

## ANNEXURES

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## Annexure-I

### The Schedule of the Meetings of the Pay Review Committee

S.No	Place of Meetings	States Covered	Date
1.	Chandigarh	Panjab, Haryana, H P & J & K	20 <sup>th</sup> to 21 <sup>st</sup> May,2008
2	Lucknow	UP, Uttarakhand	2 <sup>nd</sup> to 3 <sup>rd</sup> June,2008
3	Pune	Maharashtra, Goa	5 <sup>th</sup> to 6 <sup>th</sup> June,2008
4	Jadavpur	West Bengal, Orissa, Sikkim	9 <sup>th</sup> to 10 <sup>th</sup> June,2008
5	Guwahati	All North Eastern States, i.e., Tripura, Nagaland, Meghalaya, Assam, Manipur, Mizoram and Arunachal Pradesh	11 <sup>th</sup> to 12 <sup>th</sup> June,2008
6	Bhopal	MP, Chattisgarh	16 <sup>th</sup> to 17 <sup>th</sup> June,2008
7	Ahmedabad	Gujarat, Rajasthan	29 <sup>th</sup> to 30 <sup>th</sup> June,2008
8	Hyderabad	Andhra Pradesh	19 <sup>th</sup> to 20 <sup>th</sup> June,2008
9	Patna	Bihar, Jharkhand	23 <sup>rd</sup> to 24 <sup>th</sup> June,2008
10	Bangalore	Karnataka	25 <sup>th</sup> to 26 <sup>th</sup> June,2008
11	Thiruvananthapuram	Kerala, Tamil Nadu and Pondicherry	27 <sup>th</sup> to 28 <sup>th</sup> June,2008
12	Delhi	Delhi	2 <sup>nd</sup> to 3 <sup>rd</sup> July,2008

**Annexure-II**

**UNIVERSITY GRANTS COMMISSION  
PAY REVIEW COMMITTEE, 2007**

**(QUESTIONNAIRE FOR UNIVERSITIES)**

Basic information as on 31.03.2008 regarding scales of pay, allowances and other related conditions of service of teachers of the Universities for the use of Pay Review Committee constituted to review the scales of pay and services conditions of teachers in Universities and Colleges.

**I. Name of the University** \_\_\_\_\_.

a.. No. of Colleges \_\_\_\_\_ Affiliated UG   
 \_\_\_\_\_ PG

\_\_\_\_\_ Constituent UG   
 \_\_\_\_\_ PG

b. Type of University (Pl. tick the appropriate box)

Central  State  Deemed

c. Source of funding

Govt. funded  Self Financing

d. No. of MOUs signed with various countries/foreign universities for running collaborative programmes.

Countries   
 Universities

(Pl. give details on a separate sheet as per the following format)

S.No.	Name, address and website of the foreign University/Institute	Activities outlines in the MOU and areas of collaboration	Period of MOU	Source of Funding for activities
-------	---	---	---------------	----------------------------------

**II. Details of staff working in University Departments including constituent colleges and Institutes of Correspondence Courses wherever they exist.**

a. University staff details

Designation	Number of		Pay Scale	Effective Date of implementation of the scale
	Sanctioned post	Posts filled up		
Professor				
Professor (CAS)*				
Reader				
Reader (CAS)				
Lecturer (Sel. Grade)				
Lecturer (Sr. Grade)				
Lecturer				
Lecturer (Part Time/Adhoc)				

Lecturer (Contractual Appointment)				
Demonstrator/Tutor				
Librarian				
Deputy Librarian				
Assistant Librarian				
Director of Physical Education				
Deputy Director of Physical Education				
Assistant Director of Physical Education				
Other Academic Staff (pl. Specify)				

**\* Career Advancement Scheme (CAS)**

- b. Is there a policy of the university to give any break in service during vacation period for Part Time/Adhoc Contractual Appointment? (Pl. tick the appropriate box).

Yes  No

- c. Ratio of Professor : Reader : Lecturer
- 

- d. Method of Executive appointments and pay scales:

	<b>Appointment Procedure (Tick the appropriate option)</b>	<b>Pay Scale</b>	<b>Other benefits (Use tick Mark)</b>
Vice-Chancellor	1. On the recommendation of search committee. a. Yes b. No  2. Whether UGC nominee is a member of search committee. a. Yes b. No  3. Who is the appointing authority. a. Central/State Govt. b. Governor/Visitor c. President of the Society d. Any other (pl. mention)		1. Free furnished Accommodation  2. Vehicle 3. Telephone 4. Entertainment allowance 5. Personal Staff 6. Any other facilities (Pl. mention)
Pro-Vice-Chancellor	1. On the recommendation of search committee. a. Yes b. No  2. By the Vice-Chancellor 3. By the Chancellor 4. Any other (Pl. mention)		1. Free furnished Accommodation  2. Vehicle 3. Telephone 4. Entertainment Allowance 5. Personal Staff 6. Any other facilities (Pl. mention)

### III. Faculty Recruitment

- a. Please state whether minimum qualifications for various teaching posts as notified by the UGC from time to time have been adhered to.

Yes  No

If yes, since when?

If the answer is no, to any of the above please state variations and reasons thereof.

<b>Designation</b>	<b>Yes/No</b>	<b>Remarks(variations and reasons)</b>	<b>Date</b>
Lecturer/Reader/Professor			

Librarian/Dy. Librarian/Asstt. Librarian/DPE/Dy.DPE/Asstt.DPE			
Demonstrator/Tutor			

b. Procedure for appointment being followed (Please tick mark wherever applicable).

Category	As per the provisions laid down by UGC	Any other #
Professor		
Professor (CAS)		
Reader		
Reader (CAS)		
Lecturer (Sel. Grade)		
Lecturer (Sr. Grade)		
Lecturer		
Librarian		
Deputy Librarian		
Assistant Librarian		
Director of Physical Education		
Dy. Director of Physical Education		
Assistant Director of Physical Education		

# If the answer is “**Any Other**” to any of the above question in that case please state variations and reasons. Wherever there is a departure from the procedure laid down by the UGC. Please indicate the authority which approved such departure from the procedure laid down by the UGC.

c. How does the University appoint contractual/part-time teachers?

- |  |                          |
|--|--------------------------|
| (i) Duly constituted a selection committee | <input type="checkbox"/> |
| (ii) Directly by the Vice-Chancellor       | <input type="checkbox"/> |
| (iii) Any other (Pl. mention)              | <input type="checkbox"/> |

d. Whether performance appraisal of teachers as prescribed by the UGC is maintained and reviewed?

Yes  No

e. Whether merit promotion scheme is still prevalent?

Yes  No

f. Whether any equivalent examination to NET duly accredited by the UGC has been adopted?

Yes  No

- g. Whether recruitment of Lecturers is done in accordance with NET or the duly accredited examination?

Yes

No

#### IV. Outwards mobility of Teachers:

1. In your University how many teachers (fully paid by Government) have left in the past five years to join different jobs?

Destination	Number	%to total teachers	Reasons for leaving
Any other university/college/education institutions			
Public sector other than education			
Private Sector			
Others			
Total			

- Code for Reasons:
- i) Promotion (Code 1)
  - ii) Better/Higher starting salary (Code 2)
  - iii) Better Career/ Promotion Prospects (Code 3)
  - iv) More Attractive Perks (Code 4)
  - v) Others (Specify ..... ) (Code 5)

2. From amongst the following disciplines which discipline experiences the highest exodus of teachers from your university. Give your ranking for the highest 1 and down the line 2,3,4, .....

Faculty	Ranking
Arts	
Science	
Commerce/Management	
Education	
Engineering/Technology	
Medicine	
Agriculture	
Veterinary Science	
Law	
Others	

3. Which level experiences the highest outward mobility of teachers from your University?

Professor

Reader

Lecturer

4. Has your university taken measures to retain the talent?

Yes   
 No

5. If so, what, in your opinion, measures do you suggest for retaining the faculty.

- A.
- B.
- C.
- D.

**V. Allowances and Benefits (Indicate whether at par with Central Government Rules or State Government Rules or neither of the two)**

a. **Allowances:** (Pl. tick the appropriate option)

Allowances	Central	State	Time Lag (in years)
DA/Additional DA			
House Rent Allowance			
City Compensatory Allowance			
Hill Allowance (if applicable)			
Transport Allowance			
Other Allowances, if any (Please specify). i) ii) iii)			

b. **Benefits:**

1. Medical Facilities (Please tick mark against category available).

- (i) Contributory or Non-Contributory
- (ii) CGHS
- (iii) Reimbursement
- (iv) Any other
- (v) available

2. Leave Travel Concession: whether available?

Yes  No

3. Residential Accommodation

Yes  No

4. Percentage of staff provided with residential accommodation.

Staff	Percentage of staff provided with residential accommodation	Average waiting period (in months)
Professor		
Readers		
Lecturer		
Librarian and Sports personnel		

5. Leave:

Type of Leave	Admissible No. of Days Per Annum/Academic Year	
	Teachers	Librarians and sports personnel
Casual Leave (CL)		
Earned Leave (EL)		
Extra Ordinary Leave (EOL)		
Half Pay Leave		
Medical Leave (Full Pay)		
Medical Leave (Half Pay)		
Maternity leave		
Detention Leave (Leave in lieu of vacation)		
Encashment Leave during service (Earned Leave)		
Encashment Leave during service (Detention Leave)		
Study Leave		
Sabbatical Leave		
Academic Leave		
Duty/Deputation Leave		
Any other (Please specify).		

6. Other benefits (Advances & Loans).

Whether following advances/loans are admissible. (Pl. tick)

	Yes	No
i. House Building advance	<input type="checkbox"/>	<input type="checkbox"/>
ii. Conveyance Advance	<input type="checkbox"/>	<input type="checkbox"/>
iii. Computer Advance	<input type="checkbox"/>	<input type="checkbox"/>
iv. Any other advance (Pl. specify)		

7. Provision for attending Conferences in India & Abroad.

i. Total expenditure incurred on attending conferences by teachers in 2006-07.

a. In India. Rs.

b. In Abroad Rs.

ii. Number of teachers who attended Conferences in 2006-07.

a. In India

b. In Abroad

(Please attach norms on the subject).

iii. Number of Conferences/Seminars/Workshops organized by the University during 2006-07.

	Out of University Fund	Other Sources (Pl. Specify)
International		
National		
State		
Total		

8. Superannuation Benefits:

a. Age of Superannuation.

b. Is there a provision for re-employment?

Yes  No

If yes, then

i. Annual average percentage of superannuating teachers getting reemployment in the last 5 years.

ii. Professors Readers Lecturers Others (Pl. Specify)

iii. Average duration of re-employment (in years).

Provision for Voluntary Retirement.

Yes  No

d. Contributory Provident Fund

Yes  No

e. General Provident Fund

Yes  No

If no, Year of phasing out.

f. Pension Scheme/Family Pension Scheme.

Yes  No

g. Gratuity

Yes  No

h. Encashment of Leave on Retirement.

Yes  No

i. Group Insurance Scheme.

Yes  No

j. Whether provision exists for transferring services/accepting services rendered elsewhere for pensionary benefits:

i. Within the State

Yes  No

ii. Outside the State

Yes  No

9. Provision for professional paid consultancy/expert assignments.

Yes  No

(If yes, please indicate the maximum number of days the University allows consultancy and the principle of sharing honorarium with the University).

No. of Days/Year/Semester % share given to University



VI. (i) Actual Workload in hours/week for different categories of teachers.

Category	Hours per week			
	Teaching	Tutorial/Practical	Research	Others
Professor				
Reader				
Lecturer				

The number of days, the University is working per week

(ii) Number of actual teaching days (excluding examination and preparation days) in last three years.

Year	No. of Days
2004-05	
2005-06	
2006-07	

## VII. Academic Standards

### 1. Orientation/Refresher Courses

a. Whether UGC norms for attendance of Orientation/Refresher Courses for Career Advancement have been incorporated in the University Rules.

Yes  No

b. Number of Lecturers who have gone through the Orientation Courses.

Year	No.
2004-05	
2005-06	
2006-07	

c. Number of Lecturers who have gone through Refresher Courses.

Category	Number of Refresher Courses Attended			
	0	1	2	2+
Lecturers				
Lecturers (Sr. Scale)				
Lecturers (Sel. Grade)				

## 2. Curriculum Development

i. Whether the UGC CDC Reports were taken into account while framing the curricula.

Yes  No

If yes, then percentage and number of subjects in which syllabi has been revised so far during the last 3 years.

No. of Subjects

Percentage of Subjects

ii. Percentage and No. of subjects in which the syllabi was revised in the last 3 years as per Curriculum Development Committee recommendations.

No. of Subjects

Percentage of Subjects

iii. Interval at which revision of curriculum and syllabi is taken up.

	Years			
	0-3	3-5	5-10	Above 10
No. of Departments				

## 3. Distinction/Awards

i. Special Assistance and other Programmes ----- (CAS, DSA, DRS, COSIST etc.) identified by the UGC in the University during the last 5 years.

	No. of Departments	% of Departments
SAP(CAS, DSA, DRS)		
COSIST		

ii. Distinction/Awards (national/international)/Fellowship of National Academics earned by the teachers during the last five years.

	No. of teachers
International	
National	
State	

**4. Research Activities/output**

1. No. of Teachers who possess

M.Phil degree	<input type="text"/>
Ph.D.degree	<input type="text"/>

2. No. of teachers who have obtained M.Phil/Ph.D. degree during last five years.

M.Phil degree	<input type="text"/>
Ph.D.degree	<input type="text"/>

3. No. of M.Phil/Ph.Ds enrolled and produced in last 5 years.

	Enrolled	Produced
M.Phil	<input type="text"/>	<input type="text"/>
Ph.D.	<input type="text"/>	<input type="text"/>

4. No. of publications produced by the Teachers during last five years:

a. Text Books (other than course books)	<input type="text"/>
b. Anthologies & edited works	<input type="text"/>
c. Monographs	<input type="text"/>
d. Whether University publishes any journal	
Yes	<input type="text"/>
No	<input type="text"/>

If yes, give details.

e. Research Papers.

i. In national Journals	<input type="text"/>
ii. In International Journals	<input type="text"/>
f. Number of Minor/Major Projects	<input type="text"/>

**5. Financial Statement**

Financial assistance received from various agencies by way of grants, donations, student fees, consultancy services and research projects and the expenditure incurred during the last five years. (please specify details).



## 6. Examinations

i. Has the Semester System been introduced?

Yes  No

If yes, please indicate date of introduction?

Level	Yes/No	Date
UG Level		
PG Level		
Both (UG and PG)		
None		

ii. Has Internal/Continuous Assessment been introduced?

Level	Yes/No	Date
UG Level		
PG Level		
Both (UG and PG)		
None		

iii. Has the grading system been adopted?

Yes  No

iv. Has the University adopted Credit System?

Yes  No

If yes, whether credit transfer allowed?

Yes  No

## 7. Enrolment

Total enrolment in University in the last five years.

Category	Year				
	2002-03	2003-04	2004-05	2005-06	2006-07
UG Level					
PG Level					
Regular					
External/Non-Collegiate/Private					
Distance Education					
Drop out Rate at UG Level #					
Drop out Rate at PG Level #					

# Drop out rate would be the difference between enrolment in first year and appearance in exam in the final year.

i. Whether the University Act has provision to grant autonomy to

a. Colleges.

Yes  No

b. University Departments

Yes  No

If yes, the number of Colleges/Departments granted autonomy.

Colleges	University Departments
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**VIII. Distance Education Courses**

i. Whether University offers courses through distance education?

Yes  No

ii. Are the courses approved by DEC?

Yes  No

Kindly furnish other relevant details which has not been incorporated in the questionnaire but are of significance and as such reflect on the merit of the University.

**General Questions:**

**I. Levels of hierarchy and promotions:**

Labour market differentiation in the present phase of development is very high. The teachers are considered as an organic intellectual of society in spite of individual differences. This calls for less hierarchy and differentiation among teachers. Given the present trend of differentiation in the labour market, how should the future academics be shaped?

Q.1 Presently, there is a three-tier system in academic profession – Lecturer, Reader and Professor. Should the three tier hierarchical system be continued?

Yes  No

Q.2. If no, should there be less than three tier hierarchy or more than three tier hierarchy.

Less  More

Give your views with justification.

Q.3. Should there be a greater differentiation at each of the following levels in terms of academic qualifications, experience, etc. as well as towards pay package:

<u>Academic Qualifications</u>		<u>Experience</u>		<u>Pay Package</u>	
Yes	No	Yes	No	Yes	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lecturer	Yes	<input type="text"/>	No	<input type="text"/>
Reader	Yes	<input type="text"/>	No	<input type="text"/>
Professor	Yes	<input type="text"/>	No	<input type="text"/>

Q.4. Should the pay packages at all three level of academic position be linked with in merit, performance and achievements of teachers?

If yes, give the details with justification.

Q5. Do you favour a single running scale for all College and University teachers?  
If yes, what mechanism needs to be evolved and adopted to recognize and reward teachers with extra merit?

**II. Career Advancement Scheme (CAS) :**

Q6. Presently, there is a system of Career Advancement Scheme (CAS) for promotion to the post of Reader or to that of Professor. Has the scheme, in your views, functioned satisfactorily?

Yes	<input type="text"/>	No	<input type="text"/>
-----	----------------------	----	----------------------

If no, what are your views and suggestions to improve the position of promotion under this scheme.

Q.7 In case you think CAS has lost its appeal/relevance in the contemporary context, what, in your view, is the alternative to the CAS? Give a detailed suggestion in as much as objective terms as possible.

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**III. Attracting Talent at Initial Level of Recruitment:**

After having obtained a Graduate / Post Graduate degree, students are generally getting attracted and are looking out for jobs in the private sector owing to the availability of attractive pay packages. Thus, over the years, our ability to attract/retain meritorious and talented people to the education sector has been dwindling and this poses the most formidable challenge to higher education in India. If the present trends continue, the shortage of meritorious and brilliant young scholars in higher education would get



magnified with consequences that would be frightening and counter-productive for the future growth of the Indian polity and society.

Q.8. There are various problems relating to the flight of brilliant young graduates into non-education sector, mostly in private sector. What are the ways of attracting and retaining them in the education sector?

- (i) By offering attractive scholarship during Ph.D. for selected talents
- (ii) By offering higher basic as starting salary.
- (iii) By offering higher perks and facilities.

Tick mark any one alternative suggestion:

(i) only  (i) and (ii) only  (i) and (ii) only

(i) and (iii) only  (ii) only  (iii) only

(i), (ii) and (iii)  None of the above

Q.9. What are your specific suggestions to attract talent at the initial level of recruitment?

- A.
- B.
- C.
- D.

Q.10 Generally, education is not to be taken as an activity of profit. How should the flight of human resources from education to a profitable private sector be checked which may have much higher capacity/readiness to pay? Tick any one of the following:

(i) By offering competitive salary only

(ii) By offering not so high salary but better housing and other facilities such as campus life, schooling facilities for children etc. and also compensating with high prestige, rewards, autonomy to work, providing grants for attending workshops/seminars.

(iii) By a combination of (i) or (ii)

**IV. Principle of Pay Fixation:**

Q.11. In the past, there was an attempt to fix pay of teachers by maintaining some parity with government officers. Now, under globalization, the trend is changing and talents of the university sector join the corporate sector in a big way. Within the university system around the globe, an attempt is made to link the salary with the performance and academic reforms. In the light of above, what should be the principle of pay fixation? (Please tick mark any one).

- Pay linked to maintain parity with the corporate sector
- Pay linked to maintain parity with central government officer
- Pay linked to performance
- Pay linked to academic reforms
- Any other criterion on (pl. spell out)

Q.12. Which among the following academic performance of teachers be considered as criteria for incentivising a teacher in terms of increment benefits? (Tick mark one or more than one)

- i. Research article in international/national referred journal
- Book published by teacher
- iii. Patent award to a teacher
- iv. Titles/award/membership of reputed national/international body
- v. Any other (mention)
- vi. None

Q.13. Should increment accrue automatically every year?

- Yes
- No

Q.14. Should increment benefit be reviewed at a regular interval? (say at interval of 3/5 years)

- Yes
- No

**V. Parity of the scale of pay of Professors:**

Q.15. The basic salary of Professor at entry level is Rs 16,400/- while that of Joint Secretary, Government of India is Rs.18,400/- and that of Additional Secretary, Govt. of India is Rs.22,000/-.

(i) Should the parity of Professor's scale be maintained with the pay scale of Joint Secretary?

Yes  No

(ii) Should parity be maintained with the Additional Secretary, Government of India pay scale?

Yes  No

(iii) Should the scale of pay of Professor be determined independent of the above two scales?

Yes  No

Q.16. Should there be two pay scales for Professor? Allowing for a superior pay scale equivalent to the Secretary to Government of India for select few (upto a maximum of 10% of total professors). They may be designated as National Professors whose selection procedures may be determined by the UGC.

Two pay scales for Professor Yes

#### VI. Institutional Autonomy of the Universities:

Q.17. Should there be institutional autonomy to government or aided universities to pay select Professors salary higher than the one offered by UGC scheme upto a maximum specified limit. (Say, in case of attracting foreign scholars or Indian scholars working abroad).

Yes  No

Q.18. Should every University follow the norm for Consultancy assignment of teachers as prescribed by UGC?

Yes  No

Q.19. If no, should University have autonomy to frame the norm for consultancy assignment of teachers according to the requirements of incentives as well as the academic capacity of teachers?

Yes  No

#### VII. University Vs College

Q.20. Anticipating the more daunting challenges of teaching and research in higher education, especially in the context of globalization of higher education, is there a case for differentiating **university faculty from college faculty**, in terms of the following:

a) Norms for recruitment Yes

b)	Pay Scale+ allowances +perks	Yes	No	<input type="checkbox"/>	<input type="checkbox"/>
c)	Strong incentives for doing research	Yes		<input type="checkbox"/>	<input type="checkbox"/>
d)	Criteria to evaluate performances	Yes		<input type="checkbox"/>	<input type="checkbox"/>
e)	Incentives for improving educational accomplishment	Yes		<input type="checkbox"/>	<input type="checkbox"/>
f)	Prospects/Channels available to College faculty to move to universities	Yes	No	<input type="checkbox"/>	<input type="checkbox"/>
g)	Others (pl. specify)	Yes	No	<input type="checkbox"/>	<input type="checkbox"/>

If you agree with differentiation for some of the above parameters, please give your reasons for the same:

- a) \_\_\_\_\_  
\_\_\_\_\_
- b) \_\_\_\_\_  
\_\_\_\_\_
- c) \_\_\_\_\_  
\_\_\_\_\_
- d) \_\_\_\_\_  
\_\_\_\_\_
- e) \_\_\_\_\_  
\_\_\_\_\_
- f) \_\_\_\_\_  
\_\_\_\_\_
- g) \_\_\_\_\_  
\_\_\_\_\_

Q.21. Which among the following should be the academic reform conditions for pay revision? (Tick mark one or more than one)?

- i. Credit system
- ii. Semester system
- iii. Continuous evaluation
- iv. Curriculum revision
- v. None of the above



UNIVERSITY GRANTS COMMISSION  
PAY REVIEW COMMITTEE, 2007

(QUESTIONNAIRE FOR COLLEGES)

Basic information as on 31.03.2008 regarding scales of pay, allowances and other related conditions of service of teachers of the Colleges for the use of Pay Review Committee constituted to review the scales of pay and services conditions of teachers in Universities and Colleges.

- I. i. Name of the College \_\_\_\_\_
- ii. Whether Govt. funded or Self-financing  
Govt. Funded  Self-Financing
- iii. Date of Establishment
- iv. Name of the University to which affiliated \_\_\_\_\_  
and the date of affiliation. \_\_\_\_\_
- v. Status of the College: (Please tick mark)  
Govt.  Non-Govt.   
Aided  Non-Aided   
UG  PG
- vi. Whether College is running Self-Financing Courses. If yes, the number of such courses, at –  
UG level  PG level
- vii. Whether College is autonomous or not ? Yes
- vii. If yes, whether constituent or affiliated  
Constituent  Affiliated
- viii. Faculties existing. (Please tick mark).  
Humanities  Management   
Social Sciences  Engineering   
Commerce  Education   
Science  Any other

II. Details of staff.

Designatio	Number of	Pay Scale	Effective Date	No. of
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<b>n</b>	<b>Sanctioned posts</b>	<b>Post filled up</b>		<b>of implementation of the scale</b>	<b>Contractual Staff/Full time/Part-Time</b>
	Principal*				
	Reader				
	Lecturer				
	Lecturer (Sr. Scale)				
	Lecturer (Sel. Grade)				
	Demonstrator/Tutor (Wherever the post continues to exist)				
	College Librarian (Sel. Grade)				
	College Librarian (Sr. grade)				
	College Librarian				
	College Director of Physical Education (Sel. Grade)				
	College Director of Physical Education (Sr. Scale)				
	College Director of Physical Education				
	Other Academic Staff (Pl. specify)				

- \* If additional allowances/facilities are given please specify. In terms of residential telephone, internet, transport, subscription of journals, newspapers etc. Yes  No

If yes, give detail.

Whether residential accommodation provided?

If yes,

Rent free  with re nt

### III. Recruitment

- i. Please state whether qualifications for various teaching posts as notified by the UGC from time to time have been adhered to

Yes  No

If yes, since when?

If the answer is no, to any of the above please state variations and reasons.

Designation	Yes/No	Remarks(variations and reasons)	Date
Principal			
Lecturer/Reader/Professor			
College Librarian			
College Director of Physical Education			

- ii. Whether two outside experts are included in the Selection Committee for the appointment of Lecturers?

Yes  No

- iii. Whether advance increments are allowed to candidates holding M.Phil/Ph.d. degree at the time of recruitment?

Yes  No

- iv. Whether benefit in counting qualifying service allowed on acquiring higher qualifications viz; M.Phil/Ph.D. at the time of grant of senior scale/selection grade?

Yes  No

- v. Whether Clauses 7.8 and 8.0 of UGC notification, 1998, implemented?

Yes  No

(If the answer is no to any of the above, please state variations and reasons.)

- vi. Procedure for Appointment being followed (Please tick mark wherever applicable).

Category	As laid down by UGC	Any Other #
Principal		
Reader		
Lecturer		
Lecturer (Sr. Scale)		
Lecturer (Sel. Grade)		
College Librarian (Sel. Grade)		
College Librarian (Sr. Grade)		
College Librarian		
College Director of Physical Education (Sel. Grade)		
College Director of Physical Education (Sr. Grade)		
College Director of Physical Education		
Other Academic Staff		

# If the answer is "Any Other" to any of the above questions please state variations and reasons. Wherever there is a departure from the procedure laid down by the UGC. Please indicate the authority which approved it.

- vii. Whether performance appraisal as prescribed by the UGC is maintained and reviewed?

Yes  No

- viii. Probation/Confirmation.

- a. No. of years of probation prescribed for Lecturers.
- b. Whether Lecturers are confirmed after they have attended one Orientation course, as laid down by UGC?

Yes  No

- c. Whether performance appraisal is taken into account for confirmation?

Yes  No

- ix. Whether recruitment of Lecturers is done in accordance with NET or the duly accredited examination?

Yes  No

#### IV. Outwards mobility of Teachers:

1. In your college how many teachers (fully paid by Government) have left in the past five years to join different jobs?

Destination	Number	%to total teachers	Reasons for leaving
Any other university/college/education institutions.			
Public sector other than education			
Private Sector			
Others			
Total			

- Code for Reasons:
- i) Promotion (Code 1)
  - vi) Better/Higher starting salary (Code 2)
  - vii) Better Career/ Promotion Prospects (Code 3)
  - viii) More Attractive Perks (Code 4)
  - ix) Others (Specify ..... ) (Code 5)

2. From amongst the following disciplines which discipline experiences the highest exodus of teachers from your college. Give your ranking for the highest 1 and down the line 2,3,4, .....

Faculty	Ranking
Arts	
Science	
Commerce/Management	
Education	
Engineering/Technology	
Medicine	
Agriculture	
Veterinary Science	
Law	
Others	

3. Which level experiences the highest outward mobility of teachers from your College?

Reader

Lecturer

4. Has your university taken measures to retain the talent?

Yes

No

5. If so, what, in your opinion, measures do you suggest for retaining the faculty.

- A.
- B.
- C.
- D.

**V. PAY, ALLOWANCES AND BENEFITS (indicate whether at par with Central Government Rules or State Government Rules)**

**(A). Pay & Allowances:**

Pay	UGC	State Govt.	College	Any other
Pay Scales				

Allowances	Central	State
DA/Addl.DA		
House Rent Allowance		
City Compensatory Allowance		
Hill Allowance (if applicable)		
Transport Allowance		

Whether 50% of DA is merged with Basic Pay?

Yes  No

Whether stagnation increment given?

Yes  No

Mode of payment of salary

Direct payment by Govt.

Payment by Institution from Grant-in-Aid

**(B). Benefits:**

1. Medical Facilities (Please tick mark against category available).

(i) Contributory or Non-Contributory	<input type="checkbox"/>
(ii) CGHS	<input type="checkbox"/>
(ii) Reimbursement	<input type="checkbox"/>
(iii) Any other	<input type="checkbox"/>
(iv) Not available	<input type="checkbox"/>

2. Leave Travel Concession: whether available?

Yes  No

If yes, after how many years admissible and in a block of how many years.

3. Residential Accommodation:  
Percentage of staff (taken together for the categories of the staff specified at Item (II) of this questionnaire) provided with residential accommodation.

4. Leave:

Type of Leave	Admissible No. of Days Per Annum/academic yr.	
	Teachers	Librarians and sports personnel
Casual Leave (CL)		
Earned Leave (EL)		
Extra Ordinary Leave (EOL)		
Half Pay Leave		
Medical Leave (Full Pay)		
Medical Leave (Half Pay)		
Maternity leave		
Detention Leave (Leave in lieu of vacation)		
Encashment Leave during service (Earned Leave)		
Encashment Leave during service (Detention Leave)		
Study Leave		
Sabbatical Leave		
Academic Leave		
Duty/Deputation Leave		
Any other (Please specify).		

No. of teachers provided with Teacher Fellowship for M.Phil/Ph.D. under FIP Scheme of UGC.

5. Other benefits (Advances & Loans).  
Whether following advances/loans are admissible.

	Yes	No
i. House Building advance	<input type="checkbox"/>	<input type="checkbox"/>
ii. Conveyance Advance	<input type="checkbox"/>	<input type="checkbox"/>
ii. Any other advance (Pl. specify)	<input type="checkbox"/>	<input type="checkbox"/>

6. Provision for attending Conferences in India & Abroad.

- i. Expenditure incurred on attending conferences by teachers in last three years.

	2006-2007	2005-06	2004-05
In India			
Abroad			

- ii. Number of Conferences/Seminars/Workshops held in the last three years in the college.

- a. In India.
- b. Abroad

(Please attach norms on the subject).

- iii. Whether College has any provision for attending conferences in India or Abroad?

Yes  No

- iv. Number of teachers who attended/presented papers in Conferences in last three years in reverse chronological order.

	Attended Conference		Presented Paper	
	In India	In Abroad	In India	In Abroad
2006-07				
2005-06				
2004-05				

(Please attach norms for sanctioning assistance for attending conferences).

7. Superannuation Benefits:

- a. Age of Superannuation

- b. Is there a provision for re-employment?

Yes  No

If yes.

- i. Norms for re-employment

- ii. Percentage of superannuating teachers getting re-employment

- iii. Average/ Duration of re-employment

- c. Provision for Voluntary Retirement if any, give details.





Yes  No

- d. Number of Lecturers:
- i. who were required to attend the Orientation/Refresher Programme.
- ii. who have gone through the Orientation/Refresher Course, so far.
- e. Number of Lecturers who have gone through the Refresher Courses.

### Number of Refresher Courses Attended

Category	Number of Refresher Courses Attended			
	0	1	2	2+
Lecturers				
Lecturers (Sr. Scale)				

### 2. Distinction/Awards.

Number of Distinction/Awards earned by the faculty.

### 3. Enrolment

Total enrolment in College in last five years.

Category	Year				
	2002-03	2003-04	2004-05	2005-06	2006-07
UG Level					
PG Level					
Regular					
External/Non-Collegiate/Private/Add-on-Courses					
Distance Education (Whether approved by DEC.)					
Enrolment in aided/unaided streams					
Drop out Rate at UG Level #					
Drop out Rate at PG Level #					

Has the Minimum Examination Reform Programme of the UGC has adopted by the College?

Yes  No

- i. Has the Semester System been introduced?

Yes  No

If yes, please indicate the date of introduction

Level	Yes/No	Date
UG Level		
PG Level		
Both (UG and PG)		
None		

- ii. Has Internal/Continuous Assessment/Annual Evaluation been introduced?

Level	Yes/No
UG Level	
PG Level	
Both (UG and PG)	
None	

- iii. Has the grading system been adopted?

Yes  No

(If the answer to any of the above is no, the reasons may please be indicated).

#### 4. Research Activities

1. No. of Teachers who possess

M.Phil degree   
Ph.D. degree

2. No. of teachers who have obtained M.Phil/Ph.D. degree during last five years.

M.Phil degree   
Ph.D. degree

2. No. of M.Phil/Ph.Ds enrolled and produced in last 5 years.

	Enrolled	Produced
M.Phil		
Ph.D.		

4. No. of publications produced by the teachers:

- a. Text Books (other than course books)   
b. Anthologies & edited works

c. Monographs

d. Whether college has any publication of journals.

Yes  No

If yes, give details.

e. Research papers.

i. In National Journals

ii. In International Journals

f. Number of Minor/Major Projects

### 5. Examinations (for autonomous colleges only)

Has the Minimum Examination Reform Programme of the UGC has adopted by the College?

Yes  No

i. Has the Semester System been introduced?

Yes  No

If yes, please indicate the date of introduction.

Level	Yes/No	Date
UG Level		
PG Level		
Both (UG and PG)		
None		

ii. Has Internal/Continuous Assessment/Annual Evaluation been introduced?

Level	Yes/No
UG Level	
PG Level	
Both (UG and PG)	
None	

iii. Has the grading system been adopted?

Yes  No

(If the answer to any of the above is no, the reasons may please be indicated).

### 6. Curriculum Development (for autonomous Colleges only)

- i. Whether the College has adopted the recommendations of the Curriculum Development Council (CDC).

Yes  No

If yes, the number of subjects in which syllabi has been revised so far.

- ii. No. of subjects in which the syllabi was revised in the last 3 years as per Curriculum Development Centre recommendations.

- iii. Interval at which revision of curriculum and syllabi is taken up.

- iv. Innovative teaching methods used by the College

- v. Extension activities

NCC  
 NSS  
 Social Service Activities

(Details to be submitted).

### VIII. Grants Received

Source		Year				
		2002-03	2003-04	2004-05	2005-06	2006-07
Grants received	UGC					
	State Govt.					
	Others					

	2002-03	2003-04	2004-05	2005-06	2006-07
Total Expenditure Incurred					

Any additional relevant information not covered in this questionnaire (please state).

**General Questions:**

**I. Levels of hierarchy and promotions:**

Labour market differentiation in the present phase of development is very high. The teachers are considered as an organic intellectual of society in spite of individual differences. This calls for less hierarchy and differentiation among teachers. Given the present trend of differentiation in the labour market, how should the future academics be shaped?

Q.1 Presently, there is a three-tier system in academic profession – Lecturer, Reader and Professor. Should the three tier hierarchical system be continued?

Yes  No

Q.2. If no, should there be less than three tier hierarchy or more than three tier hierarchy.

Less  More

Give your views with justification.

Q.3. Should there be a greater differentiation at each of the following levels in terms of academic qualifications, experience, etc. as well as towards pay package:

<u>Academic Qualifications</u>		<u>Experience</u>		<u>Pay Package</u>	
Yes	No	Yes	No	Yes	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lecturer	Yes <input type="checkbox"/>	No <input type="checkbox"/>			
Reader	Yes <input type="checkbox"/>	No <input type="checkbox"/>			
Professor	Yes <input type="checkbox"/>	No <input type="checkbox"/>			

Q.4. Should the pay packages at all three levels of academic position be linked with in terms of merit, performance and achievements of teachers?

If yes, give the details with justification.

Q5. Do you favour a single running scale for all College and University teachers?



If yes, what mechanism needs to be adopted to recognize and reward teachers with extra merit?

**II. Career Advancement Scheme (CAS) :**

Q.6. Presently, there is a system of Career Advancement Scheme (CAS) for promotion to the post of Reader or to that of Professor. Has the scheme, in your views, functioned satisfactorily?

Yes  No

If no, what are your views and suggestions to improve the position of promotion under this scheme.

Q.7 In case you think CAS has lost its appeal/relevance in the contemporary context, what, in your view, is the alternative to the CAS? Give a detailed suggestion in as much as objective terms as possible.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**III. Attracting Talent at Initial Level of Recruitment:**

After having obtained a Graduate / Post Graduate degree, students are generally getting attracted and are looking out for jobs in the private sector owing to the availability of attractive pay packages. Thus, over the years, our ability to attract/retain meritorious and talented people to the education sector has been dwindling and this poses the most formidable challenge to higher education in India. If the present trends continue, the shortage of meritorious and brilliant young scholars in higher education would get magnified with consequences that would be frightening and counter-productive for the future growth of the Indian polity and society.

Q.8. There are various problems relating to the flight of brilliant young graduates into non-education sector, mostly in private sector. What are the ways of attracting and retaining them in the education sector?

- (i) By offering attractive scholarship during Ph.D. for selected talents
- (ii) By offering higher basic as starting salary.
- (iv) By offering higher perks and facilities.

Tick mark any one alternative suggestion:

(i) only      (i)  only      (i) and (ii)

(i) and (iii) only       (ii) only       only

(i), (ii) and (iii)  of the above

Q.9. What are your specific suggestions to attract talent at the initial level of recruitment?

- A.
- B.
- C.
- D.

Q.10 Generally, education is not to be taken as an activity of profit. How should the flight of human resources from education to a profitable private sector be checked which may have much higher capacity/readiness to pay? Tick any one of the following:

(v) By offering competitive salary only

(ii) By offering not so high salary but better housing and other facilities such as campus life, schooling facilities for children etc. and also compensating with high prestige, rewards, autonomy to work, providing grants for attending workshops/seminars.

(vi) By a combination of (i) or (ii)

#### IV. Principle of Pay Fixation:

Q.11. In the past, there was an attempt to fix pay of teachers by maintaining some parity with government officers. Now, under globalization, the trend is changing and talents of the university sector join the corporate sector in a big way. Within the university system around the globe, an attempt is made to link the salary with the performance and academic reforms. In the light of above, what should be the principle of pay fixation? (Please tick mark any one).

Pay linked to maintain parity with the corporate sector

Pay linked to maintain parity with central government officer

Pay linked to performance

Pay linked to academic reforms

Any other criterion on (pl. spell out)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Q.12. Which among the following academic performance of teachers be considered as criteria for incentivising a teacher in terms of increment benefits? (Tick mark one or more than one)

i. Research article in international/national referred journal

Book published by teacher

iii. Patent award to a teacher

iv. Titles/award/membership of reputed national/international body

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

v. Any other (mention)

vi. None

Q.13. Should increment accrue automatically every year?

Yes

No

Q.14. Should increment benefit be reviewed at a regular interval? (say at interval of 3/5 years)

Yes

No

**V. Parity of the scale of pay of Professors:**

Q.15. The basic salary of Professor at entry level is Rs 16,400/- while that of Joint Secretary, Government of India is Rs.18,400/- and that of Additional Secretary, Govt. of India is Rs.22,000/-.

(i) Should the parity of Professor's scale be maintained with the pay scale of Joint Secretary?

Yes  No

(ii) Should parity be maintained with the Additional Secretary, Government of India pay scale?

Yes  No

(iii) Should the scale of pay of Professor be determined independent of the above two scales?

Yes  No

Q.16. Should there be two pay scales for Professor? Allowing for a superior pay scale equivalent to the Secretary to Government of India for select few (upto a maximum of 10% of total professors). They may be designated as National Professors whose selection procedures may be determined by the UGC.

Two pay scales for Professor Yes

**VI. Institutional Autonomy of the Universities:**

Q.17. Should there be institutional autonomy to government or aided universities to pay select Professors salary higher than the one offered by UGC scheme upto a maximum specified limit. (Say, in case of attracting foreign scholars or Indian scholars working abroad).

Yes  No

Q.18. Should every University follow the norm for Consultancy assignment of teachers as prescribed by UGC?

Yes  No

Q.19. If no, should University have autonomy to frame the norm for consultancy assignment of teachers according to the requirements of incentives as well as the academic capacity of teachers?

Yes  No

### VII. University Vs College

Q.20. Anticipating the more daunting challenges of teaching and research in higher education, especially in the context of globalization of higher education, is there a case for differentiating **university faculty from college faculty**, in terms of the following:

- |  |     |                          |    |                          |
|--|-----|--------------------------|----|--------------------------|
| a) Norms for recruitment   | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| b) Pay Scale+allowances+perks  | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Strong incentives for doing research                                       | Yes |                          | No |                          |
| d) Criteria to evaluate performances                                       | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| e) Incentives for improving educational accomplishment                     | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| f) Prospects/Channels available to College faculty to move to universities | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| g) Others (pl. specify)  | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

If you agree with differentiation for some of the above parameters, please give your reasons for the same:

a) \_\_\_\_\_

\_\_\_\_\_

b) \_\_\_\_\_

\_\_\_\_\_

c) \_\_\_\_\_

\_\_\_\_\_

d) \_\_\_\_\_

\_\_\_\_\_

e) \_\_\_\_\_

\_\_\_\_\_

f) \_\_\_\_\_

\_\_\_\_\_

g) \_\_\_\_\_

Q.21. Which among the following should be the academic reform conditions for pay revision? (Tick mark one or more than one)?

- |                            |                          |
|----------------------------|--------------------------|
| v. Credit system           | <input type="checkbox"/> |
| vi. Semester system        | <input type="checkbox"/> |
| vii. Continuous evaluation | <input type="checkbox"/> |
| viii. Curriculum revision  | <input type="checkbox"/> |
| ix. None of the above      | <input type="checkbox"/> |

## Annexure-IV

### Various issues identified on which comments were elicited from eminent educationists.

1. In what manner pay scales and Career Advancement in universities and colleges be made comparable with All India services/private sector in order to attract and retain the academic personnel in the teaching profession, in the changed scenario.
2. Given the differences in job requirements and responsibilities, and the fact that universities may not be able to match the compensation levels in the other sectors, what other incentives and perquisites can be considered in order to attract and retain right type of talent in the teaching profession and motives them to give their best.
3. There is a feeling that accountability as it obtains now is a weak link in the academic chain. Ensuring an effective system of accountability requires a well defined objective criteria. What are your suggestions to achieve this objective?
4. How should a pay scale be structured? What should be the ratio between minimum and maximum of a scale?
5. What should be the ratio between the minimum of a Lecturer's grade to the maximum of a Professor's grade?
6. Should stagnation be countered by having long integrated pay scales or through grant of stagnation increments? If by any other method, please give your suggestions.
7. It has been suggested that the emoluments of university teachers and pensioners, or at least those elements thereof which are compensatory in nature like DA, CCA, HRA, etc. should be exempted from income tax. What are your suggestions?
8. What should be the reasons percentage satisfaction in provision of institutional residential accommodation?
9. Should housing be made available by (i) capital outlay on Institutional housing, (ii) hiring of privately owned flats or (iii) reimbursement of market rents actually paid. Subject to a ceiling.
10. What special facilities like flexible time-schedules, provision for age relaxation, childcare services, early retirement plans, re-entry etc. are necessary to improve the opportunities for employment for women?
11. Do you think the concept of contractual appointment, part-time work, flexible job description, flexi time etc. need to be introduced in the university system to change the environment provide more jobs and impart flexibility to the working conditions of employees?

12. Should there be lateral movement from, university to non-university jobs and vice-versa? If so, in which spheres and what measures you suggest in order to facilitate this.
13. Do you consider the present performance appraisal system adequate? If not, what changes would you suggest to improve the system? How far do you think the student-assessment would help in the process of appraisal?
14. How should recruitment/promotion policies be modified to ensure that seniority, merit and professional qualification get due weightage? Should promotions be time-bound and delinked from availability of posts?
15. Kindly suggest any conditions of service which should be introduced, modified or removed to improve the morale and efficiency of service.

### Illustrative List of Eminent Educationists met by the Pay Review Committee

1. Dr. Krishna Kumar  
Director  
National Council of Educational Research  
& Training (NCERT), New Delhi-110016.  
Tel No. 26519154, 26964712  
  
Represented by  
Prof. D.K. Vaid  
Prof. and Head  
Dept. of Edu. in  
Survey & Data  
Processing, NCERT,  
New Delhi
2. Prof. (Dr.) Jandhyala B.G. Tilak  
Senior Fellow and Head Educational Finance Unit  
NIEPA, 17-B, Sri Aurbindo Marg  
New Delhi-110016.  
Tel No. 26861320, 26853043/ 9868646919
2. Prof. M. Ananda Krishnan  
Chairman  
Madras Institute of Development Studies  
79, Second Main Road  
Gandhinagar  
Adyar, Chennai-600020.  
Tel No. 24411574, 24412589
3. Prof. Mariamma Verghese  
Sr. Educational Consultant  
National Assessment & Accreditation Council  
P.B. No.1075,Rajaji Nagar, Bangalore-560010.  
Tel No. 080-23637368, 23210281 (O )  
Mob: -09341800152
4. Prof. P.N. Srivastava  
Former, Vice-Chancellor,JNU  
House No.163,National Media Centre,  
NH-8, Gurgaon-122002.  
Tel No. 95124-2356188, 9899624668  
e-mail : [pns07@yahoo.com](mailto:pns07@yahoo.com)
5. Prof. Amrik Singh  
2/26, Surpriya Vihar  
New Delhi-110016.  
Tel No. 26510738.

6. Prof. R.P. Bambah  
Former VC, Panjab University  
Flat No. 1275, Sector-19  
Chandigarh-160019.  
Tel NO-2774863
7. Prof. Ashok Ranjan Thakur  
Vice-Chancellor  
West Bengal University of Technology  
BF-142, Sector-1, Salt Lake, Kolkata-700064.  
Tel No. 033-23217578 (R ) 23341909
8. Prof. Romilla Thapar  
Former Professor of History  
House No. 23-B, Maharani Bagh  
New Delhi-110065.
9. Prof. H.P. Dikshit  
Former VC, IGNOU  
Director-General  
School of Good Governance, Policy & Analysis  
C-401, 4<sup>th</sup> Floor, Narwada Bhawan  
59, Arera Hills, Bhopal-4620101.  
M-0942580000002, 0755-2570216, 2570217, 2570218  
e-mail : [hpdsushasan@gmail.com](mailto:hpdsushasan@gmail.com)
10. Prof. Ghanshyam Shah  
Former Professor of Social Science  
Jawaharlal Nehru University  
C/o Miss Neha Shah  
804, Rair Apartments  
Vasana Bus Stop  
Vasana , Ahmedabad-07  
Tel No. 79-26442053 M-9376227469
11. Prof. Deepak Nayyar  
Former VC, Delhi Univ.  
5-B, Friends Colony (West)  
New Delhi-110065.  
M-9810018588, (R ) 26312297
12. Shri M.K. Kaw  
Former Secretary M/HRD  
D31, Pomposh Complex  
Greater Kailash –I  
New Delhi-110048  
M-9810832041  
(R ) 26229711

## Annexure-V

### List of Secretaries to the Govt. of India and other related Institutions met by the Pay Review Committee

1. Dr. Mangala Rai  
Secretary  
DARE  
and Director General  
Indian Council of Agricultural Research  
Krishi Bhavan,  
New Delhi – 110 001
2. Shri R.P. Agrawal  
Secretary (S&HE)  
Ministry of Human Resource  
Development  
Dept. of Secondary and Higher Education  
Shastri Bhawan  
New Delhi-110 001
4. Dr. G. Madhavan Nair  
Secretary  
Ministry of Science and Technology  
Dept. of Space  
3<sup>rd</sup> Floor, Lok Nayak Bhawan  
New Delhi  
Represented by  
Dr. Radhika Ramachandran  
OSD  
Dept. of Space  
3<sup>rd</sup> Floor, Lok Nayak Bhawan  
New Delhi
6. Dr. R.A.Yadav  
Vice-Chairman  
(Acting Chairman)  
All India Council for Technical Education  
7<sup>th</sup> Floor, Chanderlok Building, Janpth,  
New Delhi – 110 001.
7. Major General Dr. P.N. Awasthi  
Secretary  
Dental Council of India  
Aiwan-e-Ghalib marg  
New Delhi – 110 002  
Represented by  
Dr. Mahesh Verma  
Director Principal  
Maulana Azad Institute of  
Dental Sciences  
Govt. of Delhi  
M.A.N. College Campus  
Bahadur Shah Zafar Marg  
New Delhi – 110 002



## Annexure- VI

### STATE FINANCES AND FISCAL SPACE FOR PAY REVISION

**Note Circulated during the Conference of the State Ministers of Higher and Technical Education, during July 23-24, 2008, on behalf of the UGC-appointed Pay Revision Committee for university and college teachers. The Pay Review Committee is deeply obliged to Professor Govinda M. Rao, Director, National Institute of Public Finance and Policy, New Delhi, who spared his valuable time in preparing this note, and discussing the broad trends and issues in state finances with Professor G.K. Chadha, Chairman, Pay Revision Committee.**

The Pay Review Committee hopes this brief note convinces States to think more positively, in their own interest, for sparing adequate resources for higher education. Pay revision is but an inescapable, and most crucial, step towards attracting, and retaining, the talented people to the teaching profession. None of the states can afford to lag behind, any more.

#### Introduction

The Union government is likely to implement the Sixth Pay Commission's recommendation within the next few months. A number of State governments are also likely to implement the pay scales of their employees in line with the Central government. Similarly the University Grants Commission has also appointed its own **Pay Review Committee for university and college teachers**. The critical question that confronts the policy makers is, what would be the consequences of the pay revision? In the case of the States, in particular, the apprehension is, in the prevailing situation, is there sufficient fiscal space for the States to implement the pay revision of the employees and teachers. In other words, what is the carrying capacity of the states for pay revision and to what extent they can bear the additional burden of pay revision without having to compress their developmental outlay and increase in deficits?

The issue is of immense significance, for, it is widely believed that the sharp deterioration in State finances in 1997-98 onwards was mainly due to pay revision. It may be recalled that fiscal deficit in the States relative to GDP increased from 2.7 per cent in 1996-97 to 4.7 per cent in 1999-2000 and revenue deficits increased from 0.85 percent to 2.4 percent during the period. Thus, during the period, not only the volume of fiscal deficit increased sharply but the quality of deficits deteriorated as well; for example, the ratio of revenue deficits which was 26 per cent increased to 59 percent. The States' indebtedness relative to GDP increased from 21 percent in 1995-96 to 30 percent in 2001-02. The expenditures on social and economic services as a ratio of GDP remained constant around 9.5 percent. However, following the pay revision, the unit cost of providing these services witnessed a sharp increase, and accordingly, the allocation to these sectors, in real terms, actually declined.

This note, based on state budget and finance papers, presents recent trends in state finances and projects a cheering view on the carrying capacity of the states for pay revision. It shows that the states are now in a much better position to carry out the pay revision than a decade ago, most ostensibly, because their finances are

in a much better health and are in the upward phase of the cycle when generating additional revenues is much easier than when they are in a trough. Our plea is that there must be a corresponding realization on the part of states that, in this age and time, perhaps more so for the coming times, a lackadaisical approach to the development of higher education sector would keep them away from their dreams of growth acceleration, economic modernization, higher earnings and mitigation of inter-state disparities. Perhaps, the time has arrived for states to compete with one another for strengthening their higher education sectors and not miss the remarkable socio-economic opportunities that an expanding higher education sector, especially in qualitative terms, can bring forth to their populace. The contemporary experiences in many developing economies duly confirm that investing more, and qualitatively better, resources in the higher education sector is tantamount to assuring a better living to future generations. Can any of the Indian states afford to miss such opportunities, and inflict upon itself a backseat in digital accomplishments and knowledge economy? The democratic compulsions would simply not permit it even to think so despairingly!

### **Recent Trend in State Finances**

Recent trends show significant improvements in State finances. For example, between 2001-02 and 2008-09, revenue deficit relative to GDP showed an improvement of over three percentage points, declining from 2.7 percent to a marginal surplus of 0.5 percent. The improvement resulted in reducing the fiscal deficit relative to GDP from 4.2 percent to 2.1 percent during the same period which meant that capital expenditures increased by about one percentage point. The Twelfth Finance Commission's fiscal restructuring plan set the target that by 2008-09, the States taken together should phase out their revenue deficits and should strive to bring their fiscal deficit to 3 percent of GDP. As seen from above, the States have succeeded not only in reaching the targets but in exceeding them.

The analysis of various sources of improvements summarised in Table 1 shows interesting features. During the period from 2001-02 to 2008-09, the revenue deficit relative to GDP was reduced by 3.2 percentage points. Of this, 2.6 percentage points were due to increase in revenues and 0.7 point was from expenditure compression. Within revenues, almost 1.6 percentage points were due to increase in transfers equally distributed between tax devolution and grants. Much of this increase is attributable to the high buoyancy of Central direct taxes.

Own tax revenues of the State governments increased by about one percentage point during the period and a close examination shows that much of the increase is attributable to the reform of the sales tax system – of replacing the cascading type sales tax with the value added tax (VAT) in April 2005. Of course, rationalisation of stamp duties and boom in the real estate market also had its contribution in terms of significant increase in stamp duties as well.

On the expenditure side, the adjustment was only 0.7 percentage point and this is almost entirely attributable to reduction in interest payments mainly due to lower interest rates on states' borrowings. Besides lowering of interest rates due to the debt swap scheme adopted in 2004-05, lower volume of borrowings from the National Small Savings Fund and to some extent, write-off of debt repayment as per





Manipur	10.22	1.72	8.5	4.84	-14.3	19.14
Meghalaya	4.79	1.47	3.32	0.73	-6.14	6.87
Mizoram	21.7	3.61	18.09	13.38	-5.2	18.58
Nagaland	8.09	2.68	5.41	2.46	-6.77	9.23
Sikkim	5.88	14.56	-8.68	-12.58	-17.56	4.98
Tripura	8.45	6.54	1.91	-0.86	-6.35	5.49
Uttarakhand	3.83	3.05	0.78	2.06	-4.74	6.8
<b>Average- All States</b>	<b>5.06</b>	<b>2.77</b>	<b>2.29</b>	<b>3.32</b>	<b>-1.1</b>	<b>4.42</b>

Note: (-) indicates surplus.

steady accumulation of debt have had adverse impact on the interest rates which caused significant increases in their borrowing costs. Many states tried to manage the hardening fiscal situation arising from higher wage costs by taking resort to more expensive small saving loans. Thus, both the volume of debt relative to GSDP and effective interest rates were much higher in the 1990s. Finally, the states' economies were relatively less buoyant and the revenue productivity of the tax system was low. The states' tax revenue as a ratio of GSDP was stagnant.

In contrast, the recent trends have shown sharp increase in Central transfers, a major contributor to that being tax devolution. Thanks to the high buoyancy of income taxes – both corporate and personal, the revenues have shown a 30 per cent increase on average during the last 5 years; the buoyancy of Central transfers is likely to continue in the medium term. Much of the increase has been due to tax administration reform – of instituting the Tax Information Network and therefore, it is not cyclical. Steady increase in transfers will help the pay revision implementation much smoother.

Interestingly, states' own revenues too are likely to increase steadily due to the recent introduction of VAT. Given the buoyancy in the economy and more particularly the property markets, high buoyancy in the revenue from stamps, excise duties on alcoholic products and VAT will continue. Above all, the buoyancy in the economy presents the opportune time for implementing the pay revision.

Third, all the States are enjoying the lower debt burden as well as lower interest rates. The incentive scheme introduced by the 12<sup>th</sup> Finance Commission, of rescheduling the debt based on the passing of Fiscal responsibility Legislations and writing off the repayments of Central loans based on deficit reduction has significantly reduced their outstanding liabilities. The swapping of lower interest rate debt for high cost debt has reduced the effective rate of interest. The states no longer have to amass large volumes of small savings which are costly. Thus, better fiscal management has helped them to compress interest payments as well.

Indeed, the occasion presents opportunities to re-examine the employment in different departments to minimise over-employment in the government. However, even without that, the implementation of pay revision now will not create serious problems to the states in managing their finances, unlike in the late 1990s. In other words, the states have adequate fiscal space to undertake pay revisions and it is highly advisable, as well as expected, to do so when the economy is in the peak of a cycle rather than when the economy is sliding. Perhaps, sparing more resources for the higher education sector may help them thwart the slide, at least the intensity of the slide.

## Annexure- VII

### **SCIENCE EDUCATION IN INDIA**

India has been able to break the shackles of the image of an impoverished society, thanks to the evolution of knowledge –based information and communication technologies as well as successes in defense and satellite technologies. This has created the image of a potential knowledge society for India in the world community and there is indeed a new interest in India as an investment and outsourcing destination. Striking advances in medicare at the high end have led to India being a destination for affordable, sophisticated medical treatment. India is also recognized as an emerging important player in Biotechnology. At the same time, India occupies a low ranking in Human Development Index and faces challenges to make it an inclusive society. It is obvious that Science & Technology has played an important role in India's transformation and will be a key component in bridging the two Indias, one representing a knowledge society and another, a society ridden with poverty and deprivation.

#### **Is India Slipping Down in Science?**

With this background, there is a concern that India is slipping down in science education and research. Since the total population is over a billion, India is still able to harvest a segment of intellectuals that can hold forte, despite concerns of falling standards of science education and research. That is how India is able to boast of individuals who can create the hot mail or Pentium Process. Across the seas, it can claim that a significant proportion of scientists and engineers in Microsoft or NASA or the Silicon Valley and those engaged in medical profession are of Indian origin. But, this statistics is not enough to take India to its ultimate goal of an inclusive knowledge society.

#### **Enrollment and Completion Data**

A look at the actual numbers would help to understand the situation. There are two caveats to using the statistics available to draw conclusions. 1. The numbers given are not sacrosanct, since they vary to some extent depending on the source. However, they do indicate the trend. 2. Detailed analysis of data are available only upto 2003-2004 and in some cases 2000-2001. More recently, there are indications that some changes have started happening for the better, but detailed authenticated data are not available.

As per data available (1), as of 2003-2004, India had 39.2 mn graduates (22.3% in science stream), 9.3 mn post-graduates (19.4% in science stream), and 0.3mn doctorates (33% in science stream). The number of graduates as per 1991 sensus report was 20.5 mn. The gross enrollment in science (graduate +) during 2003-2004 was 3.29 mn, representing 34.6% of total enrollment. The growth rates were : graduate, 21% (1995-96) to 33.1% (2003-2004); post-graduate, 36.5% (1995-96) to 41.4% (2003-2004). The annual growth rate between 1995-96 and 2003-2004 was from 6.5% to 7.9%. Engineering education showed the highest growth rate, from

8.2% per annum during 1995-2000 to 21.9% during 2000-2004. Post-graduates increased from 0.7mn in 1995 to 1.7mn in 2004. The numbers enrolled in science increased by 2.7 times, while those in engineering increased by more than 10 times. Enrollment for graduates increased by 1.3% from 2000-2001 to 2003-2004.

This gross picture would sound encouraging but just 1% of total graduates/post-graduates ultimately enrolled for Ph.D in 2000-2001 (1). There were only 1,00,000 Ph.D holders in the country in 1999 and the yearly addition was around 10,000 to 11,000. Of these, Ph.Ds awarded in the Sciences including agriculture and veterinary sciences were around 5000 in 1998-99. The poor entry into higher degrees in the sciences is well reflected by the recent data provided by the UGC.

**Table.1.**

**Enrollment and Completion Statistics in the Science Degrees (2007- 2008).**

	Enrollment		Completed	
	Total (mn)	Science (mn)	Total (mn)	Science (mn)
Graduates	9.80	1.96	2.05	0.33
Post-graduates	1.03	0.25	0.54	0.075
Ph.Ds	0.07	0.023	0.018	0.0059

Although, there is a phase difference of a few years between the 'enrollment' and 'completed' figures for a given year, the trend is pretty much clear. Considering the figures in the Sciences, although the number of graduates enrolled is 19.6 lakhs, the completed figure is 3.3 lakhs. For the post-graduates, the enrollment figures is 2.5lakhs and that for completed is 75000. For the Ph.Ds, the enrollment figure is 23000 and that for completed is around 6000. Assuming that there is no drastic change in enrollment in a span of 3 to 5 years, it is very clear that only a small percentage of graduates opt for post-graduation and even less ultimately opt for Ph.D. This is also because the number completing is only 15-25% of the number enrolled at every level. This is not only true in Sciences, but is also a general picture with all subjects included. Thus, the total number of Ph.Ds has only increased from ~ 5000 in 1998-99 to around ~ 6000 in 2007-2008.

**Performance Indicators – A Comparative Study with China**

**Ph.Ds in Science and Engineering :**

The data given in Table 2 (computed from Ref 2) would indicate that in 2003-2004, the number of Ph.Ds in Sciences were about the same between India and China (5539 Vs 5665). But the number of Ph.Ds in engineering was strikingly different (779 Vs 6573). The rate of growth in China between 1995-2005 was significantly higher than India, since China started from a lower base line in science in 1995. Especially, China's growth in producing Ph.Ds in engineering was phenomenally high, justifying its effort to become the Manufacturing Capital of the world. It also appears that more

recently, while the Science & Engineering Ph.Ds from India is hovering around ~6000, China is surging to 40,000 (3).

**Table.2**

**Number of Ph.Ds in Science & Engineering**

Area	India		China	
	1995-1996	2003-2004	1995	2004
Science	3665	5539	1758	5665
Engineering	335	779	1659	6573
All Subjects	9070	13733	4364	18806

**Papers Published and Patents Filed (4,5,6)**

The data presented in Table 3 would indicate that while China is surging ahead to account for 6-7% of the total scientific publications of the world (7, 8), India would account for less than 2%. The number of scientific papers from India included in Science Citation Index (SCI) fell from 14, 987 to 12,227 between 1980-2000, where as China's grew from 924 to 22, 061 (9).

**Table 3**

**Papers Published and Patents Filed**

Period	India	China	USA
1995-2006	2,11,063	4,22,993	29,07,592
2007-2008	~ 20,000	~80,000	~ 2,50,000
Percent of country's papers among top1% cited	0.33	0.52	1.87
Rank	13	10	1
Patents Filed (2007-2008)	35,000	24516-00	~500,000

The picture may be changing for the better in India as seen by the steepness of the rise in the curve indicating the number of research papers in SCI after 2003-2004 (10). In addition, the analysis by the National Institute of Science & Technology (NISTADS) gives a more encouraging picture to the general tenor of a fall in scientific publications (11). The data cover a period of six years viz, 1985-1986, 1993-1994 and 2001-2002. Based on the analysis of the data from Web of Science (Thomson –ISI, USA), which covers 5700 journals unlike the SCI which covers only 3700 journals, it is concluded that India posted an average growth rate of 4.3% in its S & T publications between 1993-2003, contrary to the general impression of a stagnation. The impact factor per paper has increased from 0.748 in 1985-86 to 0.806 in 1994-95 and to 1.229 in 2001-2002. But, the fact remains that 70% of the

papers are published in low impact or no impact journals. The performance of S & T institutions continues to rise, whereas the university sector has shown a decline. It needs to be pointed out that the absolute numbers vary depending on the data bases used Viz. SCI, SCIE and SCOPUS.

India and China face an anomalous situation in terms of publications. Areas such as agriculture, veterinary science and medical practice generate papers of local interest and a substantial number is published in national journals. This is indeed of national relevance. But, the quality of papers published are uneven, since many local journals do not have a proper peer-review system. There is a move to include national journals and those published in different languages in SCI. Since, English is the preferred language for science communication. Journals published in other languages are at a disadvantage in citation index calculations. However, India which uses English as the predominant medium for science communication is behind, despite the language advantage. There is also a concern that scientists clamoring to publish in international journals of repute in modern areas of science hurt the local journals in traditional areas of science in terms of standing and credibility. There is also a concern that obsession to modern science at the expense of traditional areas of importance can hurt the society as is evident from the statement ‘they can send a satellite to mars, but not solve most basic problems that threaten million of lives in the developing world’ (12).

### Strength of HRST and FETRS :

The total HRST (Human Resource in Science in Technology) was estimated at 40.2mn that was 11% of the total work force of the country (1). Among this only 1/3 (14.2 mn) was found to be in core HRST occupation and the rest 2/3 not utilized in the sector. The FETRS (Full Time Equivalent Researchers) data indicate that China has 7-8 times more R & D personnel. The GERD (gross Expenditure on R & D) per mn, for China was 12 times more than for India. China’s total investment in R & D was 12-13 times more that of India (3). The data are tabulated in Table 4.

Table.4: Research workers/ Scientists and Investments (1, 3, 13,14)

	India	China	USA
FETRS/mn	~130	~850	~4400
FETRS (Total)	1,15,000	8,50,000	11,50,000
GERD/mn	20	240	1006
Expenditure/yr (Rs. In crores)	~ 20,000	2,66,000	-
% GDP	~ 0.8	1.23	~ 3.0

## Possible Reasons for Inadequate Number of S & T Personnel

### Attitude to Science at the Tertiary level

First of all, the India Science Report (1) states that at class 6-8, 30% of the students wanted to become teachers that declined to 23% in class 11-12. Popularity of Science subjects had taken a dip in the 1990s and early 2000, as can be seen from case studies with the Central Board Secondary Examination (CBSE) and Indian School Certificate Examination (ICSE) students (15). Based on the number of students who appeared in 10+2 examinations, a Priority Index was worked based on several enrollment parameters. Essentially, while this showed an increasing trend for Accounts and Economics, the combined trend for Physics, Chemistry and Biology showed a decreasing trend between 1992-2002. Similarly, a case study with Delhi University, where the colleges are better endowed and equipped than those in other states, the drift rate from B.Sc and B.Sc (Hon) in pure sciences to professional courses such as engineering and medicine was around 50%. This explains, why the number of students getting into and completing higher degrees in Science is poor, despite an increase in the total number of graduates (Table.1). In the last few years, science courses at the graduate level are attracting a greater enrollment, but the intention is to get into the IT sector rather than venture into higher education in Science. With a phenomenal increase in engineering colleges in the states, even candidates with a low ranking in entrance examinations are able to get admission into some engineering college or the other. It is essentially the left over candidates who get into post-graduate education in science. With the imposition of a ban on the recruitment of regular faculty in colleges and universities in many states till recently, such post-graduates get into positions of ad hoc/guest faculty for a paltry sum.

### Science Education in Colleges :

It is again an egg or chicken story. The quality of faculty, especially in colleges has suffered in view of a ban on recruitment of regular faculty till recently. Poorly paid adhoc faculty with PG qualification teaching post graduate courses is not a formula to ensure quality education. Even private institutions with imposing civil structures do not have well qualified faculty, with few exceptions. There is very little research environment in post - graduate colleges with the result that teaching fails to keep pace with the progress in global science. There is an artificial separation of research in science and teaching, which prevents automatic contemporisation of syllabuses. As per data available on college resources (16), the annual budget even for well known colleges is low, although the tuition fee has remained frozen. The sciences are practical intensive subjects and practicals suffer due to lack of funds to purchase modern equipment, hire skilled technicians for maintenance, purchase chemicals, purchase books/journals for the library or to provide for online subscription, and vagaries of power supply in the absence of generators. Even the small percentage genuinely interested in Science gets disillusioned and drifts into professional courses with the result that students have very little exposure to experimental science. Undergraduate colleges lack funds to organize modern laboratory exercises, again with few exceptions. Rural colleges suffer more in this context than urban colleges

## A Positive Example:

In this scenario of falling standards in overall science education and research, a limited success story is seen in the area of Life Sciences. This is because of the dedicated role of the Department of Biotechnology, Government of India to bolster this area in the country through improving research in the area of Life Sciences. The Department created several new institutions all over the country for research, created infrastructure in terms of providing modern equipment, organized advanced training programmes within the country and abroad for budding researchers and also facilitated industry – academia interaction. More importantly, in collaboration with UGC it started M.Sc.(Biotech) programmes in six universities in the 1980s, providing admission through All India entrance examination. This Masters programme has been multiplied over the years in different areas such as Agriculture, Medicine and Technology. The net result of all this effort to provide the supply line is a significant enhancement in the quality of research in biology as evidenced by the number of publications in medium to high impact international journals (11). The Biotech industry is also fast picking up. The flip side is the hype in the projection of prospects for Biotechnology as next only to the IT sector. There has been a surge among graduates and PG students to opt for subjects such as Biotechnology, Microbiology, Biochemistry etc. in the last 5-6 years. This has led to all state and private universities starting Bachelors, Masters and B.Tech programmes in Biotechnology and self-financing courses without any regulatory mechanism. More often the poorly trained students are being left without jobs or future prospects. This can seriously affect the morale of students and their parents who have paid heavily to earn the degrees in Biotechnology. It is high time that UGC and DBT join hands to introduce norms for setting the quality through some accreditation mechanism. DBT has plans to identify and support 'Star Colleges' to ensure quality education in Life Sciences. However the basic positive initiative of DBT to improve quality of research and teaching in Life sciences has paid dividends, although to a limited extent.

## Difference Between Central and State Universities and National Institutes :

Central universities under the UGC are better funded than state universities. The former also receive substantially higher research grants through sponsored projects from various R & D agencies such as DST, DBT, CSIR, DAE, DRDO etc. The quality of faculty teaching and exposure to laboratory courses and projects are of a higher order in central universities than state universities. Many state universities do not follow the UGC norms in terms of scale of pay, career path for faculty or infrastructure requirements and, therefore, the students suffer. To an extent Delhi University Colleges and those associated with a few other non-unitary central universities have a higher standard of teaching in science than colleges associated with state universities. Autonomous colleges tend to do better in science education. Self financing colleges and courses have introduced a distortion in science education. Similarly, private universities resort to advertisement blitz and there has not been a systematic evaluation of the performance of science teaching in these environments to pass judgement. The biggest concern at present is the quality of graduate and post-graduate science education in state universities and associated colleges due to lack of adequate funds, lack of good faculty and political interference. National Institutes in general are better funded and have a better infrastructure for

research than the university sector, and, therefore, tend to attract better quality scientists at the expense of university requirements. In terms of R & D, these institutes do compete in global science, but have fallen short; with some exceptions, as the statistics given earlier would indicate. Many of these institutes have a Ph.D programme recognized by specific universities. These Ph.Ds are in general are of a higher caliber than the ones generated in Universities. The participation of these national institutes in terms of teaching post-graduate courses in nearby colleges/universities in general is poor. It also needs to be recognized that Ph.Ds generated by the national institutes or even central universities tend to seek greener pastures abroad on a permanent basis (although reversal of this trend might have started), leaving Ph.Ds generated by state universities to form the bulk of the pool available for research and teaching in the country. Therefore, improvement in the standard of science teaching and quality of research in state universities and their constituent colleges is a priority.

### What is in place and what is on the anvil ?

As already stated, the clear signs of slowing down of Indian Science have led to several actions being taken by various funding agencies during the 10<sup>th</sup> plan and trends of reversal are already seen. However, data from authenticated studies on the recent picture are not available. It is, however, clear that India has a lot of catching up to do to reach its goal of a knowledge power. Therefore, a quantum increase in funding to education as such and several measures to tone up basic research and teaching in science as well as to attract and retain talent have been taken in the 11<sup>th</sup> plan.

To review the strategies in place, a long-term measure taken by the University Grants Commission has helped to sustain research and teaching over the years in identified universities. This is through the sanction of assistance at three different levels. Special Assistance Programme, (SAP) Department of Special Assistance (DSA) and Centre for Advanced Studies (CAS). So far, UGC has granted 397 SAP/DSA/CAS programmes to universities. A second very successful initiative of the UGC in place has been the creation of inter university facilities at three different centres: IUCAA at Pune : IUAC at Delhi and UGC-DAE consortium for scientific research at Indore. The DBT – UGC programme on the initiation of M.Sc Biotech courses has already been mentioned. A major initiative is the conduct of NET examination in the country to establish a minimum standard to enter the lecturer profession and is now widely accepted as a bench mark.

The expansion planned is both horizontal and vertical. UGC (17) has plans for 30 universities with world class standards and infrastructure in the 11<sup>th</sup> plan. Plans are afoot to set up 370 colleges in backward districts. There would be 16 new Central Universities in addition to the 20 already in place and 14 world class universities. The aim is to increase the gross enrollment ratio (GER) with percentage of youth in the age group 18-23 in higher education going up from the current 10% to 15% by 2012. This still falls short of the projection of knowledge commission that India should have 1500 Universities to make it a knowledge society. A UGC committee has recommended 735 universities by 2012 to increase enrollment into higher education from 10% to 15%. An empowered committee of the UGC for Basic Scientific Research in Indian Universities has made specific recommendations to

upgrade science education and research. Some of these are: 1. 1800 JRFs to be granted to each science department under DRS/CAS/DSA/University Centres for Potential Excellence. 2. Fill in 1000 Faculty positions through global advertisement 3. UGC networking Summer/Winter School Centres 4. Support to non-SAP departments 5. University – CSIR linkage 6. M.Sc. programmes with research component 7. Infrastructure strengthening grants to 700 science departments of 97 colleges with Potential for Excellence.

The Report of the Steering Committee on Science and Technology for Eleventh Five Year Plan (2007-2012) Government of India (10) has detailed out the ongoing programmes and the plans for massive improvement in higher education and research in the Science. (10). These details are given below.

DST has taken important initiatives to support R & D in universities and national laboratories. For example, 35% and 6% of the projects sanctioned by SERC in 2005-2006 were in universities and colleges, respectively. This support has helped to improve the quality of research publication as demonstrated by the Impact Factor above 2.2 in papers published under this scheme of support. A major initiative of DST to improve R & D infrastructure is through the FIST (Fund for improvement of S & T in Higher Educational Institutions) and SAIF (Sophisticated Analytical Instrument Facilities). Nearly 240 Universities were able to get support for upgradation of equipment, library and other facilities during 2000-2007.

In terms of human resource development, sponsored project and Fellowship support provided by the various agencies such as DST, DBT, ICMR, CSIR, UGC and DAE, have encouraged candidates to take up Ph.D programmes. Similarly, provision of RAs by CSIR & DST and post-doctoral fellowships by DBT have encouraged training of fresh Ph.Ds to undertake research projects on their own. These agencies also have fast-track mechanisms to sanction first time projects by young faculty. A particularly interesting initiative taken by the DST is the KVPY (Kishore Vigyanik Prothshahan Yojana) programme where talented students interested in Science are identified after 10+2 and 150 fellowships have so far been awarded to take them through a career for Science. Similarly, the Olympiads conducted by the Homi Bhabha Science Centre have inculcated interests among school and college students in Physics and Mathematics.

While these initiatives in the new millennium have started bearing fruit (yet to be quantified), it is recognized that India has still a long way to go to be in league with the developed world or China. Therefore, a quantum leap has become necessary in the 11<sup>th</sup> plan in terms of investments, augmentation of activities already listed and initiation of new strategies to attract and retain talent. The objectives are “Massive revitalization of the university system, expanding post-graduate and Ph.D programmes in select institutions and bringing these upto global standards, assured careers to talented young students who opt to remain in science, collaborative projects between colleges/universities and proximate national laboratories for sharing of infrastructure and also faculty support, primarily to develop highest quality human resource and simultaneously improve the standard of the institutions”(10).

DST and other S & T agencies in addition to supporting basic research and other innovative projects of different kinds have strategies spelt out for up gradation of research standards as well as nurturing, attracting and retaining scientific talent. First of all, there would be augmentation of the existing programmes. For example, KVPY Fellowships would be expanded from 150 to 450. One innovative programme referred to as INSPIRE (Innovation for Science Pursuit for Inspired Research) is poised for implementation to nurture and retain talent. This has three components. It is planned to give Rs.5000 fellowship to 1 mn young learners between 10-17 years of age in the next 5 years. The top 1% of the performers would be exposed to mentorship by global icons including 60-70 Nobel Laureates and 150-200 Indian leaders. There will be assured career opportunity to a 1000 performers upto 5 years after Ph.D. National Talent scholarships will be given to 10,000 students/year. Ten Universities will be selected for S & T up gradation with an investment of Rs.200 Crores. Twenty Universities will receive Rs.75 crores for augmenting new integrated M.Sc programmes. Four hundred science and engineering colleges will receive Rs.1 crore each for up gradation to provide for research by colleges teachers. There will be provision for B. Tech (eng) holders to move into science and vice versa. There is a proposal to have a National Professorship scheme. Provision for sabbatical and international travel for teachers to attend conferences and support scheme for having retired teachers at colleges have been made Table 5 lists many of the initiatives planned under the purview of the Department of Science & Technology (DST).

Table 5 : Initiatives Planned in the 11<sup>th</sup> plan

#### Topic / Programme

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##### **A. Massive Revitalization of University Sector**

1. Select 10 premier universities in the country for major support to bring them on par with global standards.
2. Select about 20 universities other than those in item (1) above.
3. Special grants to IITs and leading PG universities (total about 20) for starting quality undergraduate courses in sciences.
4. Expanding PG and Ph.D level programmes in IITs and NITs to bring R & D strength to global standards.
5. Each State to eventually have at least one centrally funded university. 10 state Universities to become centrally funded.
6. Initiate post B.Sc – 2 year. B.Tech programmes (followed by M.Tech degree courses) in 20 universities.
7. Additional one-time grant to the three Inter-University Centres (IUCAA, IUAC, UGC, DAE Consortium).
8. Infrastructure support to about 400 colleges, identified for their potential for excellence.

9. Strengthen INFONET in the university system massively.
10. Involve major scientific institutions/universities in a big way for Satellite/EDUSAT based higher education programmes for large scale use.

## **B. Support to Science Academies**

11. Strengthening the initiatives of Academies and rewarding excellence
  - i) **Educational programmes**  
(summer programmes/refresher courses etc.)
  - ii) **National Professorships (100)**  
(compensation at the level of INSA professorship)  
research grant may also be awarded.
  - iii) **National Post-doctoral Fellowships (500)**  
(This includes 100 fellowships for outstanding young researchers)

## **C. Individual Scheme for Teachers and Students**

12. Promoting research and mobility among teachers and students.
  - i) Support to individual college teachers for research
  - ii) Support for Visiting Teacherships
  - iii) Support for retired scientists teaching at colleges/universities
  - iv) Permit direct admission of B.Tech degree holders to Ph.D in Science.
13. **Scholarships for students**
  - i) NTSS  
Total number of scholarships after Class VIII to be raised to 10,000 (from the the current 1000) for the whole country..
  - ii) KVPY  
Number of Fellowships to be tripled. Nurture camps to be essential part of the programme at present
  - iii) National Scholarships (For 1500 UG & 1000 PG students)
  - iv) Olympiads (6 subjects)
14. **15 Years Assured Career Support Programme**  
Phase I, II and III each for 5 years periods

## **1. National Science and Engineering Research Foundation (NSERF)**

### **2. Initiative for Recruitment of New Faculty/Postdoctoral Fellows**

- a) New Faculty (1000 positions over 5 years)
- b) Start-up grants for new faculty (-20 lakhs per faculty)
- c) New Postdoctoral Programs (500 Research Associates/PDF per year)

### 3. Special Scheme to upgrade Select University Departments (25 Universities at 40 crores per university)

### 4. Inter-Institutional Linkages to promote National Institution/University Collaborative Programs. .

The MHRD has plans to start new IITs, IIITs and IIIMs. To emulate the 100 years old Indian Institute of Science (IISc), three IISERs (Indian Institute of Science for Education and Research) have already been started at Pune, Kolkata and Mohali emphasizing the importance of both education (5 year M.Sc integrated programmes) and research. Two more are planned. The DAE has started a similar institution called NISER (National Institute for Science Education and Research) at Bhubaneswar. The concept of university and proximal national institute interaction and mentoring is emphasized in all these initiatives. As already mentioned DAE has teamed up with UGC to establish the Consortium for Scientific Research at Indore.

#### Women in Science education and Research:

It is well known that very few women are into active research and education for a variety of sociological reasons, although the enrolment of girls in higher education is increasing. The initiative of UGC to have separate scientist positions (A, B & C) for women in universities to provide flexibility could not work for a variety of reasons. In the 11<sup>th</sup> plan, steps have been taken to facilitate study and practice of science through special purpose courses exclusively for women with scholarship have been planned. The initiatives planned are listed in Table .6.

**Table.6 : Steps to Reduce the Stress on Women Scientists and Students and Facilitate Study and Practice of Science by Women**

Sl.No.	Issue	Implementing Agency
1.	Flexible working hours and part time jobs	UGC Institutions
2.	Facilities like well-run crèche, day-care centre for the Elderly, campus housing, transport, proper toilets, ladies rooms, etc.	As above
3.	Age relaxation in recruitment and 2 mid career breaks	As above
4.	Freedom for husband and wife to work in the same institution	As above
5.	Transfer to enable the wife and husband to work in the same City	As above
6.	'Grievance cell' for gender-related and sexual offences at the level of the Institutions as well as at a higher level.	UGC, Science agencies
7.	Inclusion of women in selection and other policy making committees	As above

8. Transparency in the process of selection. Reasons for rejection should be included. Performance assessment for a woman should be done on the basis of years spent in professional life, rather than biological age. As above
9. More rigorous efforts to identify meritorious women and objectivity in selection for fellowships and awards as well as invitations to speak in conference Academies, awarding agencies

### Concluding Remarks :

It is now clearly recognized that it is S & T in a conducive, appropriate social environment and with robust implementation strategies, that can keep India to be abreast of the changing contours of modern S & T, at the same time bridging the gap between the two India's, one representing a knowledge society and another a society ridden with poverty and deprivation. In this context, perhaps, lack of priority attention to higher education for a period, has shown a decreasing trend in several parameters governing quality education and scientific research during the 1990s and early 2000s. This has come as a glaring comparison with China, that has made large strides to become a world leader. This has now been recognized and during the 10<sup>th</sup> plan some initiatives were taken to correct the situation. Eleventh plan holds promise for a quantum jump in investments and strategies to catch up and put India in a trajectory of logarithmic growth in science education and research. The biggest challenge of all will be to build adequate **human resource** to successfully implement all the strategies. It is difficult to hazard a guess, but the requirement of teachers and scientists would run into several thousands, if the ongoing and projected activities are to run optimally. The PRC has a unique opportunity to address the concerns of the academic community and the lack of interest among the educated to get into the profession of a teacher, who as a mentor can change the society for the better in all aspects.

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## **COLLEGE EDUCATION IN INDIA**

**“Education is the manifestation of perfection already in man. Therefore, the only duty of the teacher is to remove all obstructions from the way.”**

**– Swami Vivekananda**

### **Introduction:**

India has one of the largest systems of higher education in the world. The base of this system is the teaching being carried out in different Colleges, which involves both undergraduate and postgraduate programmes. The colleges are mostly affiliated to different universities; some are constituent colleges and some may also be autonomous. These are the institutions which have the task of handling the young, wide-eyed 18 year olds, fresh from the restricted life of schools, who may be encountering the world on their own for the first time. They are at the most impressionable age, when they not only receive the first real exposure to the subjects of their choice but also learn their way around the world. Teacher is naturally the most crucial component in college education.

To quote our Prime Minister Dr. Manmohan Singh, “we still have a long way to go to meet the challenges thrown by the developed western world.” An improvement of availability and quality of higher education, particularly in colleges is the need of the hour.

### **Role of Colleges:**

Under our present system, undergraduate education involves three years of fulltime study of three subjects of choice, with or without honours or major in one of them, along with one year of study of two languages and environmental science. The syllabi followed in affiliated and constituent colleges at the undergraduate level are as prescribed by the University, which also arranges for examination of students and publication of results. In the first two stages i.e. in formulation of syllabus and conduction of examination there is significant participation of college teachers as members of Boards of Studies in different subjects and as Paper setters and examiners. As institutions, colleges are still basically places of imparting instruction within a fixed academic frame.

Autonomous Colleges however, have the freedom to decide their own syllabus in their own Board of Studies, with some amount of supervision by the university nominees. They also have their independent examination system.

Thus we may say that in the area of undergraduate education it is the affiliating university which retains the overall control, and hence remains largely responsible for the standard. The quality of instruction in undergraduate colleges depends on the academic quality and sincerity of their faculty, discipline and infrastructure available.

In the case of the colleges which have been permitted by the affiliating university to conduct semi-autonomous postgraduate courses, the Board of Studies has statutory Vice Chancellor's nominees. Here the Colleges have a reasonable scope of innovation and variation in the syllabus as well as in the method of assessment. It is expected that only a College with a high standard of faculty, academic discipline and infrastructure would be granted affiliation for postgraduate studies.

We will not be over emphasizing the fact, if we say once again, that by any way we look at it, universities are the main authority for maintaining standard of college education. They have the authority to grant or withdraw affiliation to colleges for undergraduate and postgraduate courses after due consideration of their conduct.

### **Statistics:**

#### **Colleges-**

As on 31<sup>st</sup> March 2006, there were 18,064 colleges in our country, of which only 6109 colleges are recognized under Section 2(f) of the UGC Act. Out of 6109, only 5525 colleges are eligible to receive grants from the UGC under Section 12(B) of the UGC Act. To quote further from the annual report of the University Grants Commission for the year 2005-2006, tenth plan grants (2002-2007) amounting to Rs. 471.81 crores have been allocated for the development of 5068 colleges under the College Development Scheme being implemented by the different Regional Offices of UGC.

To follow a scheme of academic autonomy, as on 31<sup>st</sup> March 2006, there were 217 Autonomous Colleges spread over 47 universities of twelve states. In the year 2005-2006 alone, Rs. 7.07 crores has been released as grant to these autonomous colleges.

During the first four years of the tenth plan period, 1858 new colleges have been established, an increase of 11.5%, with the state of Karnataka accounting for the largest number of new colleges. As many as 439 new colleges were established in 2005-2006 itself to take the total number at the end of the year to 18064, a 2.5% increase in one year.

**TYPE OF UNIVERSITIES / UNIVERSITY LEVEL INSTITUTIONS  
AS ON 31.03.2006**

Sl. No.	Type of Institutions	Number of Institutions under Section 2(f) or Section 3	Number of Institutions not eligible for Central assistance under Section 12(B) of the UGC Act
1.	Central Universities	20	-
2.	State Universities	216	60
3.	Institutions established through State Legislation	5	2
4.	Institutions Deemed to be Universities	101	-
5.	Institutes of National Importance	13	-
	<b>Total</b>	<b>355</b>	<b>62</b>
6.	Colleges	18064	

**Students-**

From the annual report of UGC for the year 2005-2006 we find that, out of a total of 110.28 lakh (provisional) students enrolled for various courses in different institutions of higher education, 88.91% were enrolled at the undergraduate level with colleges and universities put together, whereas 9.42% were enrolled for Master's level courses. About 90.3% of all undergraduate students and 66.58% of all postgraduate students were in the affiliated colleges considering the total enrolment at the UG and PG levels in the country. Thus most of the students in the higher education system in India are enrolled in affiliated colleges. No one should object, if we say that the foundation of higher education in India is being laid in affiliated colleges. Interestingly, the stage wise distribution of students has remained virtually unchanged during the last one decade.

Out of the total enrollment of 110.28 lakhs of students, 45.13% were in the faculty of Arts, 20.45% in the faculty of Science and 18% in the faculty of Commerce or Management. Thus, 83.59% of total enrolment was in the three faculties of Arts, Science and Commerce/Management, while the remaining 16.41% were in the professional courses with the highest percentage in Engineering/Technology followed by Medical courses (Annual Report of UGC for 2005-2006).

STAGE-WISE ENROLMENT\* OF STUDENTS:

UNIVERSITY TEACHING DEPARTMENTS / UNIVERSITY COLLEGES & AFFILIATED COLLEGES: 2005-2006

Sl. No.	Stage	University Deptts./University Colleges	Affiliated Colleges	Total (% to Grand Total)	Percentage in Affiliated Colleges
1.	Graduate	950892	8854085	9804977 (88.91)	90.30
2.	Post Graduate	347096	691714	1038810 (9.42)	66.58
3.	Research	64161	6555	70716 (0.64)	9.27
4.	Diploma / Certificate	64644	48873	113517 (1.03)	43.05
	<b>Grand Total</b>	<b>1426793</b>	<b>9601227</b>	<b>11028020 (100.00)</b>	<b>87.06</b>

\*Estimated

**STUDENTS ENROLMENT: FACULTY-WISE\*: 2005-2006**

Sl. No.	Faculty	Total Enrolment	Percentage to Total
1.	Arts	4976946	45.13
2.	Science	2255230	20.45
3.	Commerce/Management	1986146	18.01
4.	Education	161009	1.46
5.	Engineering/Technology	795120	7.21
6.	Medicine	348485	3.16
7.	Agriculture	63962	0.58
8.	Veterinary Science	16542	0.15
9.	Law	336356	3.05
10.	Others	88224	0.80
	<b>Total</b>	<b>11028020</b>	<b>100.00</b>

\*Estimated

We would like to mention here the progress made in enrolment of women, which has risen from 10% of the total enrolment on the eve of independence to 40.5% in 2005-2006. A total of 44.66 lakhs of women enrolled in higher education in 2005-2006 in the entire country indicates that 68 women were enrolled for every 100 men. Of these women, 51.01% were in the faculty of Arts, 20.18% in the Faculty of Science and 16.46% in the Faculty of Commerce, constituting a total of 87.65% in other than professional faculties. This has remained unchanged in the last one year.

The number of women's colleges has increased from 1146 to 1902 during the period of ten years from 1995-1996 to 2005-2006. It has made an important contribution towards increase in enrolment of female students.

### Faculty Strength:

In the academic year 2005-2006, the total number of teachers in universities and colleges was 4.88 lakhs as compared to 4.72 lakhs in the previous year. Out of 4.88 lakhs teachers, 83.85% were in colleges and the remaining 16.15% in University Department/ University Colleges. We can have an overview from the following table:

S. No.	Category	Out of Total Number of Teacher			
		AC	UTD/UC	AC & UTD/UC	Percentage to Total Number
1	Lecturers	210202	23260	233462	47.84
2	Senior Lecturers	61232	12059	73291	15.02
3	Readers & their equivalent	100520	24986	125506	25.72
4	Professors & their equivalent	23951	16591	40542	8.31
5	Others (T/D/TA etc.)	13279	1923	15202	3.11
	<b>Total</b>	<b>409184 (83.85%)</b>	<b>78819 (16.15)</b>	<b>488003</b>	<b>100.00</b>

### Target:

One of the key objectives of the 10<sup>th</sup> plan was to improve the GER (Gross Enrolment Ratio) from 6% at the start of the 10<sup>th</sup> plan to 10% by 2006-2007, which required the enrolment in universities/colleges to increase from 75 lakhs in 2002 to 125 lakhs in 2007 (Planning Commission, 2005). However, the SES (Sample Education Survey) data of the Government of India indicate that the enrolment in universities/colleges was 88 lakhs in 2001-2002, which yields a GER of 7.6%. Further, the enrolment in universities / colleges has increased to 116 lakhs with a GER of 8.8% in 2006-2007. Thus increase in GER is 1.2% and not 4% as intended for the 10<sup>th</sup> plan (Duraismy, 2007).

The concern for inclusive growth and removal of all kinds of disparities in access to higher education requires us to take a look at the projected enrolment during the eleventh plan period. We would use two tables here (Duraismy, 2007), one related

to Projected Population aged 18-23 years and their share in the total population between 2001 and 2012 and the other related to Projected Enrolment and GER for Higher Education by Educational level and Type from 2006-2007 to 2011-2012.

### Projected Population Aged 18-23 and their Share in the Total Population, 2001-2012

Year	Total Population (in thousands)	Population 18-23 years (in thousands)			% of population 18-23 years to total population
		Total	Male	Female	
2001	1,028,610	113,328	59,232	54,098	11.0
2002	1,044,807	116,457	61,042	55,414	11.1
2003	1,061,259	119,673	62,908	56,762	11.3
2004	1,077,970	122,977	64,831	58,143	11.4
2005	1,094,944	126,373	66,813	59,557	11.5
2006	1,112,186	129,862	68,855	61,006	11.7
2007	1,127,805	132,622	70,203	62,417	11.8
2008	1,143,644	135,440	71,577	63,861	11.8
2009	1,159,704	138,318	72,979	65,338	11.9
2010	1,175,991	141,257	74,407	66,849	12.0
2011	1,192,506	144,259	75,864	68,395	12.1
2012	1,207,419	144,287	75,698	68,588	12.0

Note: Population aged 18-23 is computed using Sprague Multipliers.

Source: Computed using the Population Projections for India and States 2001-2026, Report of the Technical Group on Population Projections Constituted by the National Commission on Population, May 2006, Office of the Registrar General & Census Commissioner, India.

### Projected Enrolment and GER for Higher Education by Educational Level and Type, 2006/07-2011/12

(in thousands)

Year	General Education			Professional		All	GER (%) (Degree)	Vocational	Total	GER(%) Degree+Diploma)
	UG	PG	Doct orate	Eng.& Tech	Medicine					
2000-01	7245	647	45	418	148	8626	7.6	987	9613	8.5
2001-02	7139	689	53	526	148	8821	7.6	1105	9926	8.5
2002-03	7633	709	57	709	208	9517	7.9	1200	10717	8.9
2003-04	8026	807	66	773	223	10009	8.1	1191	11200	9.1
2004-05	8506	834	64	934	231	10523	8.3	1206	11729	9.3
2005-06	8969	868	65	1069	240	11053	8.5	1221	12274	9.5
2006-07	<b>9425</b>	<b>906</b>	<b>67</b>	<b>1220</b>	<b>251</b>	<b>11592</b>	<b>8.8</b>	<b>1266</b>	<b>12858</b>	<b>9.7</b>
11th Plan										

2007-08	9877	947	69	1388	263	12133	9.0	1292	13425	9.9
2008-09	10327	988	72	1575	275	12676	9.2	1320	13996	10.1
2009-10	10775	1031	74	1781	287	13220	9.4	1349	14569	10.3
2010-11	11223	1073	76	2009	300	13765	9.5	1379	15144	10.5
2011-12	11671	1116	78	2259	313	14309	9.9	1410	15719	10.9

Note: Enrolment up to 2003/4 are actual values and from 2004/5 to 2011/12 are predicted based on the time series regression model. GER is computed using the population aged 18-23 reported in table 17.

### Expansion of College Education (Privatization of Higher Education):

Colleges recognized under Section 2(f) and 12(B) of the UGC Act are eligible to receive development grant from UGC. There are only 5525 such colleges out of a total of 18064 colleges as on 31<sup>st</sup> March 2006. It is obvious that the majority of colleges does not receive grants from the UGC and are private, unaided institutions. In the last two decades a large number of such educational institutions have come into existence, mainly at the undergraduate level. They started with professional courses but now have gradually entered science, commerce and management fields, as well. In addition, various self financing courses have been started in government and aided colleges. With the projected increase in enrolment private institutions are more likely to increase in number and may outstrip the public system of education in near future (Anandakrishnan 2008). With our experience of self financing colleges in the last decade, we have to ensure quality of higher education, its affordability for prospective students, fair and equitable access for weaker and disadvantaged sections of the society.

### Higher Education Institutions and Enrolment (by Type of Management)

Type (by Management / Funding)		Universities		Colleges		Higher Education Institutions		Enrolment (in thousand)	
		2000-2001	2005-2006	2000-2001	2005-2006	2000-2001	2005-2006	2000-2001	2005-2006
Public	Government	245	268	4097	4225	4342	4493	3443	3752
	Private Aided	#	10	5507	5750	5507	5760	3134	3510
Private	Private Un-aided	21	70	3202	7650	3223	7720	1822	3219
<b>Total</b>		266	348	12806	17625	13072	17973	8399	10481

Source: University Grants Commission (India) (Ref. Pawan)

A sustainable knowledge society able to face the challenge posed by the developed world can only be fostered, if it is inclusive and generation, transmission and diffusion of knowledge is pervasive across all sections of the society irrespective of race, religion, caste, creed and income status. In the absence of these objectives,

the knowledge and skills will be confined to the privileged few, leading to further disparities in national development efforts (Anandakrishnan 2008).

“It is true that enhancing social access to higher education is still important in the country. But the major challenge before the Indian higher education system is to bring equity in quality of education across the length and breadth of the country. This is more close to the hearts of students in rural, semi urban and urban areas, because they also wish to participate in the new economic revolution. Several social, economic and political reasons seem to act as constraints to access and equity in higher education in India. Poverty causes a high dropout rates even at primary, middle and secondary school levels. Lower status of women, lack of easy access, lack of implementation of existing programmes, inadequate utilization of resources, absence of political will and inadequacies in coordinated action across all equity fronts within institutions seem to be the other reason. Financial constraints also often form a significant factor in advancing inequity.” – UGC

In permitting the growth of self-financing institutions, the criteria were not defined in a manner to encourage the emergence of high quality institutions with reasonable control over their management practices. Some of them reached a level of acceptable quality by individual initiatives not necessarily by national policy design. The commercialization of education became rampant with the collection of capitation fees as a regular practice. Attempts to curb them through legislations have proved to be ineffective in the court of law. Starting of new technical institutions has assumed undesirable political and commercial dimensions.

These institutions function essentially under the conventional curricular structure though many new disciplines have been introduced in response to the emerging demands. For academic purposes these were affiliated to various general universities or to the specially constituted Technological Universities in some states. However, there was no transparency in the financial dealings of these institutions. Some of them have invested liberally in infrastructures and academic facilities, though shortage of qualified teachers is always a problem.

At the same time, the institutions started earlier by state governments languished for want of adequate funds for development of facilities or filling of vacancies of the teaching staff. Hence the quality of government institutions deteriorated rapidly in spite of the overwhelming preference of the students for government institutions partly for their affordability and mainly for their historical reputation. The initiation of the accreditation system by NAAC and AICTE has helped to introduce quality dimensions to many of the institutions on public as well as private sectors.

Another serious shortcoming of both private and governmental institutions is the inadequate number of teaching staff. The excuse for this situation is the non-availability of teachers with the prescribed qualifications. The statutory agencies that approved the expansion of these institutions should have exercised due caution in the rate of expansion and taken adequate measures to develop a reliable system for supply of qualified teachers in adequate numbers. Instead, it has become a convenient rationale for employing temporary, under-qualified and underpaid staff by several managements. This is a major issue agitating the minds of students and the temporary faculty in a large number of private institutions, particularly technical

institutions. The issue of science education in India is dealt with separately in this report.

Since private colleges will remain an essential component of expansion of college education, it is all the more necessary that some guidelines may be formulated for starting a private institution. Also monitoring mechanism must be put into place by the government as well as by the affiliating university to oversee the conduct of courses by the private institution. Transparency in financial dealings is a necessary condition for good academic institutions.

## **Maintenance of Academic Standard: Quality of College Education**

### **Up gradation of Faculty-**

The system of Academic Staff Colleges, which conduct the Orientation and Refresher Courses mandatory for teachers to attend periodically, has been started from 1986-1987. As on 31<sup>st</sup> march 2006, a total of 52 such ASC's exist. The Orientation programmes of 4 weeks duration are designed to inculcate self reliance in young lecturers through awareness of social, intellectual and moral environment. This course should ideally be attended by a newly recruited teacher before he or she joins the profession. However, frequently it is found that a couple of years of teaching have been completed before a new teacher is accommodated in an Orientation Course. Thus it loses some of its relevance and efficacy. Refresher Courses of 3 weeks duration are meant to provide opportunity for serving teachers to exchange notes with their peers and to receive exposure on the advanced topics of the subject concerned from renowned researchers and senior teachers. Sufficient numbers of such courses in different subjects are not regularly arranged. Thus teachers of a particular subject may have to wait for some time before being accommodated in a Refresher course. The courses are organized usually when classes are in full swing. With only limited number of teachers being available in any given department of a college, it is the students who suffer when teachers are released to attend these courses. It would be convenient for all concerned if the organizers take the academic calendar into consideration while planning the Refresher courses.

College teachers, in particular those of postgraduate courses, need to continue research activities in their chosen subjects. They need infrastructural facilities in the College as well as a reduced teaching load to pursue research programme. In the interest of students the teachers have to remain in touch with the advance developments in the subject. UGC and other agencies fund minor and major research projects but the teachers need active and continuous support from the College authorities.

## **Nature of courses conducted in colleges-**

The largest number of undergraduate students is enrolled in traditional B.A., B.Sc. and B.Com. courses in colleges, at the end of which they may not find any employment. This uncertainty makes the ordinary students restless and frequently they lose motivation. Such persons would not make good students especially for postgraduate courses.

The need of the hour is to segregate the total youth population available at the end of 10+2 examination into groups destined for different future activities depending on their abilities and inclination. The largest group will of course pursue non-academic professions at various levels in different spheres. If vocational courses offering opportunities for reasonable means of livelihood are available to the youth, they will enrol in these courses, particularly those who need to earn early. The most important fact about any course is whether it is meaningful. Today's young people, men and women, are keen to make a living and they are prepared to work hard towards it. We need to guide them towards a clear, positive goal making sure that they may work with their self respect intact.

The more meritorious students will go for postgraduate education to be followed up by careers in various administrative and other jobs. Only the students with an academic bent of mind and right ability would continue with advanced studies, after which they should be able to join respectable positions at different levels of the academia.

Needless to say, the undergraduate and postgraduate courses, vocational and otherwise, would have to be designed in close coordination with the societal situation, including employment opportunities. This does not preclude pursuance of basic sciences or gathering of knowledge for its own sake.

What is being suggested here is that the expectation and quality of students is an important factor for a successful programme of higher education. College education being the first step in the process needs to be reorganized drastically to suit the need of our populous and diverse society.

## **Infrastructure-**

One of the difficulties faced by the colleges is their inadequate infrastructure for conducting undergraduate and postgraduate courses. Even classrooms large enough to accommodate all students of a class, not to speak of laboratories and libraries, are not always available in affiliated colleges. Many a time, enrolment far exceeds the student strength permitted by the university. This certainly gives rise to truancy amongst students. The Colleges frequently do not have the atmosphere required of an academic institution. With student strength exceeding even 5000, how can they maintain the closeness and congeniality expected of a

college by a fresh student of 18 years? Thus the chance to integrate the students into a collegial life, which will have a positive influence on their academic life and character, is lost. No wonder, that the colleges have become degree churning mills without imparting a real education to the students. How can we expect to produce responsible citizens for the country out of this system?

The pressure of increasing number of entrants for higher education and shortage of funds for adequate infrastructure are compelling the system to cut costs and thereby lower the standards. The raging indiscipline in colleges is largely caused by the dissatisfaction of the students with the existing system. Naturally, rich people who can afford it frequently send their children abroad for college education. It needs to be mentioned here that most of the budget for higher education goes towards paying salaries of the faculty and not towards building adequate infrastructure.

### **Vision:**

To keep our trust with destiny, to take our rightful place in the world, we need to think big in line with the developed nations and set a high standard for our higher education, of which college education is the first step. Plans for education can not be made in isolation from other societal needs. Education is needed to set our underprivileged masses free, free to pursue their livelihood respectably, with a clear idea of their rights and responsibilities. Education should offer our bright youngsters exposure to the wide world of knowledge and technology, so that they may achieve their potential and do the country proud.

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## Annexure- IX

Dr. M V Krishnaswamy,  
Joint Secretary,  
University Grant Commission (NET),  
New Delhi.

July 7, 2008.

Dear Dr. Krishnaswamy,

Please refer to your letter No. F.5-1/1996 (NET) dated 29 June 2008, seeking the views of the Pay Review Committee (PRC) on exemption or otherwise from National Eligibility Test (NET) for M.Phil/Ph.D degree holders, following the recommendations of the Mungekar Committee, the summary of discussions held by the UGC with the Empowered Committee on Basic Scientific Research, and the comments of the NET Bureau.

The PRC, in its meeting held on July 3, 2008 at 9.00 a.m. and attended by Prof. G.K.Chadha, Dr. Manimala Das, Mr. B.S. Thapliyal and Dr. R.K. Chauhan, looked through all the three sets of recommendations/views, and discussed the matter in great detail. As a matter of fact, the issue came up earlier also during some of the meetings that the PRC has been conducting at various regional centres, during May 20 – July 3, 2008.

Guided by the reports/evidence made available and the impressions that it had gathered during some of its regional meetings, the PRC finds adequate justification to endorse the proposal for granting exemption from the NET to Ph.D. degree holders, and not to M.Phil degree holders, provided the programme of Ph.D. studies is adequately strengthened by universities and other Ph.D. awarding institutions, to ensure a high quality of research output. In this connection, the PRC ventures to suggest a set of guidelines for Ph.D. studies (enclosed herewith) which may be discussed, and if need be suitably modified, in the next meeting of the UGC and made uniformly applicable to all universities and other degree awarding institutions from a well thought-out and pre-notified date in the near future.

With best wishes

Yours Sincerely

(G. K. Chadha)  
Chairman,  
UGC Pay Review Committee

Encl: Proposed Guidelines for Ph.D. Programme

## **GUIDELINES FOR Ph D PROGRAM**

### **RECOMMENDATION OF THE PAY REVIEW COMMITTEE UNIVERSITY GRANT COMMISSION**

#### **Institutions Eligible for Conducting Ph.D. Programme**

All Universities and Colleges/ Institutions of national importance, except an Open University and a Distance Education Mode in any University.

#### **Eligibility Criteria for Ph D Supervisor**

1. Institutions should lay down the criteria for the faculty to be a Ph D supervisor.
2. Institutions should lay down and decide, on annual basis, a predetermined and manageable number of doctoral students depending on the number of the available eligible faculty supervisors. A supervisor should not have, at any given point of time, more than six Ph D scholars, including both part and full time scholars.
3. Institutions should widely advertise the number of available seats for Ph D studies and conduct admission on regular basis.

#### **Procedure for Admission**

1. Institutions should admit doctoral students only through Entrance Test conducted at the level of individual institutions. The Test should examine research aptitude, grasp of the subject, intellectual ability and general knowledge of the prospective admitees. It should be followed by an interview to be organized by the School/ Department/ Institution/ University. Only the predetermined number of students may be admitted to Ph D program.
2. The concerned institution will decide whether to have a direct Ph D program and/or M Phil/Ph D programme.

#### **Allocation of Supervisor**

The allocation of the supervisor for a selected student will be decided by the Department in a formal manner depending on the number of students per faculty member, the available specializations among the faculty supervisors, and the chosen topic of research by the student. In no case, the allotment/allocation of supervisor should be left to the individual student or teacher.

## Course Work

On being admitted, each Ph.D. student will be required by the Institution/ University to undertake course work for one or two semesters. The course work should be treated as pre-Ph D preparation and must include a course on research methodology, on completion of which students will be required to appear, and qualify, in an examination. The individual Institution/ University will decide the minimum qualifying requirement for allowing a student to proceed further for writing the dissertation.

## Evaluation and Assessment Methods

1. On satisfactory completion of course work, Ph D students will undertake research work and produce a draft monograph in reasonable time.
2. Before submitting the draft monograph, the student will make a pre- Ph D presentation in the Department, open to all faculty members and research students, for getting feedback and comments, which will be suitably incorporated into the draft monograph, under the advice of the supervisor.
3. Research monograph produced by the Ph D students in the Institution/ Department and submitted to the University will be evaluated by three experts/specialists, out of which at least one will be from the UGC's "Panel of Subject Experts" to be made available, and periodically updated, to each institution at the beginning of each academic year.
4. On receipt of satisfactory evaluation reports, Ph D students will undergo a *viva voce* examination which will also be open to all faculty members of the Department.

## Depository with UGC

1. Following the successful completion of the evaluation process and announcement of the award of Ph D, the University will submit a soft copy of the Ph D thesis to the UGC for hosting the same in INFLIBNET, accessible to all Institutions/ Universities for the purpose of checking piracy and plagiarism.
2. The degree awarding Institution/University will issue a certificate incorporating the afore- mentioned conditionality to the (non-NET) awardees who will, in turn, enclose a copy of the same along with other testimonials while applying for a lecturer's position in a University or College.

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