS IN THE CAMPUS OF THE COLLEGE . (Rs. 960.00 Lakh)

All the development schemes and expansion of academic and professional training of the College under Plan are conducted with the additional accommodation. The 1st Phase alongwith Lift Block of the permanent building was completed in 1976 and Phase II and III consisting of Studios and Administrative Block, Foundry workshops and development of land was completed and occupied in 1986.

The proposals for the 10th Plan is to take up the left out essential projects of Capital works within the existing Campus as follows:-

- (i) Completion of the continuing projects, additions and alterations and re-allocation of Studios and workshops in view of the increase in the intake of students, introduction of New Courses and installation of new equipment's and machinery required for professional Courses.

- (ii) Construction of Central Block to house the multi-purpose Hall for Seminars, Lectures, Audio Visual Shows and Exhibition Gallery and New Studios for the new Post-Graduate Courses and housing the essential services such as electric Sub-station, Fire fighting and pump-room. It will be constructed in the premises of 22, Tilak Marg, after demolishing the existing 100 years old single-storey building.
- (iii) New Blocks to be constructed after demolishing the existing old and temporary Blocks. These will provide accommodation for the existing College Canteen, Student's facilities such as Sports, Medical, Common Rooms and Workshops. A New boundary wall to replace the existing old one is also to be constructed for the combined campus of the College at 20-22, Tilak Marg, New Delhi.
- (iv) New Workshop Blocks to be constructed in the Southern portion of the College for New Courses of Applied Design for B.F.A. likely to be started. In addition to this, the Sculpture Department is also to be expanded to accommodate MFA students.

Tenders have been called by the PWD for demolition of Old Block and construction of the New Block on the same premises.

In the view of the above, the construction of the building project is expected to be stated in the current financial year.

The approved outlay for this scheme is Rs.960.00 lakhs is approved for during 2004-05.

(2) RE-ORGANISATION OF EXISTING ACADEMIC COURSES (Rs.33.20 Lakh)

With the affiliation of the College to the University of Delhi in 1972, it became necessary to re-organize the existing pattern of staffing so as to bring it in conformity with the approved pattern of the University. Accordingly, the four posts of Lecturers (Ordinary Scale) which existed in the College have since been abolished and instead of this other posts of Lecturers, Assistant Professors and Professors created as per recommendation of the Madan Committee followed by

the Dogra Committee. The pay scales with matching "structure of staffing" in respect of ministerial and other categories of supporting staff.

The intake capacity of students at the BFA level had been increased to 100 from 80, in addition to 08 seats (03 reserved for Deaf & Dumb students and 05 for Foreign Nationals). Considering this increase in demand, it is justify to be increased further. Apart from the BFA Courses there is also an intake of seven students for each of the three disciplines of MFA Courses (plus post-Diploma seats for three Deaf & Dumb students department –wise).

Accordingly, the College proposed to have the following new posts to be created and filled/up during the 10th Five Year Plan because of the starting of P.G. Courses, expansion of academic programs, restructuring of Courses according to the approved syllabus: -

(a)	Junior Artists	05 posts	5000-8000
(b)	Attendants	10 posts	2550-3200

Out of the above posts, 04 posts of Junior Artists and 05 posts of Attendants have already been filled up. One post of the Junior Artists could not be filled up due to non-availability of suitable candidate. The proposal for creation of 05 posts of Attendants is under process and is expected to be created and filled up during the 10th Five Year Plan.

Due to portable starting of the new courses in Degree as already approved by All India Council for Technical Educational and the Directorate of Technical Education, Govt. of NCT of Delhi, this College proposes the creation of the following posts of Faculty staff: -

(1)	Professor	01	16400-18400
(2)	Asstt. Prof.	01	12000-18000
(3)	Lecturer	03	8000-13500

Besides the above posts, the following posts are also required in the College due to the setting up of Computer Graphic Cells for introduction of Computer Graphic Courses, both at the level of BFA and MFA Courses.

1.	Computer Technician	02	5500-9000
2.	Mechanic Gr. C.	01	3030-4590
3.	Attendant	02	2550-3200

To start the new Courses in Graphic Design and Graphic (Printmaking) software are needed. A provision of Rs.17.00 lakhs is proposed for this financial year for purchase of Equipment/furniture. In addition to this, raw materials, new machinery and equipments for various Studios and Workshops are also to be provided. This is a continuo process and much funds will be required

The total Outlay approved under the scheme for the 10th Five year Plan is Rs. 150 lakhs out of which a provision of Rs. 33.20 lakhs approved for the year 2004-05.

(3) DEVELOPMENT OF LIBRARY AND ACQUISITION OF SPECIMEN OF INDIAN ART. (Rs.4.00 Lakh)

Though considerable progress has been achieved in the implementation of this scheme during the 9th Five years plan, the scheme is still to be continued in the years to come. The Library of the College has been growing to become one of the finest of its kind in the country. Now it has to get ready for meeting the Post-Graduate Research requirements. The College has also made the Slide and Film Library of selected works of Art from all over the world.

In view of the above, to maintain the smooth running of the Library the following posts are to be created:-

1	Librarian	01 post	8000-13500
2.	Library Attendant	02 posts	2550-3200

The proposal of up-grade the posts of the existing Librarian to a senior scale are under consideration of Govt. of Delhi. The existing post filled under Non-Plan side will be surrendered as soon as the proposed post is filled up.

The acquisition of selected works of traditional and contemporary Indian Art has been going on to become a quite significant collection for the proposed Air-conditioned Art Gallery. This scheme is still to be continued for acquiring new art works as well as for filling up of important period gaps in the College collection. They are essentially needed in the College for education and the enlightenment of the students, fellow artists and even for the general public. Provision for pedestals for sculptures, mounting framing and restoration of Paintings and Graphic prints are also to be made. The Art Gallery has also to be furnished and provided with suitable display boards and stands. The entire collection of the Gallery has to be listed, documented and published in comprehensive catalogues as well as exhibited periodically. For all this, the following posts are proposed for the Scheme as per requirement explained above :-

1.	Exhibition Officer	01 post	8000-13500
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In view the above position a provision of Rs. 20.00 lakh is kept for the 10th Five Year Plan. Rs. 1.00 lakh is approved for the year 2004-05.

An outlay of Rs.20.00 lakhs is approved for the 10th Five Year Plan. Rs.4.00 lakhs is approved for the year 2004-2005.

(4) STUDENTS/FACULTY DEVELOPMENT PROGRAMME (Rs. 1.80 Lakh)

Under this scheme the following development programmes for Students and Faculty Members of the College which are extremely necessary and important for improving, refreshing and providing them opportunities to allow them to come out of professional and academic isolation, are proposed to be undertaken during the 10th Five Year Plan (2002-2007) :-

Visit of teachers to other important Colleges in India to learn specific techniques and methods in the field of their specialisation.

Holding of important Exhibitions and Seminars on new innovations in the field of Visual Arts. Arranging illustrated lectures by eminent Artists and professionals from India and Abroad.

Publication of College Year Book, Reports that include Education, History of art, Creative interaction, with other visual arts etc. While the Faculty and Students continue to achieve the planned objectives on the academic and administrative fronts, we have also had more open-minded interaction with expertise outside in various fields along with the value patterns that they offer for now and the future. The need has been not to sideline existing norms but to reassess and strengthen them thus creating an understanding between the fast growing influx of technology in practically every sphere of life and the process of creating a finer sensibility. To facilitate such interactions by mutually opening avenues between the college and other institutions/academicians, the Scheme of Students/Faculty Development Programme will be instrumental.

The total approved outlay under this scheme for the 10th Five Year Plan is Rs.9.00 lakhs out of which an outlay of Rs.1.80 lakhs is approved for the year 2004-05.

(5) ACADEMIC DEVELOPMENT OF SC/ST STUDENTS OF THE COLLEGE (SPECIAL COMPONENT PLAN SCHEME) (Rs. 1.00 Lakh)

Good art material and equipment are quite expensive but important to produce quality work. Under this Scheme, it has been planned to provide to all SC/ST students of this College as an assistance, free of cost ,materials to those who cannot afford to purchase them according to their actual needs. In addition to this, it is also proposed to provide special classes in Theory subjects to the students who are found to be weak, in such subjects as History of Art, Aesthetics and methods & Materials.

Approved outlay under this scheme during the 10th Five Year Plan is approved as Rs.5.00 lakhs out of which Rs. 1.00 lakh is approved for the year 2004-05.

INTRODUCTION OF NEW COURSES OF STUDIES

The College proposed to start three pending Post-Graduate Courses during the 10th Five Year Plan considering the demand from the academic and professional areas, with an intake capacity of 7+1 students each in the following disciplines: -

Photography (Cinematography/Video)

Graphic Printmaking

History of Art

These Courses are already approved by the University of Delhi and also incorporated in their Calendar. The matter was referred to Ministry of HRD, Govt. of India and AICTE through the Directorate of Training and Technical Education for approval and is expected to be obtained.

In addition to above three Post-graduate courses, there has been great pressure as for the admission to all BFA/MFA Courses is concerned. All our graduates have been finding suitable jobs and there is need for more. The Courses Committee has recommended and proposed to start a new Course in Applied Design at the BFA level with an intake capacity of 25 students. This course also could not be started the 9th Five Year Plan due to non-receipt of approval from the Competent Authority. However, the University of Delhi has already approved the Course.

The infrastructure already built up in the College will support the above-mentioned Courses. However, as per the approved Staffing patter, the following new posts will be required to be created and filled up: -

For the proposed New MFA Courses

(1)	Professors	03 Nos	16400-18400
(2)	Asstt. Professors	03 Nos	12000-18000
(3)	Camera-man	01 No	5500-9000

For the proposed New BFA Courses

(1)	Professors	01 No	16400-18400
(2)	Asstt. Professors	01 Nos	12000-18000
(3)	Lecturers	02Nos	8000-13500

Besides the above, the College also invites Experts, Professionals and Part-time Lecturers to take Special Classes and Lectures so/as to fill-up the gap of leave-vacancies and un-filled posts.

Stipend to all eligible students of Post-Graduate Courses will be paid as per the Rules and conditions approved by the ministry of HRD, Govt. of India, New Delhi.

As the approval to start the above Courses is still awaited, the College has kept only a nominal provision for the current year for 03 months against the approved Outlay.

Approved outlay for the 10th Five Year Plan (2002-2007) is Rs.26.00 lakhs and the proposal is merged with Scheme No. 2 and as and when the new courses shall start; this Scheme shall be separated.