

APPENDIX - A

CENTRE OF ADVANCED STUDY IN EDUCATION  
Faculty of Education and Psychology  
M.S. University of Baroda,  
Baroda - 390 002

For College Principals & Teachers

Dear Madam / Sir,

The University Grants Commission initiated College Science Improvement Programme ( COSIP ) (1970-71) and College Humanities and Social Sciences Improvement Programme ( COHSSIP ) (1974-75) for bringing about qualitative improvement in teaching-learning and evaluation processes in Science, Humanities and Social Sciences at the undergraduate level in selected affiliated Colleges. The programmes were designed to : introduce modern methods of instruction in the class room as well as in the laboratory, supplement classroom instruction with instructional material, enrich and make best use of library resources, provide opportunity to students for practical orientations in disciplines, make arrangement of guest lectures, make arrangement of remedial teaching - for academically weaker students, devise special programmes for gifted students, introduce internal assessment procedure, develop question bank, start job-oriented courses, revise, update and modernise the syllabi, publish news letters etc.

This is an attempt to study COSIP and COHSSIP in terms of successful attainment of their objectives as laid down by the University Grants Commission in selected colleges of India. For this purpose three tools have been used. Two tools are common for principals and teachers - a checklist for specifying the objectives of COSIP and COHSSIP and a questionnaire for studying the realisation of accepted objectives; and the third tool is only for principals - A Questionnaire for studying the problems faced by the principals in implementing these programmes.

The investigator requests you to fill in the attached questionnaires. You are requested to put a tick mark ( ✓ ) at most of the places. This may take about 55 minutes of your valuable time. The information supplied by you will be kept confidential and will be used for research purposes only. I know that you are busy in your academic work but without your valuable help the study cannot be completed. Hence, your cooperation is solicited.

With regards,

Cordially Yours

R.P. Jain

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PERSONAL DATA SHEET

1. Name of the respondent (if you like) \_\_\_\_\_
  2. Designation \_\_\_\_\_
  3. Sex : (i) Male (    ) ; (ii) Female (    )
  4. Name of the College : \_\_\_\_\_
  5. Academic qualifications : \_\_\_\_\_
    - (i) M.A. / M.Sc. or equivalent degree (    )
    - (ii) Ph.D. (    )
    - (iii) Number of papers published (    )
  6. Total university / college teaching experience :
    - (i) 1 - 5 years (    )
    - (ii) 6 - 10 Years (    )
    - (iii) 11 - 15 Years (    )
    - (iv) 16 or more years
  7. What is your main subject of teaching ?  
Subject : \_\_\_\_\_
  8. Any other : \_\_\_\_\_
- \_\_\_\_\_

## APPENDIX A - 1

## SPECIFICATION OF THE OBJECTIVES OF COSIP AND COHSSIP

(Check list for Principals and Teachers)

Please read the objectives of COSIP and COHSSIP listed below and answer according to the instructions given :

(i) Put a tick mark (✓) in Column I against each of the objectives which you have accepted.

(ii) Encircle the appropriate response in Column II against each of the accepted objectives showing the degree of emphasis laid on them for their attainment according to the following key :

Very much = 5 ; Much = 4 ; Moderately = 3 ; A little = 2 ;  
Least = 1

Objectives of COSIP and COHSSIP	Column I	Column II
1. To introduce new methods of instruction in the classroom as well as in the laboratory	( )	5 4 3 2 1
2. To develop instructional material.	( )	5 4 3 2 1
3. To introduce new experiments for changing laboratory activities.	( )	5 4 3 2 1
4. To establish workshop in order to design and assemble equipment for fabricating new apparatus for supporting instructional programmes.	( )	5 4 3 2 1
5. To provide more opportunities to students for independent laboratory activities.	( )	5 4 3 2 1
6. To make efforts to enrich, modernise and update the syllabi	( )	5 4 3 2 1
7. To make optimum use of common facilities such as stationery, cyclostyling and audio-visual equipment etc.	( )	5 4 3 2 1
8. To provide opportunity to students for practical orientation in discipline.	( )	5 4 3 2 1

(Continued ...)

(Appendix A - 1)

Objectives of COSIP and COHSSIP	Column I	Column II
9. To enrich the library with relevant advanced books and journals and to make best use of it.	( )	5 4 3 2 1
10. To develop self-study habits among the students.	( )	5 4 3 2 1
11. To develop question bank in each discipline containing objective type, short answer type and essay type questions.	( )	5 4 3 2 1
12. To introduce internal assessment.	( )	5 4 3 2 1
13. To design and set tests according to new techniques of examination.	( )	5 4 3 2 1
14. To make arrangement for remedial teaching for academically weaker students.	( )	5 4 3 2 1
15. To develop special programmes for gifted students to enable them to develop their innate talents.	( )	5 4 3 2 1
16. To extend the programme for guest lectures.	( )	5 4 3 2 1
17. To extend the facilities of workshop repair centre to neighbouring institutions.	( )	5 4 3 2 1
18. To introduce job-oriented courses within the framework of the existing curriculum	( )	5 4 3 2 1
19. To start interdepartmental and inter-collegiate programmes to uplifting education at the undergraduate level.	( )	5 4 3 2 1
20. To send teachers to advanced learning Centres for refresher courses.	( )	5 4 3 2 1

## APPENDIX - A-2

REALISATION OF THE OBJECTIVES OF COSIP  
AND COHSSIPQuestionnaire for Principals and  
Teachers

To realise the accepted objectives of COSIP and COHSSIP changes have been introduced in different aspects of academic programmes such as methods of instruction, instructional material, utilisation of library facilities, practical orientation in discipline, guest lectures, remedial teaching programme for academically weaker students, special programmes for gifted students, evaluation procedure - question bank and internal assessment, revision of syllabi, publication of news bulletin, job-oriented courses etc. It is requested to you to indicate the various activities initiated for the realisation of accepted objectives of COSIP and COHSSIP.

1. Methods of Instruction

(1) A list of methods of instruction is given in table A.

Please check and put a tick mark ( ✓ ) against each method of instruction according to the following instructions :

- (i) Those were being practised by you prior to the introduction of the programme in Column I.
- (ii) Those you are practising at present in Column II.
- (iii) Frequency of practising them in column III.
- (iv) Average duration of the class in Column IV.
- (v) Average number of students in a group or class in column V.
- (vi) Percentage of students participating in discussions during seminars, tutorials, group discussion and symposia in column VI.

TABLE - A  
METHODS OF INSTRUCTION

Methods of Instruction	Column I Practised Prior to the Instruction of the Programme	Column II Practising at Present	Column III Frequency of Practising at Present	Column IV Average Duration of the Class	Column V Average No. of students in Class or Group	Column VI Students Participating in Discussions During, Seminars, Tutorials Group Discussions & Symposia
1. Lecture		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
2. Assignment		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
3. Seminar		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
4. Tutorial		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
5. Group Discussion		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
6. Symposium		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
7. Workshop Activities		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
8. Project		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%
9. Laboratory Activities		Per Month	Per Week	More than one hour	Over 50, Between 25-50, Below 25	Over 60%, Between 31%-60%, Below 30%

1. Lecture

2. Assignment

3. Seminar

4. Tutorial

5. Group Discussion

6. Symposium

7. Workshop Activities

8. Project

9. Laboratory Activities

=====

2. (a) Do you supply the duplicated bibliographical notes and lecture abstracts in connection with your class lecture course in advance to the students ? Yes / No
- (b) If the answer to question 2.(a) is 'Yes', do you assess the students' preparation based on duplicated bibliographical notes and lecture abstracts in the class ? Always/Often/Occasionally/  
Seldom/Never
- (c) How do you assess the students' preparation in the class ? ( Check more than one )
- (i) By probing questions ( )
- (ii) By inviting their queries ( )
- (iii) By asking them to recall the topic in a nutshell ( )
- (d) To what extent are the duplicated bibliographical notes and lecture abstracts helpful to students in :
- |  | To a<br>great<br>extent | To much<br>extent | To<br>some<br>extent | To a<br>litt-<br>le<br>extent | Not<br>at<br>all |
|--|-------------------------|-------------------|----------------------|-------------------------------|------------------|
| (i) exploring library resources ?                    | ( )                     | ( )               | ( )                  | ( )                           | ( )              |
| (ii) making a choice of book's edition and content ? | ( )                     | ( )               | ( )                  | ( )                           | ( )              |
| (iii) preparing their own notes in detail ?          | ( )                     | ( )               | ( )                  | ( )                           | ( )              |
| (iv) studying the subject-matter in depth ?          | ( )                     | ( )               | ( )                  | ( )                           | ( )              |
3. Do you project your lecture on screen through visual aids ?
- (i) Most of the lecture ( )
- (ii) A summary or part of it ( )
- (iii) Figures, diagrams, formulae, or phrases only ( )
- (iv) None of the lecture ( )
4. (a) What type of questions do you ask the students in assignments ? ( Check more than one )
- (i) Objective type ( )
- (ii) Short answer type ( )
- (iii) Essay type ( )
- (iv) All the above three types of questions ( )

- (b) Do the students submit the assignments after completion ? Yes/No
- (c) After going through the assignments do you :
- (i) return them with written correction or criticism but without oral discussion ? ( )
- (ii) discuss them orally in general to the students ? ( )
- (iii) Both the above ( )
- (d) To what extent are the assignments helpful to the students in developing the habits of :
- |   | To a<br>great<br>extent | To much<br>extent | To some<br>extent | To a<br>little<br>extent | Not at<br>all |
|---|-------------------------|-------------------|-------------------|--------------------------|---------------|
|   | _____                   | _____             | _____             | _____                    | _____         |
| (i) expressing independently?                               | ( )                     | ( )               | ( )               | ( )                      | ( )           |
| (ii) answering in a precise and orderly manner ?            | ( )                     | ( )               | ( )               | ( )                      | ( )           |
| (iii) organising and interpreting the facts systematically? | ( )                     | ( )               | ( )               | ( )                      | ( )           |
| (iv) summarising different thoughts critically?             | ( )                     | ( )               | ( )               | ( )                      | ( )           |
5. (a) Do you organise seminars based on classroom lectures ? Yes / No
- (b) By whom are the seminar sessions chaired ?  
(Check more than one )
- (i) By teachers ( )
- (ii) By outsider ( guest expert ) ( )
- (iii) By students ( )
- (iv) Any one of the above three ( )
- (c) How are the seminar proceedings recorded ?
- (i) By students ( )
- (ii) By teachers ( )
- (iii) By both ( )
- (d) Does the speaker supply duplicated material about the topic in the seminar ?
- Always/Often/Occasionally/Seldom/Never

- (e). Are the seminar sessions marked by
- (i) majority participation in the discussion ? ( )
  - (ii) domination by a few ? ( )
  - (iii) domination by one member participant ? ( )
  - (iv) domination by speaker himself ? ( )
6. (a) Do you organise tutorials based on class lectures ? Yes / No
- (b) Are the tutorial periods for solving students':
- (i) academic problems ? ( )
  - (ii) personal problems ? ( )
  - (iii) both ( )
7. (a) How do you appoint the group leader in a group discussion session ?
- (i) Randomly ( )
  - (ii) Based on merit ( )
  - (iii) Through election ( )
  - (iv) Through rotation as per attendance, rolls ( )
- (b) Do you confine the discussion
- (i) strictly to the topic ( )
  - (ii) Allowing enough flexibility to introduce new ideas from other disciplines when such a step promises to be fruitful ( )
8. (a) How many students do you invite in a symposium to present their points of view on a topic ?
- Four or /Three / Two  
more
- (b) How do you organise a symposium ?
- (i) By delivering short speeches ( )
  - (ii) By reading brief papers ( )
  - (iii) By combining both the techniques ( )
- (c) After delivering short speeches or reading brief papers do you throw open the topic for group discussion ? Yes / No

9. To what extent are the discussion methods such as seminar, tutorial, group discussion and symposium helpful to students in :

	To a great extent	To much extent	To some extent	To a little extent	Not at all
(i) supplementing class lecture?	( )	( )	( )	( )	( )
(ii) discussing difficult topics?	( )	( )	( )	( )	( )
(iii) exchanging different view points ?	( )	( )	( )	( )	( )
(iv) gaining experience to present the papers ?	( )	( )	( )	( )	( )
(v) facing interrogation ?	( )	( )	( )	( )	( )
(vi) developing power of expression ?	( )	( )	( )	( )	( )
(vii) arranging the content of the paper logically and sequentially ?	( )	( )	( )	( )	( )
(viii) revising the reports or papers through suggestions made by the groups ?	( )	( )	( )	( )	( )

10. Below is given a list of activities which can be conducted in workshop. Please put a tick mark (✓) : (a) in column I against each of the activities for which you provide opportunities to students to conduct in workshop : (b) To what extent are the students able to make use of acquired skills for conducting such activities in column II ?

Activities	Col. I	Column II				
		To a great extent	To much extent	To some extent	To a little extent	Not at all
i) Preparing charts, maps, diagrams, sketches, models etc.	( )	( )	( )	( )	( )	( )
ii) Repairing and improvising the apparatus	( )	( )	( )	( )	( )	( )
iii) Designing and assembling equipment for new apparatus	( )	( )	( )	( )	( )	( )
iv) Operating electrical gadgets	( )	( )	( )	( )	( )	( )

11. (a) What is the form of small research projects undertaken by the students ? ( Check more than one ).

- (i) Survey ( )  
(ii) Historical ( )  
(iii) Biographical with relevance to modern times ( )  
(iv) Designing and assembling equipment for new apparatus ( )  
(v) Experimental verification of laws or hypotheses ( )

(b) Do you follow the practice of supplying an instruction sheet pertaining to the projects to students ? Yes / No

(c) How do the students finalise the projects ?

- (i) After exploring the sources of information ( )  
(ii) After group discussion ( )  
(iii) After going through above both the processes ( )

(d) To what extent are the small research projects helpful in :

	To a great extent	To much extent	To some extent	To a little extent	Not at all
--	-------------------------	----------------------	----------------------	--------------------------	------------------

- |   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
| (i) enabling the students to adopt a scientific procedure for solving the problems ?                        | ( ) | ( ) | ( ) | ( ) | ( ) |
| (ii) enabling the students to apply appropriate techniques for taking observations/collecting data ?        | ( ) | ( ) | ( ) | ( ) | ( ) |
| (iii) enabling the students to tabulate and analyse the data or observations mathematically/statistically ? | ( ) | ( ) | ( ) | ( ) | ( ) |
| (iv) enabling the students to verify and generalise the results ?   | ( ) | ( ) | ( ) | ( ) | ( ) |

12. A : Note : The question 12 A is only for English Language Group

- (a) Do you have the facilities of language laboratory in your department ? Yes / No
- (b) If the answer to question 12A.(a) is 'Yes', please put a tick mark ( ✓ ) in Column I against each of the items pertaining to students' learning which you supervise in language laboratory as mentioned in the table given below.
- (c) To what extent are the students' conversation modified with regard to the learning mentioned in the table given below ? ( Please put a tick mark ( ✓ ) against each of the items in Column II ).

Students' learning through language laboratory	Col. I	Column II				
		To a great extent	To much extent	To some extent	To a little extent	Not at all
i) Pronunciation	( )	( )	( )	( )	( )	( )
ii) Pacing	( )	( )	( )	( )	( )	( )
iii) New words	( )	( )	( )	( )	( )	( )
iv) Fluency	( )	( )	( )	( )	( )	( )
v) Appropriateness of words	( )	( )	( )	( )	( )	( )

12. B : The question 12 (B) is meant only for Natural Science and Social Sciences ( Geography and Psychology ) groups.

- (a) Do you provide the opportunity to students for independent laboratory activities ? Yes/No
- (b) If the answer to question 12(B) 'a' is 'Yes' to what extent are the students able to make use of acquired skills in :
- |  | To a great extent | To much extent | To some extent | To a little extent | Not at all |
|--|-------------------|----------------|----------------|--------------------|------------|
| i) checking the working conditions of apparatus and tools ?    | ( )               | ( )            | ( )            | ( )                | ( )        |
| ii) rectifying defects of apparatus in laboratory situations ? | ( )               | ( )            | ( )            | ( )                | ( )        |
| iii) improvising apparatus if necessary ?                      | ( )               | ( )            | ( )            | ( )                | ( )        |
| iv) sketching the arrangement of the apparatus at the outset ? | ( )               | ( )            | ( )            | ( )                | ( )        |

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	<u>To a great extent</u>	<u>To much extent</u>	<u>To some extent</u>	<u>To a little extent</u>	<u>Not at all</u>
v) setting up apparatus with ease ?	( )	( )	( )	( )	( )
vi) taking measurements and reading instruments accurately and checking their observation at every stage?	( )	( )	( )	( )	( )
vii) taking precautions in handling instruments and doing experiments ?	( )	( )	( )	( )	( )
viii) performing experiment with reasonable speed and accuracy so as to complete it in time?	( )	( )	( )	( )	( )
ix) performing experiment with neatness ?	( )	( )	( )	( )	( )
x) dismantling and cleaning the apparatus and putting them in proper place ?	( )	( )	( )	( )	( )
xi) tabulating observations meaningfully ?	( )	( )	( )	( )	( )
xii) summarising observations leading to generations ?	( )	( )	( )	( )	( )
xiii) representing observations by diagrams or graphs ?	( )	( )	( )	( )	( )
xiv) calculating and finalising the results mentioning units?	( )	( )	( )	( )	( )

## 2. Library and Audio-Visual Aids

1.(a) Please put a tick mark (✓) against the availability of library facilities and staff indicating more than adequate and inadequate in the table given below:

Library facilities and staff	More than adequate	Adequate	Inadequate
(i) Books	( )	( )	( )
(ii) Journals	( )	( )	( )
(iii) Seating arrangement	( )	( )	( )
(iv) Library Staff	( )	( )	( )



- (c) Please check and put a tick mark (✓) against each of the equipment indicating their availability as mentioned in the table given below :

Equipment	Film Projector	Slide Projector	Overhead Projector	Epidia- scope	Tape- recorder	Lingua- phone
Availability	( )	( )	( )	( )	( )	( )

- (d) When you make use of audio-visual aids such as charts, maps, diagrams, sketches, models, films, filmstrips, slides, cassette tapes, sound records etc., do you follow the practice of ( Check more than one ) :

- i) making introductory comments in advance ? ( )
- ii) explaining the meaning of new words ? ( )
- iii) providing an instruction sheet to students pertaining to the teaching points ? ( )
- iv) reviewing the key points at the end of the session ? ( )

- (e) After using audio-visual aids which of the follow-up activities do you conduct ? ( Check more than one )

- i) objective type tests ( )
- ii) Verbalisation of the content ( )
- iii) discussion ( )
- iv) Assignments ( )
- v) Any other ( )

- (f) To what extent are the audio-visual aids help to students in :

- |  | To a<br>great<br>extent | To<br>much<br>extent | To<br>some<br>extent | To a<br>little<br>extent | Not<br>at<br>all |
|--|-------------------------|----------------------|----------------------|--------------------------|------------------|
| i) preparing reports based on taped lectures ?                                   | ( )                     | ( )                  | ( )                  | ( )                      | ( )              |
| ii) listening to recorded lectures borrowed from abroad or other departments?    | ( )                     | ( )                  | ( )                  | ( )                      | ( )              |
| iii) understanding working conditions in various vocations in India and abroad ? | ( )                     | ( )                  | ( )                  | ( )                      | ( )              |
| iv) understanding conditions in far off countries or lands ?                     | ( )                     | ( )                  | ( )                  | ( )                      | ( )              |

3. Do you consider that teaching in your department is handicapped in any way by inadequacies in accommodation facilities and if so, in which of the following ways ?

Types of Rooms	Not handi- capped room	Handicapped by		
		Not enough small	Rooms for small	Rooms otherwise unsatisfactory e.g. ventilation etc.
i) Lectures				
ii) Tutorials, seminars, group discussions and symposia				
iii) Workshop activities				
iv) Demonstration				
v) Audio-Visual Aids				
vi) Laboratory activities				

#### 4. Field Trips

1. Below is given a list of significant locations where field trips can be organised for providing the students practical orientation in disciplines. Please check and put a tick mark (✓) : (a) in Column I against each of the locations where you have organised field trips in your discipline ; and (b) their frequency of organisation per year in Column II.

Locations for Organisation of Field Trips	Col. I	Column II		
		Three or More times	Two Times	Once
i) Rural areas	( )	( )	( )	( )
ii) Social service centres, panchayat ghar, municipal corporation, hospital etc.	( )	( )	( )	( )
iii) Places of historical importance	( )	( )	( )	( )
iv) Commercial centres	( )	( )	( )	( )
v) Industrial centres	( )	( )	( )	( )
vi) Botanical gardens	( )	( )	( )	( )
vii) Ponds / sea shore	( )	( )	( )	( )
viii) Instrumentation centres	( )	( )	( )	( )
ix) Laboratories of national importance	( )	( )	( )	( )

- (c) To what extent are the field trips helpful to the students in :

	<u>To a great extent</u>	<u>To much extent</u>	<u>To some extent</u>	<u>To a little extent</u>	<u>Not at all</u>
i) relating theoretical aspects of study to practical realities of life ?	( )	( )	( )	( )	( )
ii) gaining experience about the advancements in the discipline ?	( )	( )	( )	( )	( )
iii) making them aware of the resources and advancements of the country ?	( )	( )	( )	( )	( )
iv) analysing problems and drawing conclusions ?	( )	( )	( )	( )	( )

#### 5. Guest Lectures

1. (a) Have you organised guest lectures in your discipline ?  
Yes / No

- (b) If the answer to question 1.(a) is 'yes' to what extent are the guest lectures helpful to the students in :

	<u>To a great extent</u>	<u>To much extent</u>	<u>To some extent</u>	<u>To a little extent</u>	<u>Not at all</u>
i) understanding fundamental concepts in a discipline ?	( )	( )	( )	( )	( )
ii) getting acquainted with the recent developments in a discipline ?	( )	( )	( )	( )	( )
iii) understanding interrelationship among different disciplines ?	( )	( )	( )	( )	( )
iv) taking up small research projects based on interdisciplinary approach ?	( )	( )	( )	( )	( )

#### 6. Remedial Teaching for Academically Weaker Students

1. Below is given a list of remedial teaching programmes which can be organised for academically weaker students.

Please check and put a tick mark (✓) : (a) in column I, against each of the remedial teaching programme which you have organised for academically weaker students; and (b) to what extent have they been benefitted by such programmes in Column II ?

Remedial Teaching Programme	Col. I	Column II				
		To a great extent	To much extent	To some extent	To a little extent	Not at all
i) Programme of individual coaching outside the class	( )	( )	( )	( )	( )	( )
ii) Arrangement for extra periods of instruction	( )	( )	( )	( )	( )	( )
iii) Programme of providing graded bibliographical notes and lecture abstracts	( )	( )	( )	( )	( )	( )
iv) Programme of providing easy and direct assignments	( )	( )	( )	( )	( )	( )

### 7. Special Programmes for Gifted Students

1. Observing the gifted students in the classroom, it is found that they can be broadly, classified into three categories, viz., highly academic achievers, highly skilled in organisational works and highly skilled in manipulative activities.

Below is given a list of special activities which can be organised for gifted students. Please check and put a tick mark ( ✓ ) : (a) in Column I against each of the special programmes which you organise for gifted students; and (b) to what extent do they contribute towards the success of the programmes in column II ?

Special Programmes for Gifted Students	Col. I	Column II				
		To a great extent	To much extent	To some extent	To a little extent	Not at all
i) Developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.	( )	( )	( )	( )	( )	( )
ii) Designing and assembling equipment for new apparatus.	( )	( )	( )	( )	( )	( )
iii) Improvising and repairing instruments	( )	( )	( )	( )	( )	( )
iv) Operating electrical gadgets	( )	( )	( )	( )	( )	( )
v) Preparing model answers for selected questions	( )	( )	( )	( )	( )	( )
vi) Assisting weaker students in their study	( )	( )	( )	( )	( )	( )
vii) Making arrangement of field trips	( )	( )	( )	( )	( )	( )
viii) Organising : (a) guest lectures	( )	( )	( )	( )	( )	( )
(b) departmental seminars	( )	( )	( )	( )	( )	( )
(c) Interdepartmental seminars	( )	( )	( )	( )	( )	( )
(d) Intercollegiate seminars	( )	( )	( )	( )	( )	( )

8. Evaluation Procedure

## 1. Question Bank :

1. (a) Have you developed question bank in your discipline ? Yes/No

(b) If the answer to question 1(a) is 'Yes', what type of questions do you frame in your discipline for the question bank ? ( Check more than one )

(i) Objective type ( )

(ii) Short answer type ( )

(iii) Essay type ( )

(iv) All the above three types ( )

(c) Who contributes questions for the enrichment of question bank ?

(i) Staff-members of the same discipline of the college ( )

(ii) Staff-members of the same discipline from neighbouring institutions ( )

(iii) Both the above ( )

(d) Do you analyse the items of the question bank in terms of :

(i) difficulty level of items ? ( )

(ii) discriminatory value of items ? ( )

(iii) Both the above values ( )

(e) Do you revise the items of question bank ?

Always/Often/Occasio- /Sel- /Never  
nally dom

(f) When do you supply questions from the bank among the students ?

(i) In advance of each unit ( )

(ii) At the end of each unit ( )

(iii) After finishing 50% of the course ( )

(iv) At the end of the course ( )

(v) Not at all ( )

(g) To what extent is the question bank helpful to students in :

	<u>To a</u> great extent	<u>To</u> much extent	<u>To</u> some extent	<u>To a</u> little extent	<u>Not</u> at all
(i) presenting a comprehensive picture of the syllabus ?	( )	( )	( )	( )	( )
(ii) developing the habits of studying the subject-matter in depth ?	( )	( )	( )	( )	( )
(iii) making them understand questions in examination easily ?	( )	( )	( )	( )	( )
(iv) getting them acquainted with a variety of questions ?	( )	( )	( )	( )	( )
(v) providing them opportunity to discuss difficult questions with (a) the teachers	( )	( )	( )	( )	( )
(b) the students	( )	( )	( )	( )	( )

## 2. Internal Assessment

1. (a) What type of internal assessment procedure do you follow ?

- (i) following the university situation of adding a percentage of marks to the final examination marks ( )
  - (ii) by awarding a certificate of the institution without the credit marks which could be added to the final examination ( )
  - (iii) Both the above ( )
- (b) Do you assess the students' performance on the basis of (check more than one) :
- (i) Assignments ? ( )
  - (ii) Seminars ? ( )
  - (iii) tutorials ? ( )
  - (iv) group discussions ? ( )
  - (v) symposia ? ( )
  - (vi) Quizzes ? ( )
  - (vii) periodic tests ? ( )
  - (viii) designing and assembling equipment for new apparatus ? ( )
  - (ix) repairing and improvising the apparatus ? ( )
  - (x) Any other ( )

(c) To what extent is the internal assessment helpful to students in:

	<u>To a</u> great <u>extent</u>	<u>To</u> much <u>extent</u>	<u>To</u> some <u>extent</u>	<u>To a</u> little <u>extent</u>	<u>Not</u> at <u>all</u>
(i) developing regular study habits ?	( )	( )	( )	( )	( )
(ii) ensuring better assessment of their performance ?	( )	( )	( )	( )	( )
(iii) improving their marks or grades ?	( )	( )	( )	( )	( )
(iv) guiding the preparation for subsequent periodic tests ?	( )	( )	( )	( )	( )
(v) providing them opportunity for exposing in a variety of situations ?	( )	( )	( )	( )	( )
(vi) enabling them to reduce undue emphasis on the final examination ?	( )	( )	( )	( )	( )

#### 9. Revision and Enrichment of the Syllabus

1. (a) Has your department attempted to revise and enrich the syllabus in your discipline ? Yes / No
- (b) If the answer to question 1.(a) is 'Yes', who were the members of the committee revising syllabus ? ( Check more than one )
  - (i) Experts in the discipline ( )
  - (ii) Staff members of the college in the discipline ( )
  - (iii) Staff members of the neighbouring institutions in the discipline ( )
  - (iv) All the above three ? ( )
- (c) How much time did the university take for approving the revised syllabus ?
  - (i) One year or more ( )
  - (ii) Between 8 months and one year ( )
  - (iii) Between 4 months and 8 months ( )
  - (iv) 4 months or less ( )

(d) To what extent was the revised syllabus accepted by the university ?

- (i) 75 percent of more ( )  
 (ii) Between 50 percent and 75 percent ( )  
 (iii) Between 25 percent and 50 percent ( )  
 (iv) 25 percent or below ( )  
 (v) Not at all ( )

(e) To what extent has the revised syllabus attempted :

- |  | <u>To</u><br>great<br>extent | <u>To</u><br>much<br>extent | <u>To</u><br>some<br>extent | <u>To a</u><br>little<br>extent | <u>Not</u><br>at<br>all |
|--|------------------------------|-----------------------------|-----------------------------|---------------------------------|-------------------------|
| (i) to impart upto date knowledge ?                                    | ( )                          | ( )                         | ( )                         | ( )                             | ( )                     |
| (ii) to provide more opportunities for independent study to students ? | ( )                          | ( )                         | ( )                         | ( )                             | ( )                     |
| (iii) to include more job-oriented units ?                             | ( )                          | ( )                         | ( )                         | ( )                             | ( )                     |
| (iv) to bridge the gap between theory and practice ?                   | ( )                          | ( )                         | ( )                         | ( )                             | ( )                     |

#### 10. Publication of News Bulletin

1. (a) Has your department/institution started to publish news bulletin in your discipline ? Yes / No

(ii) If the answer to question 1(a) is 'Yes', please mention the name of the news bulletin :

(b) What is the frequency of publication of news bulletin ?

- (i) Yearly ( )  
 (ii) Half yearly ( )  
 (iii) Quarterly ( )  
 (iv) Monthly ( )

(c) Who contributes articles for news bulletin ? (Check more than one )

- (i) Scholars of other institutions ( )  
 (ii) Teachers of the institution only ( )  
 (iii) Students of the institution only ( )  
 (iv) All the above three ( )

(d) In which language it is published ?

- (i) English ( )  
(ii) Vernacular ( )  
(iii) Both ( )

(e) To what extent is the news bulletin helpful to students in:

- |  | <u>To a</u>   | <u>To</u>     | <u>To</u>     | <u>To a</u>   | <u>Not</u> |
|--|---------------|---------------|---------------|---------------|------------|
|  | <u>great</u>  | <u>much</u>   | <u>some</u>   | <u>little</u> | <u>at</u>  |
|  | <u>extent</u> | <u>extent</u> | <u>extent</u> | <u>extent</u> | <u>all</u> |
| (i) enabling them to understand the language of the journal ?  | ( )           | ( )           | ( )           | ( )           | ( )        |
| (ii) preparing an abstract of an article/ research paper of the journal ?  | ( )           | ( )           | ( )           | ( )           | ( )        |
| (iii) Substantiating by research evidences the papers prepared for seminars, tutorials, group discussions and symposia ? | ( )           | ( )           | ( )           | ( )           | ( )        |
| (iv) developing skills for contributing articles to the journals ?   | ( )           | ( )           | ( )           | ( )           | ( )        |

#### 11. Job Oriented Courses

1.a(i) Have you started job oriented courses in your discipline ?

Yes/No

(ii) If the answer to 1(a)i, is 'Yes', please mention the name of job-oriented courses :

(b) To what extent do these job-oriented courses :

- |   | <u>To a</u>   | <u>To</u>     | <u>To</u>     | <u>To a</u>   | <u>Not</u> |
|---|---------------|---------------|---------------|---------------|------------|
|   | <u>great</u>  | <u>much</u>   | <u>some</u>   | <u>little</u> | <u>at</u>  |
|   | <u>extent</u> | <u>extent</u> | <u>extent</u> | <u>extent</u> | <u>all</u> |
| (i) help the students in getting acquainted with the nature and conditions of preferred vocations ? | ( )           | ( )           | ( )           | ( )           | ( )        |
| (ii) form the basis of a particular vocation ?  | ( )           | ( )           | ( )           | ( )           | ( )        |
| (iii) lead the students towards self-employment ?   | ( )           | ( )           | ( )           | ( )           | ( )        |
| (iv) make the students appreciate the dignity of labour ?   | ( )           | ( )           | ( )           | ( )           | ( )        |

12. To what extent are the COSIP and COHSSIP helpful to the students in :

	<u>To a</u> <u>great</u> <u>extent</u>	<u>To</u> <u>much</u> <u>extent</u>	<u>To</u> <u>some</u> <u>extent</u>	<u>To a</u> <u>little</u> <u>extent</u>	<u>Not</u> <u>at</u> <u>all</u>
(i) improving their marks or grades in the final examination ?	( )	( )	( )	( )	( )
(ii) getting them positions in the university examination ?	( )	( )	( )	( )	( )
(iii) getting them positions in competitive examinations such as I.A.S., I.P.S., Engineering, Banking etc. ?	( )	( )	( )	( )	( )
(iv) enabling them to face the interviews for jobs confidently ?	( )	( )	( )	( )	( )
(v) enabling them to get a job ?	( )	( )	( )	( )	( )

## APPENDIX A - 3

PROBLEMS FACED BY THE PRINCIPALS IN IMPLEMENTING COSIP AND  
COHSSIP

(Questionnaire)

(For Principals only)

Dear Madam/Sir,

This is an attempt to get a better perspective of the problems faced by the institutions in implementing COSIP and COHSSIP. Below a few statements pertaining to various types of problems are given : You are requested to encircle the appropriate response against each of the statements showing the intensity of agreement or disagreement to the problem according to following key :

Strongly agree = 5 ; Agree = 4 ; Undecided = 3 ;  
Disagree = 2 ; Strongly disagree = 1.

- 
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Most of the teachers are unfamiliar with modern methods of instruction.                             | 5 | 4 | 3 | 2 | 1 |
| 2. The teachers are not interested in doing extra work.  | 5 | 4 | 3 | 2 | 1 |
| 3. The teachers expect remuneration for doing extra work.  | 5 | 4 | 3 | 2 | 1 |
| 4. There is a lack of motivation among the teachers for organising varied activities.                  | 5 | 4 | 3 | 2 | 1 |
| 5. The teachers do not guide the students in the library.  | 5 | 4 | 3 | 2 | 1 |
| 6. There is a rival group in the staff who creates hinderance in the implementation of any innovation. | 5 | 4 | 3 | 2 | 1 |
| 7. Library facilities are not properly utilised by the students.                                       | 5 | 4 | 3 | 2 | 1 |
| 8. Books are stolen from the library.  | 5 | 4 | 3 | 2 | 1 |
| 9. There is a lack of motivation among the students for participating in various activities            | 5 | 4 | 3 | 2 | 1 |

(Continued...)

10. The students are more examination oriented, hence, offer little cooperation for non-graded activities. 5 4 3 2 1
  11. The students are not interested to study beyond university prescribed syllabus. 5 4 3 2 1
  12. The university's rigid curriculum does not allow the introduction of any innovative activity. 5 4 3 2 1
  13. The U.G.C. does not disburse the grants in time. 5 4 3 2 1
  14. There is an unsatisfactory teacher-student ratio. 5 4 3 2 1
  15. There is a lack of physical facilities for performing various types of activities. 5 4 3 2 1
  16. There are constraints in adjusting various programmes in daily routine time-table. 5 4 3 2 1
-

## APPENDIX A - 4

CENTRE OF ADVANCED STUDY IN EDUCATION  
 Faculty of Education and Psychology  
 M.S. University of Baroda  
 Baroda - 390 002

QuestionnaireFor Students Only

Dear Friends,

One of the major objectives of higher education is to develop self - study habits among the students. For achieving this objective and for raising the standards of higher education, the University Grants Commission has introduced COSIP and COHSSIP in selected colleges of India. Yours is one of them.

Various activities have been organised under COSIP / COHSSIP by your college such as distribution of duplicated material, provision of assignments, organisation of discussion methods such as seminars, tutorials, group discussions, symposia, organisation of workshop activities, project work, provision of independent laboratory activities, practical orientation in disciplines, arrangement for guest lectures, remedial teaching programme, special programmes for gifted students, development of question bank, introduction of internal assessment, revision of syllabus, publication of news bulletin, job-oriented courses etc.

This is an attempt to find out your reactions about the effectiveness of the activities organised under COSIP and COHSSIP with the aid of a questionnaire. The questionnaire has been divided into two sections (A) and (B). There are 18 items in all ; the section (A) contains 14 items ; and the section (B) contains 4 items. The activities in section (A) are common for all the students whereas the activities in section (B) are related to laboratory, remedial teaching programme and special programmes for gifted students. You are requested to put a tick mark ( ✓ ) against the activities in which you participate; if some of the activities

are not organised by your institution leave the responses blank against those items. This may take 40 minutes of your valuable time. Kindly oblige me by sparing this time.

The information supplied by you will be kept confidential and will be used only for research purposes.

Cordially Yours

R.P. Jain

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PERSONAL DATA SHEET

1. Name of the respondents ( if you like ) : \_\_\_\_\_
  2. Class and year in which you are studying : \_\_\_\_\_
  3. Sex : (i) Male ( ) ; (ii) Female ( )
  4. Name of the College : \_\_\_\_\_
  5. Subjects offered at the undergraduate level : \_\_\_\_\_
-

STUDENTS' REACTIONS TOWARDS THE ACTIVITIES OF  
COSIP AND COHSSIP  
(Questionnaire)

Below a few items pertaining to the activities of COSIP and COHSSIP are given. You are requested to encircle the appropriate response against each of the items of the activities initiated by your institution according to the following key :

To a great extent = 5 ; To much extent = 4 ; To some extent=3;  
To a little extent = 2 ; Not at all = 1

If some of the activities are not initiated by your institution, leave the responses blank againse those items.

SECTION \* A

1. To what extent are the duplicated bibliographical notes and lecture abstracts helpful to you in :
  - i) exploring library resources ? 5 4 3 2 1
  - ii) making a choice of a book's edition and content ? 5 4 3 2 1
  - iii) preparing your own notes in detail ? 5 4 3 2 1
  - iv) studying the subject-matter in depth ? 5 4 3 2 1
  
2. To what extent are the assignments helpful to you in developing the habits of :
  - i) expressing independently ? 5 4 3 2 1
  - ii) answering in a precise and orderly manner ? 5 4 3 2 1
  - iii) organising and interpreting the facts systematically ? 5 4 3 2 1
  - iv) summarising different thoughts critically ? 5 4 3 2 1
  
3. To what extent are the discussion methods such as seminars, tutorial, group discussion and symposium helpful to you in :
  - i) supplementing class lecture ? 5 4 3 2 1
  - ii) discussing difficult topics ? 5 4 3 2 1
  - iii) exchanging different view point ? 5 4 3 2 1
  - iv) gaining experience to present the papers ? 5 4 3 2 1
  - v) facing interrogation ? 5 4 3 2 1

(Continued...)

- vi) developing power of expression ? 5 4 3 2 1
- vii) arranging the content of the paper logically and sequentially ? 5 4 3 2 1
- viii) revising the reports or papers through the suggestions made by the group ? 5 4 3 2 1
4. To what extent are the workshop activities helpful to you in developing the skills of :
- i) preparing charts, diagrams, sketches, maps, models etc. 5 4 3 2 1
- ii) repairing and improvising the apparatus ? 5 4 3 2 1
- iii) designing and assembling equipment for new apparatus ? 5 4 3 2 1
- iv) operating electrical gadgets ? 5 4 3 2 1
5. To what extent are the small research projects helpful to you in ?
- i) adopting a scientific procedure for solving problems ? 5 4 3 2 1
- ii) applying appropriate techniques for taking observations/collecting data ? 5 4 3 2 1
- iii) tabulating and analysing the data mathematically/statistically ? 5 4 3 2 1
- iv) verifying and generalising the results ? 5 4 3 2 1
6. To what extent do you make use of library facilities in :
- i) collecting bibliographical notes ? 5 4 3 2 1
- ii) completing assignments ? 5 4 3 2 1
- iii) preparing papers for seminars, tutorials, group discussions, and symposia ? 5 4 3 2 1
- iv) preparing project reports/revising discussion papers ? 5 4 3 2 1
7. To what extent are the audio-visual aids ( except than blackboard) such as charts, maps, diagrams, sketches, models, films, filmstrips, slides, radio, T.V. etc., are helpful to you in :
- i) preparing reports based on taped lectures ? 5 4 3 2 1
- ii) listening to recorded lectures borrowed from abroad or other departments ? 5 4 3 2 1
- iii) understanding working conditions in various vocations in India and abroad? 5 4 3 2 1
- iv) understanding conditions in far off countries or lands ? 5 4 3 2 1

8. To what extent are field trips in <sup>your</sup> discipline helpful to you in :
- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| i) relating theoretical aspects of study to practical realities of life ? | 5 | 4 | 3 | 2 | 1 |
| ii) gaining experience about the advancements in the discipline ?         | 5 | 4 | 3 | 2 | 1 |
| iii) making aware of the resources and advancements of the country ?      | 5 | 4 | 3 | 2 | 1 |
| iv) analysing problems and drawing conclusions ?                          | 5 | 4 | 3 | 2 | 1 |
9. To what extent are the guest lectures helpful to you in :
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| i) understanding fundamental concepts in a discipline ?                      | 5 | 4 | 3 | 2 | 1 |
| ii) getting acquainted with recent developments in a discipline ?            | 5 | 4 | 3 | 2 | 1 |
| iii) understanding the interrelationship among different disciplines ?       | 5 | 4 | 3 | 2 | 1 |
| iv) taking up small research projects based on inter-disciplinary approach ? | 5 | 4 | 3 | 2 | 1 |
10. To what extent is the question bank helpful to you in :
- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| i) presenting a comprehensive picture of the syllabus ?             | 5 | 4 | 3 | 2 | 1 |
| ii) developing the habits of studying the subject-matter in depth ? | 5 | 4 | 3 | 2 | 1 |
| iii) understanding questions in examination easily ?                | 5 | 4 | 3 | 2 | 1 |
| iv) getting acquainted with a variety of questions ?                | 5 | 4 | 3 | 2 | 1 |
| v) providing opportunity to discuss difficult questions with :      |   |   |   |   |   |
| (a) the teachers  | 5 | 4 | 3 | 2 | 1 |
| (b) the students  | 5 | 4 | 3 | 2 | 1 |
11. To what extent is the internal assessment helpful to you in :
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| i) developing regular study habits ?                               | 5 | 4 | 3 | 2 | 1 |
| ii) ensuring better assessment of your performance ?               | 5 | 4 | 3 | 2 | 1 |
| iii) improving grades or marks ?                                   | 5 | 4 | 3 | 2 | 1 |
| iv) guiding the preparation for the subsequent periodical tests ?  | 5 | 4 | 3 | 2 | 1 |
| v) providing opportunity for exposing in a variety of activities ? | 5 | 4 | 3 | 2 | 1 |
| vi) reducing undue emphasis on the final examination ?             | 5 | 4 | 3 | 2 | 1 |

12. To what extent does the revised syllabus :
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| i) impart upto date knowledge ?                        | 5 | 4 | 3 | 2 | 1 |
| ii) provide more opportunities for independent study ? | 5 | 4 | 3 | 2 | 1 |
| iii) include more job-oriented units ?                 | 5 | 4 | 3 | 2 | 1 |
| iv) bridge the gap between theory and practice?        | 5 | 4 | 3 | 2 | 1 |
13. To what extent is the news bulletin published by your department/institution in the concerned discipline helpful to you in :
- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| i) enabling to understand the language of the journals ?  | 5 | 4 | 3 | 2 | 1 |
| ii) preparing an abstract of an article/ research paper of the journal ?  | 5 | 4 | 3 | 2 | 1 |
| iii) substantiating by research & evidences the papers prepared for seminars, tutorials, group discussions and symposia ? | 5 | 4 | 3 | 2 | 1 |
| iv) developing skills for contributing articles to the journal ?  | 5 | 4 | 3 | 2 | 1 |
14. To what extent are the job-oriented courses in your discipline helpful to you in :
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| i) getting acquainted with the nature and conditions of preferred vocation ? | 5 | 4 | 3 | 2 | 1 |
| ii) forming the basis of a particular vocation ?                             | 5 | 4 | 3 | 2 | 1 |
| iii) leading towards self-employment ?                                       | 5 | 4 | 3 | 2 | 1 |
| iv) appreciating the dignity of labour ?                                     | 5 | 4 | 3 | 2 | 1 |

## SECTION \* B

In this section, there are four items pertaining to the activities of COSIP and COHSSIP. You are requested to encircle the appropriate response against each of the items of the activities in which you participate according to the instructions given.

1. (Note : This question is only for English Language group who avail the facilities of language laboratories.)

To what extent is the language laboratory helpful to you in :

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| i) modifying your pronunciation ?                 | 5 | 4 | 3 | 2 | 1 |
| ii) learning spaces between words and sentences ? | 5 | 4 | 3 | 2 | 1 |
| iii) learning new words ?                         | 5 | 4 | 3 | 2 | 1 |
| iv) developing fluency in speaking ?              | 5 | 4 | 3 | 2 | 1 |
| v) learning appropriateness of words ?            | 5 | 4 | 3 | 2 | 1 |

2. (Note : The question is only for Natural Science and Social Sciences - Geography and Psychology disciplines) groups and mainly for those students who have offered subjects at the undergraduate level in which laboratory activities are involved).

In performing laboratory activities independently to what extent are you able to make use of acquired skills in :

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| i) checking the working conditions of the apparatus and tools ?   | 5 | 4 | 3 | 2 | 1 |
| ii) rectifying defects of the apparatus in laboratory situations ?  | 5 | 4 | 3 | 2 | 1 |
| iii) improvising the apparatus if necessary ?   | 5 | 4 | 3 | 2 | 1 |
| iv) sketching the arrangement of the apparatus at the outset ?  | 5 | 4 | 3 | 2 | 1 |
| v) setting up apparatus with ease ?   | 5 | 4 | 3 | 2 | 1 |
| vi) taking measurement and reading instruments accurately and checking up their observation at every step ? | 5 | 4 | 3 | 2 | 1 |
| vii) taking precautions in handling instruments and doing experiments ?                                     | 5 | 4 | 3 | 2 | 1 |
| viii) performing the experiment with reasonable speed and accuracy so as to complete it in time ?           | 5 | 4 | 3 | 2 | 1 |
| ix) performing experiment with neatness ?   | 5 | 4 | 3 | 2 | 1 |
| x) dismantling and cleaning the apparatus and putting them in proper place ?                                | 5 | 4 | 3 | 2 | 1 |
| xi) tabulating observations meaningfully ?  | 5 | 4 | 3 | 2 | 1 |
| xii) summarising observations leading to generalisations ?  | 5 | 4 | 3 | 2 | 1 |
| xiii) representing observations by diagrams or graphs ?   | 5 | 4 | 3 | 2 | 1 |
| xvi) calculating and finalising the results mentioning units ?  | 5 | 4 | 3 | 2 | 1 |

3. Please put a tick mark ( ✓ ) against the remedial teaching programmes : (a) which you have attended in Column I; and (b) to what extent have you been benefitted by them in Column II ?

Remedial Teaching Programmes	Col. I	Col. II				
i) Programme of individual coaching outside the class	( )	5	4	3	2	1
ii) Arrangement for extra periods of instruction	( )	5	4	3	2	1
iii) Programme of providing graded bibliographical notes and lecture abstracts	( )	5	4	3	2	1
iv) Programme of providing easy and direct assignments	( )	5	4	3	2	1

4. Please put a tick mark (✓) against the special programmes:  
 (a) in which you are invited to participate in Column I ;  
 (b) to what extent do you contribute towards the success of  
 the programmes in Column II ?

Special Programmes	<u>Col. I</u>	<u>Column II</u>				
i) Developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.	( )	5	4	3	2	1
ii) Designing and assembling equipment for new apparatus	( )	5	4	3	2	1
iii) Improvising and repairing instru- ments	( )	5	4	3	2	1
iv) Operating electrical gadgets	( )	5	4	3	2	1
v) Preparing model answers for selected questions	( )	5	4	3	2	1
vi) Assisting weaker students in their study	( )	5	4	3	2	1
vii) Making arrangement of field trips	( )	5	4	3	2	1
viii) Organising :						
(a) guest lectures	( )	5	4	3	2	1
(b) departmental seminars	( )	5	4	3	2	1
(c) Interdepartmental seminars	( )	5	4	3	2	1
(d) intercollegiate seminars	( )	5	4	3	2	1