

NORTH-EASTERN HILL UNIVERSITY
Shillong - 793 001

AGENDA FOR THE NINETEENTH MEETING OF THE ACADEMIC COUNCIL

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Item No. 1. Confirmation of the Minutes of
the 18th meeting of the Academic
Council held from 26th to 28th
September, 1983 -

The Minutes of the 18th meeting of the Academic
Council held from 26th to 28th September, 1983, were already
circulated amongst the members recently. Due to limited period
of time for giving comments, if any, on the Minutes by the
members, the Office has requested the members to give comment,
if any, on the ensuing meeting of the Council scheduled to
be held from 24th to 26th November, 1983.

Item No. 2 REPORTING ITEMS :

(i) Research proposals for the M.Phil Degree -

The Board of Research Studies in Sciences in its meeting held on 10th October, 1983, had approved the research proposals for the M.Phil Degree of the following candidates :

<u>Name of candidates</u>	<u>Topics</u>
1. B. Jones Dhar	- "Data and information Base for Geographical Study of Meghalaya.
2. Mr. Bhabesh Ch.Choudhury	- "Morphometric Analysis of the Upper Kallyani River Basin, Mikir Hills, Assam".
3. Mr. P. Laskar	- "Evolution of Limestone Topography around Cherrapunjee".
4. Dambok B. Thabah	- "Techniques and problems of land use study in a Khasi Village".
5. Kanak Haloi	- "Concepts of landuse and ownership in the Khasi Hills".
6. Md. Hafiz Ali	- "Land use changes - A case study of Mangoldoi District(Assam)".
7. Girish Chandra Panda	- "Geomorphis study of Mawsynram Community Development Block, Meghalaya".
8. Mr. N.K.Sinha	- "Agricultural Development Policies in Mizoram".

This is for the kind information of the Council.

(ii) Research proposals for the Ph.D. Degree -

The Board of Research Studies in Humanities/Social Sciences in its meeting held on 31st October, 1983 had approved the research proposals of the following candidates :

<u>Name of Candidate</u>	<u>Topics</u>
1. Mr. Donkumar Roy, Department of Economics	- "Configuration of Poverty in the Border Areas of Meghalaya - A Case study of Shella Village in East Khasi Hills.

The Board had also approved the synopsis of the following Ph.D. candidates with suggestions/observations:

1. Shri Rabindra Nath Mosahary, Department of History	- "Social History of the Boros of Assam (A Reflection of Oral History)."
2. Miss Keya Sen Gupta, Department of Economics	- "Potentiality of small scale industries in Meghalaya - A Block land approach
3. Shri Ranjit Kr. Deb	- "On Education : Towards a Philosophical Theory".

This is for the kind information of the Council.

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Item No. ~~2~~ RATIFICATION OF ACTION TAKEN BY THE VICE-CHANCELLOR :

(i) Disciplinary action taken against Miss Rieviere Marak and Mr. R.Lalbaikdika, students of the College of Agriculture, Hedziphema, Nagaland.

The Principal College of Agriculture reported to the University a case of mis-conduct involving moral turpitude by two students of the College of Agriculture namely; (1) Miss Rieviere Marak and (2) Mr.R.Lalbaikdika. The disciplinary Committee of the College considered the nature of the mis-conduct and recommended to the University to expell both the students. Basing on this recommendation the Vice-Chancellor vide his order dated 13th July 1983 expelled the said students from the College of Agriculture.

According to the regulations on disciplinary action formulated by the College such disciplinary action has to have the prior approval of the Academic Council and the Executive Council. However, this Clause of the regulations formulated by the Collegg is not in consonance with the statutes of the University which deals with the maintainance of discipline among students of the University. The action is being taken seperately to get this Clause modified so as to fall in line with the provision of Statute 31.

In the meantime the matter is to be put up to the Council for their consideration and ratification of the action taken by the Vice-Chancellor in the interest of the discipline in the College of Agriculture.

Item No. 4 DEFERRED ITEMS :

The Academic Council at its meeting held from 26th to 28th September, 1983, had deferred consideration of the following Items :

- (i) Guidelines for introduction of M.Phil Courses.
- (ii) To consider certain Items from the Minutes of the Board of Research Studies in Sciences.
- (iii) Regulations governing direct Ph.D. registration for persons working in certain specialised fields.
- (iv) Amendment of Clause 4(d) & (e) of Ordinance 9 on the Board of Post-Graduate Studies.
- (v) Syllabus of B.Sc. Home Science 3rd year and syllabus for Non-Traditional Course.
- (vi) Draft syllabus of the Three-Year Degree Course in Geology.
- (vii) Re-structuring of M.A. courses in the Department of Philosophy.
- (viii) Proposals from the Board of Post-Graduate Studies in Zoology.
- (ix) Permission for a B.V.Sc. and A.H. Degree holder to appear in B.A. Examination as a regular candidate.
- (x) Opening of Sanskrit Department
- (xi) To consider the introduction of Classical Language viz., Pali, Prakrit, Arabic, Persian & Sanskrit.
- (xii) Minutes of the 4th Governing Body meeting of the College of Agriculture, Medziphema, held on 21st June, 1983.
- (xiii) Methods and Models - Teaching/Learning for mature learners.
- (xiv) To consider the desirability of holding workshops for every disciplines in the School in connection with the contemplated re-structuring of the M.A. courses in the University with effect from 1985.
- (xv) To consider the need for the members of our teaching staff particularly in the School of Social Sciences to acquire an adequate knowledge of atleast one of the languages spoken in the region.
- (xvi) Institution of an Essay Competition for students at under-graduate level.
- (xvii) Reservation of seats for study leave grantees for post-graduate course.
- (xviii) Scheme of studies for Classes XI & XII (All India Senior School Certificate Examinations, 1983 & 1984).

Hence, the above Items are placed again before the Academic Council for consideration.

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(i) Copy of letter No.F.1-2/83(TF-1), dated 3rd June, 1983, received from Shri G.P. Sharma, Under Secretary, UGC, New Delhi, addressed to the Registrar, NEHU.

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Sub:- Guidelines for introduction of M.Phil Courses.

I am directed to say that the guidelines for organising M.Phil courses circulated to the Universities vide this office letter No.F.11-14/77(FIP), dated 20th July, 1977 have since been reviewed by the Commission with the help of a committee. The UGC at its meeting held on 23rd April, 1983 accepted the recommendations made by the Committee appointed by it to review the condition for M.Phil/Ph.D. programmes and the revised guidelines consequently were approved by the Commission. I am enclosing a copy of the revised guidelines for information and guidance of the University.

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UNIVERSITY GRANTS COMMISSION
NEW DELHI

(1) REVISED GUIDELINES FOR INTRODUCTION OF M.PHIL COURSES.

OBJECTIVES:

- i) The M.Phil degree should be looked upon as the first research degree whose components will be course work as well as research work. It should provide facilities for undertaking research Training should be provided in research methodology.
- ii) The M.Phil degree will also provide an opportunity to candidates to proceed to the second research degree, viz, Ph.D. it being understood that the research work done for M.Phil Degree could be incorporated for the research work for Ph.D. degree. Normally those will be permitted to proceed for the second research degree (Ph.D. who have obtained an M.Phil Degree). However, in case of students who have either given satisfactory evidence of having attained equivalent level of proficiency or have done their Master's degree with a dissertation may also be permitted to proceed directly for Ph.D.

CONTENT:

- i) The M. Phil students may be required to take (a) A number of courses on advanced topics and research methodology; and (b) submit a dissertation and /or to undertake project work or design work 50% of the time of the M.Phil programme may be devoted to course work and seminars and the remaining 50% to dissertation based on project work and or design work.
- ii) The M.Phil student may be required to take a number of courses which should not normally exceed for to be prescribed by the Department concerned. Apart from or in lieu of some of these courses, other courses for the M.Phil may be prescribed according to individual needs.

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Students may be encouraged to take courses in allied subjects including languages required for the study of the subject.

- iii) It is expected that the courses may be designed so that they not only enhance the capacity to take up research but also add to a student's understanding of the subject.
- iv) M.Phil students should be required to attend and participate in at least six seminars to be organised by the department/centre for the purpose of discussing new results and developments in the subjects and/or interpretation of data. The M.Phil scholar shall be required to give at least one seminar pertaining to his dissertation/project/design work.
- v) Out of the total credits for M.Phil about 50% may normally be allocated to dissertation which may include project or design work.

DURATION:

The duration of M.Phil course should be generally two semesters (one academic year) in case of full-time students and three semesters in case of part time students with permission to complete the dissertation subsequently as a regular/parttime candidate or as an ex-student within the maximum period of four semesters for a full-time students and five semesters for part-time students.

ADMISSION REQUIREMENTS:

Admission to the M.Phil programme should be made on the basis of:

- i) Satisfactory performance at the Master's degree examination and test conducted by the department concerned;
- ii) Admission recommended by the department concerned shall have to be approved by the Board of Research Studies in the Universities concerned.

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ATTENDANCE :

M.Phil students should be required to participate in seminars and the course offered by the department. It would be desirable at the M.Phil level that the method of straight lecturing is replaced as far as possible by seminars and tutorials ensuring the students active participation through presentation of papers and group discussions. Irregular attendance and or unsatisfactory performance at the seminars/tutorials, etc., shall disqualify the M.Phil; students from further studies. The department concerned shall recommend the removal of the names of each scholars from the M.Phil rolls to the concerned Board of Research Studies.

EVALUATION:

It would be desirable if the course work and the performance at the seminars are evaluated as a continuous process. The evaluation of the performance of students in M.Phil courses shall be done by the course-in-charge and the credit value of a course, distribution of credits in each course to different components of performance, such as through term paper, review essays, oral presentation or viva-voce, etc., should be spelt out in each course at the beginning of the semester and it should clearly be indicated in the prospectus/syllabus/course or study with programme and circulated to the students. The dissertation based on project/design work should be evaluated separately.

Normally the students's evaluation (both course as well as dissertation) should be placed either in grade A or grade B for the award of the M.Phil Degree. Students placed in Grade A only may be allowed to proceed for work towards a Ph.D. Degree.

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ADMINISTRATION OF THE M. PHIL DEGREE PROGRAMME

- i) M.Phil programme should be instituted in Universities having good teaching and research departments in the concerned disciplines.
- ii) M.Phil programme should be administered by the departments concerned through its M.Phil Committee/Research Committee.
- iii) The M.Phil Committee will -
 - a) make recommendations for admission to the M.Phil course and assign supervisor(s) to guide in the selection of topic for dissertation based on project/design work;
 - (b) draw the syllabus for the course including the system of evaluation;
 - (c) assign these courses to the concerned teachers of the departments.
 - (d) organise seminars/tutorial, etc.
 - (e) make arrangements for evaluating performance of the M.Phil students at the seminars;
 - (f) recommend name of examiners for M.Phil dissertation to the university, dissertation may include in all cases research work such as project or design.
 - (g) recommend to the University for the award or otherwise of the degree to the students on the basis of assessment.

ACADEMIC STAFF & ORGANISATION:

1. For the introduction of M. Phil course, a university department should have at least six teachers (including one Professor and two Readers) with minimum of five years post-graduate teaching/research experience and a Ph.D. or equivalent published work. However, if the existing staff position falls below the above requirement well qualified part-time staff engaged to run

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only the M.Phil course may be taken into account for fulfilling the conditions regarding the minimum staff requirements for introduction of M.Phil course. The University may also arrange to run the M.Phil course on a co-operative basis with other universities/industries and other research organisation. Normally not more than two to three M.Phil students should be assigned to any individual teacher for purpose of guiding their dissertation work.

2. M.Phil courses should be started only in such colleges which have well developed post-graduate teaching facilities. Such colleges should have fulfilled all the conditions prescribed for the introduction of post-graduate courses in colleges. The introduction of M.Phil courses in such colleges should have the prior concurrence of the University Grants Commission.
3. In case of the University department/colleges for M. Phil degree it should be taught by those who have a research degree or have considerable experience of research.
4. In universities where M.Phil programmes are instituted it should ordinarily be ensured that a post-graduate student who propose to work for a Ph.D degree should first complete the M.Phil course. However, if there are any exemptions to this, these should be on paper and well defined academic basis.
5. No teacher should ordinarily do more than one teaching course per semester in M.Phil Programme.

- (ii) To consider certain items from the Minutes of the Board of Research Studies in Science -

The Board of Research Studies in Sciences in its meeting held on the 3rd May, 1983 had considered and recommended for consideration of the Academic Council, the following matters:-

- (i) Whether the synopsis, etc, be sent to the examiner while offering him the examinership; and
- (ii) Whether it is essential for M.Phil students to clear all the courses. The Ordinance on this subject was not clear.

The matter was placed at the last meeting of the Academic Council but consideration of this, was deferred. Hence, the same is placed again before the Council for consideration and decision.

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- (iii) regulations governing Direct Ph.D. registration for persons working in certain specialised fields-

The Executive Council in its 34th Meeting held on the 23rd June, 1983 while considering the Regulations governing direct Ph.D. registration for persons working in certain specialised fields recommended by the Academic Council, felt that the draft regulations be referred back to the Academic Council with its modifications as shown in Annexure -

The draft Regulations is, therefore, placed again before the Academic Council for re-consideration.

Appendix - 3.

Draft Regulations governing direct Ph.D. registration for persons working in certain specialised fields.

The following categories of candidates may be permitted to register themselves for Ph.D. Degree at the University subject to the fulfilment of conditions specified in each category :

(a) A person working in relevant research organisations as at the National or State level located in the North-Eastern Region and having a post-graduate or equivalent Degree in that or related field in which he or she proposes to pursue research and possessing atleast five years of practical experience in that or related field and having publication of a few research papers to his or her credit.

(b) A person holding atleast a Second Class Master's Degree in any allied and having long experience or administration/management and specialised knowledge in the proposed field of research on the North-Eastern Region upto the satisfaction of the University Department concerned, and having publication of a few research papers to his or her credit.

His thesis will be accepted by the University on the production of periodical certificates from his/her guide that the candidate has been in continuous touch with him and has acquainted himself adequately with the latest theories and methods in research in his/her field of specialisation. The candidate shall submit such report to the Research Board at an interval of six months.

DRAFT REGULATIONS GOVERNING DIRECT PH.D. REGISTRATION FOR PERSONS WORKING
IN CERTAIN SPECIALISED FIELDS.

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The following categories of candidates may be permitted to register themselves for Ph.D. Degree at the University subject to the fulfilment of conditions specified in each category:-

- (a) Persons working in relevant research organisations at the National or State level and having a post-graduate or equivalent Degree in that or related field in which he or she proposes to pursue research and possessing at least five years of practical experience in that or related field.
- (b) Persons holding at least a Second Class Master's Degree in any subject and having wide experience of administration/management and specialised knowledge in the proposed field of research upto the satisfaction of the University Department concerned.

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(iv) Amendment of ~~Clause~~ 4(d) & (e) of Ordinance 9 on the Board of Post-Graduate Studies.

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Consequent upon the abolition of the "Committee for Advanced Studies and Research" and its substitution by the Boards of Research Studies, it is considered necessary to amend the clause of the Ordinance indicated in the subject above as proposed below for the approval of the Council.

<u>ORIGINAL CLAUSE</u>	<u>PROPOSED AMENDMENT</u>	<u>CLAUSE AFTER AMENDMENT</u>
9:4(d)- To recommend to the Committee for Advanced Studies and Research applications of the students candidates for the Doctorate Degree along with details of the subject proposed to be investigated by the applicants.	Substituted the words "the Committee for Advanced Studies and Research" by the words "the concerned Board of Research Studies through the School Board".	To recommend to the concerned Board of Research Studies through the School Board applications of students as candidate for the Doctorate Degree along with the details of the subjects proposed to be investigated by the applicants;
9:4(e) - to recommend to the Committee for Advanced Studies & Research the name of teachers in the Department to be appointed as supervisors of research.	Substitute the words "the Committee for Advanced Studies & Research" by the words "the concerned Board of Research Studies".	To recommend to the concerned Board of Research Studies the names of teachers in the Department to be appointed as supervisors of research.

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V. Syllabus on Home Science (B.Sc).

B.Sc.Home Science: III year

100 marks.

Clothing and Textiles

Paper - IV - Advanced Clothing Construction -

- A. Principles of tailoring :
1. Taking body measurement.
 2. Placing, cutting, marking patterns.
- B. Details in finishing garments:
1. Seam finished - plain seams, french seam, run and fell seam, lapped seam, counter seam.
 2. Finishing raw edges - bias binding, bias facing, shaped facing, whipping.
- C. Disposal of fullness in a garment :
1. Gathers - Shirring, Snicking, gauging, ruffles,
 2. Pleats - Knife pleat or side pleat box pleat, inverted pleat, edge stitched pleat.
 3. Tucks - Pin tucks, hand run tucks, crossed tucks.
 4. Darts - Straight darts, curved darts.
- D. Principles of good design:
1. Proportion
 2. Balance
 3. Rhythm
 4. Emphasis
 5. Harmony.
- E. Discussion on well tailored clothes;

References:

1. Doongaji and Despande, "Basic processes and clothing construction" New Raj Book Dept., New Delhi, 1975.
2. Erwing "Clothing for moderns" The Mac Millan Co., London, 1969.
3. Juvekar, M.B. & Juvekar V.P. "Easy Cutting" Bombay Ball Co.
4. Golden hands, "Complete Book of dress making" New York Random House.
5. Golden Hands, "Encyclopadia of Dress making" Colling Glass glow and London, 1977.

Contd/-.....

Paper - V - Costume Designing:

- A. Study of the original costumes of India in general.
- B. Study of the costumes of different States of North-Eastern Region of India.
- C. Importance and uses of dress form in designing different costumes.
- D. Principles of drapping and flat pattern method in dress designing.
- E. Basic principles for fitting and figure problems.
- F. Study of a well designed dress.

References -

1. Brij Bhushan, Jamila, "Costumes and Textiles of India," Tarapatevala, Bombay, 1958.
2. Erwin Mebel D. "Practical dress designs"- The Mac Millan Co., New York, USA.
3. Hollen Norma R., "Flat pattern method" Burgess Publishing Co., Minneapolis 15, USA.

Paper - VI- Advanced Textiles:

- A. 1. Chemical structure of different textile fibres.
2. Effect of the structure of the fibres on the properties of fabrics made from them.
- B. Different methods of fabric construction:
 1. Weaving
 2. Knitting
 3. Crocheting
 5. Felting.
- C. Finishes:
 1. Introduction to finishes.
 2. How properties of fibres can be altered by finishing processes.
 3. Effect of various finishing processes on serviceability and durability of the fabric.
- D. Basic weaves and their variations:

References:

1. Majory L. Joseph, "Introductory Textile Science" Holt, Rine, Hart and Winston, New York, 1972.
2. Herbert R.M. "Mathews textile fibres".
3. Monoriff R.W. "Man made fibres" London Butterworth.

Contd/-.....

Paper - VII - Advanced Clothing Construction and
 Costume Designing. 100 marks
 (50-Internal)
 (50-External)

A. Advanced Clothing Construction:

1. Preparation of samples of seams gathers, pleats tucks and darts.
2. Drafting and construction of garments for adults.
 - (a) Kurta.
 - (b) Pyjama
 - (c) Blouse and its variation
 - (d) Man's shirt
 - (e) Nighty or house coat.
3. Adaptation to garments of any style will be practiced from the basic pattern.
4. Study of different types of collars and sleeves.

B. Costume Designing:

1. Reports on costumes will be prepared and presented by the students related to the theory.
2. Different methods of dress designing.
 - 3 a. Drafting.
 - b. Flat pattern
 - c. Draping.
3. Adaptation of basic pattern by draping and flat pattern methods.

Paper - VIII - Advanced Textiles and Commercial Clothing. 100 Marks
 (50-Internal)
 (50-External)

A. Advanced Textiles:

1. Identification of textil-fibres by:
 - a. Microscopic
 - b. Burning and
 - c. Chemical tests.
2. Preparation of samples of three basic weaves and some of their variations.

B. Commercial Clothing:

1. Selection of patterns
2. Selection and purchase of suitable materials
3. Principles of tailoring:
 - a. Importance of taking accurate body measurements.
 - b. Making standard paper patterns for different garments.
 - c. Placing, cutting, stitching, and finishing garments.

Contd/-.....

4. Evaluation of finished garments.
5. Production of garments for commercial purposes.
6. Taking orders and supplying of garments.

FOODS AND NUTRITION

100 marks

Paper - IV - Nutrition and Food Science
Section - I.

A. Energy requirements:

1. Factors affecting energy requirement : B.M.R., Specific dynamic action, age, activity, climate and physiological conditions.
2. Methods of calculation of energy requirements.

B. Nutrition in health:

1. Nutritional requirement of different age and occupational groups and physiological conditions.
2. Planning of meals for different age and occupation at different income levels in general and with special reference to North-Eastern Region.

C. Inter-relationships of nutrients:

Energy-Protein, calcium-vitamin D, Calcium-phosphorus, iron-copper, iodine, flourides, Manganese-Magnesium.

D. Nutritional deficiency disorders:

1. Protein-energy malnutrition.
2. Vitamin Deficiencies- A,D,C Complex, B.
3. Mineral deficiencies- Calcium, phosphorus, copper, iron, iodine, flouride.

E. Dietary standards and their use.

F. Dietary surveys: Purpose and techniques.

Section - II

A. 1. Enrichment and fortification of food by combination, supplementation.

2. Food processing-germination, fermentation,

B. Food adulteration: Nature, hazards and detection, Govt. food controls.

C. Formulation and standardisation of recipes based on regional food habits.

D. 1. Constituents of food; effect of heat, alkali, acids and salt on these constituents (carbohydrates, proteins, fats, minerals and vitamins).

2. Effects of cooking on selected items of food: Cereals, pulses, vegetables, fruits, milk and egg.

E. Effect of storage on foods .

1. Long term and short term storage.
2. Physical and biochemical changes.

N:B: At least two questions should be attempted from each section.

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Paper - V - Biochemistry and Microbiology

100 marks

- A. Brief review of the general properties of carbohydrates (mono and disaccharides, starch, glycogen and cellulose), lipids (fatty acids, triglycerides, Phospholipids) amino acids, proteins and nucleic acids.
- B. Enzymes: Elementary treatment of enzyme kinetics, Michaelis-menten equation and its significance, inhibition of enzyme-catalysed reactions.
- C. Metabolism: General pathways of amino acid metabolism, urea cycle, B-oxidation, electron transport chain, Inter-conversion of carbohydrates, lipids and proteins.
- D. Fat and water soluble Vitamins and their physiological role.
- E. Hormones: Physiological functions of the hormones of pituitary, thyroid, adrenal and gonads, effects of hormonal imbalance.
- F. General idea about microorganisms including viruses.
- G. Classification and identification of microorganisms.
- H. Bacterial growth and principles of biological assay.
- I. Microorganisms in food spoilage and food poisoning.
- J. Microorganisms of economic importance (fermentation, decomposition, symbiotic).
- K. Pathogenic microorganisms, antibiotics and disease resistance.

Food Preservation.

- A. Physics chemical classification of organic components present in food: colloids, emulsions, sols, gels, etc.
- B. Microorganisms in relation to food products.
 - 1. Relation of fungi to plants.
 - 2. Molds, Yeasts and bacteria: classification and brief description.
- G. General methods and principles of fruit and vegetable preservation; food additives and leavening agents.
- D. Role of enzymes in food processing, browning reactions in food.
- E. Classification and composition of vegetable..
- F. Classification and composition of vegetables
- G. Helly graden theory of gel formation; factors affecting gel formation process of preparation of jelly and marmalade.
- H. Fruit juice and beverages: preservation.
- I. Pickles
 - 1. Traditional (Indian) pickles.
 - 2. Fermented pickles.
- J. Vinegar: Types of vinegar, process of manufacture, synthetic vinegar.
- K. Fruit chutney: Difference between chutney and ketchups; process of making chutney.
- L. Vegetable and fruit preserves. Various sugar substitutes for fruit preserves; preparation of various fruit preserves.
- M. Fruit butters and fruit syrups.
- N. Canning of fruits and vegetables: General principles and salient points of canning.
- O. Food standards and laws in India.
- P. F.P.O. limits for permitted preservatives.

PRACTICAL
FOOD AND NUTRITION.

150 marks

Paper- VII: Nutrition, Food Science, Biochemistry and Microbiology.

1. Planning and preparation of meals for different age and occupation of North-Eastern Region with reference to different income levels.
2. Planning and preparation of:
 - a. High protein -calorie meals
 - b. High calcium and iron rich meals with locally available food-stuffs.
3. Study of effect of heat on foods with reference to alkali, acids and salt.
4. Effect of storage on physical changes of selected foods (atleast three items).
5. Dietary survey of a selected group.
6. Development and preparation of recipe based on regional food habits.
7. Preparing dishes based on germination, fermentation and combination.
8. Detection of food adulterants on selected items; cereals, pulses, milk, butter and powdered spices.
9. Qualitative tests for carbohydrates.
10. Estimation of carbohydrates by Anthrone method.
11. Estimation of Vitamin C by titrimetric method.
12. Estimation of nitrogen by Kjeldahl method.
13. Action of amylase on starch and the effect heat and pH.
14. Estimation of protein by Lowry's method.
15. Use of microscopes.
16. Microscopic examination of bacterial, yeasts and molds.
17. Demonstration of the presence of microorganisms in the environment.
18. Identification of some important microorganisms using permanent slides.
19. Gram staining.
20. Preparation of media.
21. Sterilisation of glass-wares and media.
22. Examination of bacteriological flora in utensils and domestic articles under humid conditions.
23. Demonstration of fermentation of sugar.

Paper - VIII .

Food Preparation.

75 marks
(25-Internal)
(25-External)

1. Preparation of jam from fruits like plum, apple, pineapple, Peach, pear, mango.
2. a. Preparation of jelly from high pectin fruits: guava, apple, plum.
b. Preparation of jelly from low pectin fruits: pine-apple, pear, jackfruit.
3. Preparation of fruit squashes like lemon squash, pine-apple, squash, raspberry squash, orange squash, mango squash and some local fruit squashes.
4. Preparation of orange marmalade.
5. Preparation of tomato sauce, tomato ketchup, vegetable sauce, apple sauce.
6. Preparation of papaya chutney, apple chutney, mango chutney, Pine-apple chutney, tomato chutney, ash gourd chutney, chutney from local fruits.
7. Preparation of carrot, mango, papaya, goose berry, ginger - preserves.
8. Preparation of pickles; Mixed vegetable pickle, sweet pickle, lime shred pickle, goose berry pickle, chilly pickle, bamboo-shoot pickle and jackfruit pickle.
9. Preparation of tapioca and potato chips.
10. a. Crystalline candies; Fondant.
b. Non-Crystalline candies, caramels, brittles, butter scotch.

Home Science

List of reference books:

1. Foods and Nutrition:

1. Robin, C.H. "Normal and Therapeutic Nutrition" Oxford & IBM publishing Co. India, Edition 1977.

2. Ross, M.L., Chaney, M.S. Nutrition, Houghton Mifflin Co. 1971.

3. Gopalan E, etal Dietary allowances for Indian ICMR, Series No. 60.

4. -do- Nutritive Value of Indian Foods, ICMR, 1977.

5. -do- Nutrition atlas of India, 1969 Nutrition Atlas of India 1971, ICMR.

6. Mc. Divitt, M.E. & Mudanli, S.R. Human Nutrition-Principles and application in India, Princentice Hall of India Pvt. Ltd., 1969.

7. Rajalakshmi Applied Nutrition, Oxford & IBM Publishing Co. 1974.

8. Swaminathan, M. Essentials of Food & Nutrition, Vol. I & II Applied Aspects, Ganesh and Co., Madras 1974.
Fundamental aspects.- Vol -I.

9. Nesh, E. Cooking Craft, 1975.

10. Jacob, T. Food Adulteration, Macmillan, Delhi, 1976

11. Griswald, R.M. Experimental Study of Foods, Houghton Mifflin Co. Boston, N.Y.

12. Lowe, B. Experimental Cookery, John Criley & Sons, Inc., N.Y.

13. Charley, Aclen Food Science, The Ronald Press Co.. N.Y.

14. Potter, N.N. Food Science, The Avi Publishing Co. Ltd.

Child Development.

100 marks

Paper - IV - Principles of Child Development.

- A. Growth and Development:
1. Introduction.
 2. Factors affecting growth and development
 3. Types of growth and development
 - a. Physical
 - b. Social
 - c. Mental
 - d. Emotional
 - e. Language.
- B. Heredity and environment:
1. Heredity:
 - Genes: Structure and function enzymes.
 2. Environment:
 - a. Prenatal environment.
 - Nutrition and health status of expecting mother.
 - b. Post-natal environment:
 - Nutrition and hygiene of the nursing mother and the infant.
- C. Hormones:
 - Role of hormones in growth and development.
- D. Stages of development and characteristics of each stage:
1. Infancy.
 2. Pre-school
 3. Childhood.
 4. Adolescence
- E. Parameters used for the measurement of growth and development:
1. Anthropometric measurements.
 2. Sociometry
 3. Intelligence tests.
 4. Language tests

Paper - V - Family and Child Welfare

100 marks

- A. The concepts of family and child welfare.
 - 1. Meaning of family welfare and child welfare.
 - 2. Importance of family and child welfare programmes.
- B. Family and child welfare services:
 - 1. Meaning and scope of family and child welfare services.
 - 2. Family and child welfare services: At local level, state level, national level and international level.
 - 3. Agencies rendering these services.
- C. Types of family and child welfare services:
 - 1. Integrated child development scheme.
 - 2. Maternity and child welfare centres
 - 3. Nutrition services: midday meals, school lunch programmes.
 - 4. Creches, daycare centres, Balwadis, Anganwadis.
 - 5. Services for retarded children..
 - 6. Guidance and counselling centres.

Paper - VI - Mother and Child - Health & Nutrition. 100 marks-

- A. Importance of Health and Nutrition
 - 1. Factors affecting health
 - 2. Relationship between health, physical development and Nutrition.
- B. Nutrition during pregnancy and lactation
 - 1. Significance of nutrition
 - 2. Nutritional requirements during pregnancy and lactation.
 - 3. Meal planning for expecting and nursing mothers.
 - 4. Nutritional problems during pregnancy.
- C. Infant Nutrition
 - 1. Body composition of a new born baby.
 - 2. Characteristics of an infant.
 - 3. Growth and development
 - 4. Breast -feeding and formula feeding
 - 5. Weaning of babies. .
 - 6. Supplementary foods.

Contd/-....

Pre - School Child.

1. Nutritional requirements
2. Food habits
3. Food acceptance
4. Meal planning .

E. Nutritional problems during childhood.

1. Malnutrition: Under and over-nutrition, Protein -calorie- deficiency, Vitamin A Deficiency.
2. Dietary measures for solving nutritional problems.

Practical

Child Development

100 marks
(50-Internal)
(50- External)

Paper -VII- Principles of Child Development and Family and Child Welfare.

1. Microscopic study of chromosomes.
2. Observation of an infant and interview with the nursing mother: report.
3. Case study of a child of any age group.
4. Anthropometric measures .
5. Sociometric measures
6. Visit to any two family and child welfare centres: report.
7. Planning and preparation of low-cost high protein diets with locally available foods for:
 - i. School lunch programme
 - ii. Pre-school child
 - iii. Nursing mother.
8. Visit to an institution of retarded children: report.

Paper - VIII - Mother and Child-Health & Nutrition

100marks
(50-Internal)
(50-External)

1. Planning and preparation of adequate meals for;
 - i. Expectant and nursing mother
 - ii. Weaning foods for babies:
 - iii. Pre-school child
 - iv. Preparation of snacks with locally available food stuff.
2. Survey of dietary patterns of a selected community (local report)

Reference Books:-

III. Child Development-

1. Mussen, P. H. Conger, J.J, Kagan, J.	Child Development and Personality, Harper & Row Publication
2. Hurlock, E.B.	Child and Growth Development, Mc Graw Hill Publication
3. Strang , Ruth.	An introduction to Child Study Mc. Millan and Co.
4. Dirkmeier, D.C.	Child Development, Prentice Hall .
5. Grow and Crow.	Child Development, & Adjustment, Mc. Millan
6. Smart & Smart	- Readings in Child Development and Relationships, Light & Life Pub. Co.
7. Thomson G.G.	- Child Psychology, Subject Pub.
8. Ausubel , D.P.	- "Theory & Problems of Adolescent Development" Grune & Stratton Pub.
9. Caplan, G. & Labovice, S.	- Adolescence- Psychological Pers- pecting, Basic Book Publeishers.
10. Watson, R.I.	- Psychology of the child, John, Wiley Pub.
11. Nash, J.	- Developmental psychology, Prentice Hall.
12. Hand Book of Research Me- thods in Child Development.	- Edited by P.H. Mussen Wiley Pub.

B.Sc. Home Science - III Year

Home Management

100 marks

Paper- IV - Advance Home Management.

A. Scope of Home Management.

1. Definition and characteristics of management in the home.
2. Purpose of management :Objectives, management and changes in standard of living
3. Family characteristics influencing management patterns of rights and responsibilities , family life cycle.
4. Management principles:Functions of management, controlling, delegating , directing, guiding, coordinating, supervising and evaluating.
5. Management Process:Preparation of plans, factors influencing steps, control-methods and evaluation techniques.

B. Family finance.

1. Family income-types , sources.
2. Income groups in India with special reference to NER, per capita income and average household income.
3. Pattern of expenditure in families of different income groups.Factors affecting expenditure, Size, compositions family values and social status.
4. Money management:
 - a. Planning budgets, utilisation of income, distribution adjustment and balancing
 - b. Control: records of expenditure
 - c. Evaluation:balancing income and expenditure,Periodical checking.
5. Saving and Investment:
 - a. Need for saving , Crutches of Investing
 - b. Saving, types of institutions, agencies, safety, returns,
 - c.Types of investments, Banks, Post office, life insurance, property insurance, unit trust bonds, certificates, debentures.

Paper- V -Housing

100 marks.

- A. Family Housing, Needs, purpose, status, effects of housing on family life.
- B. Modern concepts of adequate house :Space,work centre, comfort, convenience, sanitation lighting, ventilation.
- C. Types of family residential units:Independent House,apartment housing, owning, advantages, and limitations.
- D. Principles of house planning:Site aspect, prospect,utility, amenities, functional, labour saving, economical.
- E.Space designing for different activities in the home.
 1. Important.
 - 2.Furniture requirement for each work-centre.
 3. Arrangement with special reference to NER.

- A. Elements of design : Line, form, colour, texture.
- B. Types of designs :
 - 1. Structural designs
 - a. Shapes & outlines. b. Materials and processes used.
 - 2. Decorative designs.
 - a. Naturalistic b. Conventional. c Abstract.
- C. Principles of design : Proportion, balance, emphasis, harmony, rhythm.
- D. Objectives of interior decoration in the home : beauty, expression and functionalism.
- E. Importance of good taste and imagination in interior decoration.
- F. Factors influencing furnishing decisions :
 - 1. Climatic conditions
 - 2. Family needs and preferences
 - 3. Availability in the market
 - 4. Principles of design
 - 5. Present style.
- G. Alternative means of improving home furnishing conditions :
elimination, concealment, re-arrangements, supplementation with new items.
- H. Furnishing of specific rooms and areas
- I. Types of windows and window treatments.
- J. Furniture :
 - 1. Furniture styles and shapes
 - 2. Construction features
 - 3. Renovation of furniture
 - 4. Furniture arrangement
 - 5. Selection of furniture
- K. Floor coverings :
 - 1. Selection and care of floor covering
 - 2. Types of covering
 - 3. Design and colour
 - 4. Floor decorations
- L. Function and types of lighting

m. Accessories in home decorations :

1. Finding and arranging accessories
2. Plants and flower arrangements

5 :2:1(17)

Practical	100 marks
Home Managements	50-internal
	50-external

Paper - Vii - Advance Home Management & Housing

1. Comparison of standard of living among different income groups in the community : Study , report and discussion.
2. Study of values : Personal, family, social (report)
3. Expenditure patterns : Survey and report
4. Preparation of monthly and annual budgets for different income group.
5. Preparation and maintenance of different types of records of expenditure.
6. Survey of savings and investments (report)
7. Study of selected house plans with reference to site, construction, sanitation, ventilation,
8. Planning residential units for special needs and situations, such as, single person, small family, working woman. (line drawing).
9. Planning different activity centers at home and furniture arrangement (line drawing)
10. Market survey of furniture : Traditional and modern (report)

Paper - VIII - Designing & Interior Decoration

100 marks
50-internal
50-external

1. Paper marbling techniques and colour mixing
2. Selection and creation of various objects for home decoration
3. Floor decoration L Alpana, Rangeli, kolan, flower carpet
4. Furnishing of different rooms : Living room bed room, kitchen, dining room, bathroom.
5. Arranging flowers for different occasions.

6. Illustration from everyday life, Furniture, table ware, utensils, fabrics, vases, and other accessories.
7. Display of different ways of hanging curtains, different ways of arranging objects to create different types of balances.
8. Selection of suitable illustrations to show good proportion in architecture, interior decoration and other objects.
9. Designing greeting cards.
10. Experiment with different ways of obtaining rhythm in display of articles and interior decoration.
11. Market study of consumer goods (report).

 Reference Books:

I. Home Management:

1. Mickall, Rice, Tucker - Management in Family living, John Wiley & Sons, Inc.
2. Nickell & Parsey - Management in Family Living, Wiley Eastern Pvt. Ltd., New Delhi.
3. Chatterjee, S.S. - Introduction to management, The Harold Press, Calcutta.
4. Joseph L. Massie - Essentials of Management, Prantico Hall of India Pvt. Ltd., New Delhi.
5. Gross & Gradle - Management for modern families, Indian Education-Sterling Pub. Pvt. Ltd. Delhi - 6
6. Mann, N.K. - Management for Indian Families, Kalyan Publisher, Delhi.
7. Eutt, A.H. - Home Furnishing, John Wiley & Sons, Inc.
8. Goldstein & Goldstein - Art in everyday life, Oxford & IBA Pub. Co. Calcutta, New Delhi.
9. Bigalow, H.F. - Family Finance, J.B. Lippincott, McGraw Hill Book Co. N.Y.
10. Peet & Thye - Household Equipment, John Wiley, & Sons, Inc.
11. Agan, J. - The House, its plan and use, Oxford & IBH Pub. Co. N. Delhi, Calcutta.
12. Deshpande, R.S. - Build your own home, United Book Corporation, Poona.
13. Deshpande, R.H. - Modern Ideal Homes, Poona..

Non-Traditional Course in Nutrition

Paper - I - Nutrition

100 marks
(Theory-75
Practical-25)

- A. 1. Nutritional requirement for different age groups and physiological status.
- Infants
 - Pre-school children
 - Elementary school children
 - Adolescents
 - Adult man and woman - light, moderate and heavy workers.
 - Pregnant and lactating women
 - Elderly people
2. Sources, function, requirements and deficiency diseases of energy, fats, proteins, minerals and vitamins
3. Food habits and beliefs in N.E. India.
- B. Infant growth and Nutrition -
- Monitoring of growth
 - Nutrient requirements
 - Breast-feeding and weaning foods
 - General care of the infant and common ailments; rehydration therapy.
- C. Community nutrition -
- Food intake of the community in urban and rural areas of N. E. India.
 - Food and nutrient requirement of the community.
 - Nutrition programmes and involvement of different agencies (government and voluntary organisation) in the programme.

Practicals

- Formulation of weaning foods using locally available foods
- Monitoring of child growth
- Dietary survey
- rehydration formula.

Paper II - Diet therapy and Institution Management.

100 Marks:

Theory..75 Practical:25

A. Diet Therapy-

1. Diets in diseases - Diabetes, Liver disorders, Kidney disorders, Fever, Cardio-vascular disorders, Disorders of the gastro-intestinal tract, obesity.
2. Common curative dietary practices in N.E.India.

B. INSTITUTION MANAGEMENT-

1. Planning dietary departments - Hostels, student residence, Hospitals, Industrial canteen.
2. Use of house-hold utensils for baking, cooling etc.,
3. Fabrication and use of equipments and facilities.
 - (a) Non-conventional regrigeration facilities for perishable foods.
 - (b). Non-conventional equipments, pressure-cooking, oven, ice-cream maker etc.
 - (c) Storage facilities for non-perishable foods.
4. Sanitation of food service department - environment, food.
5. Purchasing of food - perishable and non-perishable.
6. Account - keeping.

PRACTICALS.

1. Planning and preparation of diets for various diseases.
2. Fabrication of non-conventional equipments.

PAPER ...III ... MEAL PLANNING.

Full marks..100

Theory..75

Practical..25.

A. Diet in health for different age groups and physiological status:

1. Infants
2. Pre-school children
3. Elementary school children
4. Adolescents
5. Adult man and woman - light, moderate and heavy workers.
6. Pregnant and lactating women.
7. Elderly people.

B. Loss of nutrients during processing and cooking of food -
Vitamins and minerals:

C. Quantity cookery.

D. Food processing and preservation:

1. Fruits and vegetables - preparation of pickles, Chutneys, Jams
fruit juices and squashes, jellies, preserves.
2. Animal foods including sea foods - drying, smoking.
3. Fermentation of foods - animal foods and soybean.

PRACTICALS:

1. Formation of balanced diet and calculation of nutrients.
2. Preparation of fermented foods.
4. Preparation of jam, squash, pickle, etc.

GEOLOGY

3 years degree Course:

PART - I (1st & 2nd yr): PASS COURSE:

Theoretical Papers: 2, each carrying 100 marks :	200 marks
Practical Papers : 1 of 100 marks	: 100 marks
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Total:	300 marks

THEORETICAL:

PAPER - I

GROUP-A	(i) General Geology	: 20 marks
	(ii) Structural Geology:	20 marks
GROUP-B	(1) Crystallography & Mineral Optics	: 20 Marks
GROUP-C	Economic Geology	: 20 marks
		<hr/>
	Total	: 100 marks

PAPER- II

GROUP-A	(i) Igneous Petrology (ii) Sedimentary " (iii) Metamorphic "	40 marks	
GROUP-B.	(1) Principles of Stratigraphy (ii) Indian Stratigra- phy		40 marks
GROUP-C	Paleontology		
		<hr/>	Total: 100 marks.

PRACTICAL

PAPER - III

(a)	Crystallography	65 marks
(b)	Mineral hand specimen.....	10 marks
(c)	Rock hand specimen.....	10 marks
(d)	Mineral slide.....	10 marks
(e)	Rock slide	15 marks
(f)	Fossil	10 marks
(g)	Map and structural problems	15 marks
(h)	Field work and field report	25 marks
		<hr/>
	Total:	100 marks

contd./.....

PAPER - I

G R O U P - A

General Geology: Origin, constitution and age of the earth, Origin of basins and mountains, Earthquake waves and their utility in interpreting the earth's structure, Earthquake zones of India, Isostasy, study of wind, running water & glaciers as geological agents. Classification and common types of land forms.

Structural Geology: Diastrophic structures: folds, faults, thrusts, nappes, joints, cleavages, foliations and lineations-their classification and recognition. Determination of top and bottom of layered rocks. Geosynclines-definition and types, Structural features of India-a general study.

G R O U P - A

Crystallography and Mineral optics:

Crystal - its definition, Characteristics of crystals like faces, forms, interfacial and solid angles, zone and zone-axis, symmetry, parameters and indices. A broad survey of 32 classes of symmetry. Study of the normal class of isometric, tetragonal, hexagonal and orthorhombic systems.

Polarisation of light, pleochroism, extinction, double refraction, refractive index, interference colour, nicol prism, distinguishing characters of isotropic and anisotropic, and uniaxial and biaxial minerals.

Mineralogy: Physical properties of minerals. Physical, chemical and optical characters of the following mineral groups, feldspar, feldspathoid, pyroxene, amphibole, mica, olivine, and garnet. Study of the physical and optical properties of andalusite, sillimanite, staurolite, kyanite, apatite, epidote, zircon, chlorite, beryl, calcite, tourmaline, serpentine, ilmenite and hematite.

G R O U P - C

Definition of ore, gangue and tenor. Processes of formation of economic mineral deposits. Classification of mineral deposits.

Elementary knowledge of metallogenetic provinces & epochs, geological prospecting, engineering geology with respect to dam-sites, tunnels and landslides. Occurrence, origin uses and distribution in India of the following: gold, copper, aluminium, iron, manganese, chromium, limestone, radioactive minerals, coal and petroleum.

contd/r.....

PAPER - IIGROUP - A

Petrology: (i) Igneous: Magma, its composition, crystallization and consolidation and differentiation, mode of occurrence of igneous rocks. Study of textures and structures of igneous rocks. Classification of igneous rock based on textural, mineralogical, quasi-chemical and chemical criteria.

Descriptive petrology of the following rocks:

- (a) Granite-rhyolite family
- (b) Syenite-trachyte family
- (c) Gabbro-basalt family
- (d) Ultrabasic rocks.

A simple discussion on the origin of igneous rocks.

Petrological description and distribution in India of the following rocks types: Gharrockite, Khondalite, deccan-trap gondite.

(ii) Metamorphic: Agents and types of metamorphism. Changes in argillaceous sediments. Textures and structures of metamorphic rocks. Descriptive petrography of the following rock types: slate, phyllite, Schist, gneiss, quartzite, amphibolite, pyroxene-granulite, granulite, marble.

(iii) Sedimentary: Sedimentary processes, different depositional environments. Simple genetic classification of sedimentary rocks. Textures & Structures of sedimentary rocks. Petrographic description of Graywacke, arkose, quartz-arenites, shale, limestones, chert & conglomerate.

GROUP - B

Stratigraphy: Principles of stratigraphy: Correlation, geological division of India. Geological Time Scale.

Geology of India: A brief study of the Pre-Cambrians of Mysore, Singhbhum and Assam. Cuddapah System of Cuddapah basin, Vindhyan formation of Son Valley, Gondwana formation of Peninsular India, Triassic system of Spiti, Tertiary and quaternary system of Assam.

GROUP - C

Paleontology: Fossils: Definition, mode of formation and uses, broad survey of different branches of paleontology. Definition and meaning of Micro and Macro-fossils, vertebrate and invertebrate animals, paleobotany and Palynology.

A general study of the morphological characters and short geological distribution of the following: Foraminifera, brachiopoda, anthozoa, mollusca, trilobita, echinoidea, graptoloides, vertebrate fossils of the Siwaliks and the Gondwana floras.

contd/-.....

PRACTICAL :

Paper - III

A) ~~Crystallography~~: Study of symmetry elements and habit of the crystals belonging to the normal class of the isometric, tetragonal, hexagonal, orthorhombic and monoclinic systems. Drawing of crystals of the normal class of isometric, hexagonal & orthorhombic systems.

B) Minerals (hand specimens): Recognition of the following minerals in hand specimens by their physical characters: Silica minerals, orthoclase, microcline, plagioclases, quartz, hornblende, tremolite, actinolite, olivine, muscovite, biotite, sillimanite, kyanite, garnet, apatite, beryl, tourmaline, calcite, graphite, hornite, malachite, chalcopyrite, pyrite, hematite, magnetite, limonite, chromite, pyrolusite, phalloselene, lauxite, apatite, asbestos, corundum, ~~opal~~, gypsum, barite, fluorite & galena.

C) Rocks (hand specimens): Recognition of the following rocks in hand specimens:- Anorthosite, basalt, dolerite, diorite, dunite, gabbro, peridotite, peridotite, sphyerite, syenite, conglomerate, limestone, shale, sandstones, gneiss, marble, quartzite, schist, slate, charnockite, goudite.

D) Identification of the following minerals under Microscope by their optical characters:

Quartz, Orthoclase, microcline, plagioclase, muscovite, biotite, hypersthene, augite, actinolite, hornblende, olivine, feldspar, garnet, tourmaline, apatite, calcite, epidote, chlorite.

E) Study of Mineralogy, texture and structure of the following rocks and their identification:

Basalt, diorite, dolerite, granite, gabbro, peridotite, syenite, limestone, sandstone, gneiss, quartzite, schist, marble.

F) Identification of the following genera of fossils by their external morphology and their stratigraphic ages:

Nummulites, calceola, zaphrentis, micraster, clypeaster, productus, spirifer, lima, pecten, ostrea, spondylus, trigonia, cardita, conus, cypraea, cerethium, naux, physa, turritella, belemnites, nautilus, perisphinctes, calymene, phacops, glossopteris, ganganopteris, vertebralia.

contd/-.....

G) Maps and structural problems:

Reading of topographical maps: solution of simple problems of dip, strike and outcrop.

Drawing of geological sections and interpretation of geological sections and interpretation of geological maps containing simple folds, faults, unconformities, dykes and sills.

H) Field work, field report and viva-voce:

There shall be a field work of atleast 15 days duration which may spread over both the years, if so desirable.

Use of Clinometer Compass and / or Brunton Compass, geological field work of a small area of stratigraphic, structural and tectonic importance. Writing of field report.

There shall be a viva-voce test on field report and general practicals.

contd/-.....

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Text Books and Reference Books recommended for
the Pass Course in Geology.

1. A Text Book of Geology. : Longwell, C.R. Knopf,
A. & Flint R.F.
2. Introduction to Physical Geology. : A.K. Dutta
3. Text Book of Geology. : P.K. Mukherjee
4. A Text Book of Geology. : S. Roy.
5. Structural Geology : Billings, M.F.
6. Rutley's Elements of Mineralogy : Read, H.H.
7. Study of rocks in this section : Moorehouse.
8. Ore deposits of India : Gokhale
9. The principles of Petrology : Tyrrell, G.W.
10. Metamorphism : Harker, A.
11. Petrology : Huang
12. Stratigraphic principles & Practice : Weller.
13. Geology of India and Burma : Krishnan, M.S.
14. Principles of Invertebrate Palaeontology : Shrock, R.R. & Twenhofel,
W.H.
15. Palaeontology Invertebrate : Woods, H.
16. Minerals and Microscope : Wells.
17. Text Book of Petrology : Hatch, F.H., Wells, A.K.,
& Wells, M.K.
18. Industrial rocks and minerals of India
(Volumes I & II) : S. Deb
19. Text book of Sedimentary Petrology : V.K. Verma & C. Prasad.
20. Laboratory Manual of Geology : Ajoy Kumar Sen.

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G.E.O.L.O.G.Y.

3 Years Degree Course.

PART-II (Third Year): HONOURS COURSE:

Theoretical Papers : 3, each carrying 100 marks : 300 marks
Practical Papers: 2, each carrying 100 marks: 200 "

Total: 500 marks.

THEORETICAL:

PAPER-I

GROUP-A. General Geology
Structural and geotectonics 80 marks.
Geomorphology
Geohydrology

GROUP-B. Economic geology
Indian mineral deposits 50 marks
Elements of exploration
Engineering geology

PAPER-II

GROUP-A. Crystallography
Mineralogy 40 marks.
Mineral Optics

GROUP-B. Petrology
Igneous 60 marks
Sedimentary
Metamorphic

PAPER-III

GROUP-A. Principles of Stratigraphy 60 marks
Indian Stratigraphy

GROUP-B. Palaeontology 40 marks

PRACTICAL:

(Two papers of 100 marks each)

PAPER-IV

Crystallography.....15 marks
Mineral hand specimens.....10 "
Mineral Optics.....15 "
Rock Hand specimens.....10 "
Rock Slides.....20 "
Blow pipe test.....15 "
Economic minerals.....10 "
Minerals for industry..... 5 "

Total: 100 marks.

PAPER-V

Maps..... 20 marks
Structural problems..... 15 "
Palaeontology..... 25 "
Field Report..... 30 "
Viva 10 "

Totals= 100 marks.

contil/-.....

P A P E R - I

(In addition to the Pass Course)

G R O U P - A

General Geology: Permanence of continents and ocean basins, continental drift, Sea floor spreading, Preliminary concepts of Plate tectonics and island arc, Seismology and interior of the earth, Age of the earth and geochronology.

Structure and geotectonics: Secondary structural forms, Elementary knowledge of adjustment in rocks under stress, and strain, Elementary idea of rock deformation, kinds of deformation, Mechanism of folding and faulting, Major tectonics of India.

Geomorphology: Common types of land forms and their classification.

Geohydrology: Sources of ground water-its occurrence and origin: General consideration effecting ground water supply-rainfall, runoff, absorption, evaporation, porosity and permeability, hydrological properties of water bearing materials, types of openings in rocks, primary and secondary openings.

Water tables- definition and location, free and confined water, water table in consolidated and unconsolidated rock formations, selection of sites for sinking wells, ground water provinces of India.

G R O U P - B

Economic geology and Indian mineral deposits; Elements of exploration and Engineering geology.

Scope of economic geology, Definitions of ore, gangue and tenor, Processes of formation of economic mineral deposits, Classification of mineral deposits, Ore genesis, Forms, structures and textures of mineral deposits, Structural control of mineral deposits and mineral localisation, Metallogenic provinces and epochs, Coal and petroleum province.

Study of mode of occurrence, origin and uses of the following economic minerals: gold, copper, aluminium, iron, manganese, chromium, coal, petroleum, mica, sillimanite and zinc and their distribution in India, A study of minerals used in Cement, glass and refractory industries and their occurrence in N.E. region.

Elements of mineral prospecting: a general idea of geological, geophysical and geochemical prospecting.

Engineering geology with respect to constructions of canals, highways and bridges. A study of landslides - their causes and protection.

contd/-.....

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P A P E R - II

(In addition to the Pass Course)

G R O U P - A

40 marks

Crystallography:

Crystals, crystal growth, Internal structure of crystal and geometry of crystal lattice. Unit cell. Zones and their mathematical relationship. Crystal systems. A broad survey of 32 classes of symmetry. Study of symmetry elements and different forms of normal class system and of the following classes:

Isometric	:	Pyritohedral Tetrahedral
Tetragonal	:	Diphenoidal Trapezohedral
Hexagonal	:	Trapezohedral
Rhombohedral	:	Rhombohedral
Orthorhombic		
Monoclinic		
Triclinic		

Twinning: Laws of twinning. A broad survey of twin. Laws of different crystal systems. Examples of twinning in different system.

Elementary ideas of crystal chemistry.

Physical mineralogy: Study of the physical, chemical and optical properties of SiO_2 group, olivine group, pyroxene group, amphibole group, mica group, feldspar group and feldspathoid group. Study of the following individual minerals:- Sillimanite, kyanite, andalusite, staurolite, apatite, chromite, zircon, beryl, epidote, calcite, tourmaline, magnetite, ilmenite, hematite, serpentine, and garnet.

Optical mineralogy: Introduction, polarization of light, polarisers, pleochroism, refractive index, double refraction, birefringence, determination of refractive index, interference colour, extinction, interference figure, optic sign and optic-axial angle and their determination, distinguishing characters of uniaxial and biaxial minerals.

G R O U P - B

60 marks

Petrology:

Igneous petrology: Phase rule and one, two and three component systems, Mineralogical phase rule: Mixed crystals and their petrological significance. Mode of occurrence of igneous rocks, study of their texture and structures. Classification of igneous rocks based on textural, mineralogical, quasi-chemical and chemical criteria.

Magma and magma tectonics. Reaction principles, Phase relationships of the following systems.

- (i) Pyroxene - Plagioclase.
- (ii) Forsterite - Silica
- and (iii) $KAlSi_3O_8$ - $NaAlSi_3O_8$ - SiO_2 system.

contd/-.....

Descriptive petrography of the following rocks.

- (a) Grants - Rhyolite family
- (b) Syenite - Trachyte family
- (c) Gabbro-Basalt family
- (d) Ultrabasic rocks

A brief discussion on the origin of the above stated families and also of the following along with a systematic description of each.

Pegmatite, Anorthosite, Granite, Alkaline rocks and Charnockite.

Sedimentary Petrology: Introduction, scope, abundance of common sediments, sedimentary processes, sources, transportation, deposition, diagenesis-compaction, cementation and recrystallisation, composition, of sediments (mineralogical), Texture of sedimentary rocks, scalar and vector properties.

Classification of sedimentary rocks:

Petrographic description of the following rocks: Sandstone, shale, clay, limestone, conglomerate, arkose, graywacke, grit, colitic limestone, oil shale and ferruginous rocks.

An introduction to Evaporites, salt domes and Carbonates.

Metamorphic Petrology: Recent concepts of metamorphic petrology: depth zones, grades and facies of metamorphism with reference to metamorphic assemblages. Texture and structure of metamorphic rock (fabric),

Chemical equilibrium in metamorphism, Metasomatism, Metamorphic differentiation, retrograde metamorphism.

Regional metamorphism with reference to argillaceous, calcareous and basic igneous rocks of basaltic composition, relationship between regional metamorphism and anatexis, palingenesis and granitisation.

Descriptive petrography of the important rock types:

Slate, phyllite, schist, gneiss, quartzite, marble, amphibolite and pyroxene-granulites, granulites.

contd/-.....

P A P E R - I I I

(In addition to the Pass Course)

G R O U P - A

60 marks.

Principles of Stratigraphy & Indian Stratigraphy.

Principles of Stratigraphy: Definition, scope of different units: time unit, rock unit and time-rock, Time-rock classification. Principles of correlation. Geological time-scale. Indian stratigraphic column. Absolute Geological time.

Sedimentary environment- importance of sedimentary environments in Stratigraphy-elements and facies of environment, Environmental pattern, classification of sedimentary environment. Concept of facies.

Principles and methods of measurement of geological time, rate of sedimentation, salinity, radioactivity, etc.

Indian Stratigraphy: Connotation of the terms-Archean, Dharwar, Purana, Cuddapah and Vindhyan, their correlation with standard stratigraphical column.

Geological time-scale: A brief survey of historical geology of India. Archean. the Archean stratigraphy of the following areas to be studied in brief with respect to their lithology, tectonic and igneous activity.

- (.) Mysore (b) Singhbhum (c) Assam Plateau (d) M.P.
- () Rajasthan.

A study of the classification of Mysore area is also to be made.

G Cuddapah system of Cuddapah basin, Vindhyan of Son Valley:

A brief discussion on the problem of correlation of the Archean occurrences in India.

Palaeozoic and Mesozoic: Introduction to the Palaeozoic and Mesozoic eras and study of the following areas with emphasis on the points mentioned.

- (a) Palaeozoic of Salt range and Spiti: Palaeontology, structure, stratigraphy and age.
- (b) Gondwana of Peninsular and Extra-peninsular-Indian Palaeontology, palaeogeography, igneous activity, structure & economic importance and age.
- (c) Mesozoic of salt range and Triassic of Spiti: Palaeontology and lithology.
- (d) Jurassic of Cutch: Palaeontology and lithology.
- (e) Cretaceous of South and North-East India: Palaeogeography, palaeontologic and lithologic relationship.
- (f) Tertiaries and quaternaries of North-East India: Economic importance, palaeontology, structure and lithology.
- (g) A brief survey of the Tertiary formation of Himalaya

Ebhtd/-.....

Paleontology :

A brief survey of different branches of paleontology. Definition and meaning of the terms—Micro and Macro fossil, Vertebrate and invertebrate animals, paleobotany and palynology. Mode of fossilization and importance of fossils.

A general study of the morphological characters and brief geological distribution of the following; Foraminifera, Brachiopoda, anthozoa, mollusca, trilobita, echinoidea & graptoloides. A general idea of the vertebrate and plant fossils in India.

A study on the evolution of trilobita, equidae and man.

P R A C T I C A L :

P A P E R -IV.

1. Crystallography:

- (a) Study of the forms and symmetry elements of crystals belonging to the normal class of the isometric, tetragonal, hexagonal, orthorhombic, monoclinic and triclinic systems and pyritohedral, sphenoidal, rhombohedral, tetrahedral trapezohedral classes with the help of wooden and glass models.
- (b) Stereographic projection and determination of axial ratios of important crystal models of the normal class of isometric, tetragonal, hexagonal, orthorhombic and monoclinic systems.

2. Mineralogy:

(a) Study of the distinguishing characters and physical properties of minerals listed in theory syllabus in hand specimens. (Theory Paper II, Gr. A)

(b) Optical mineralogy:

- (i) Identification of the following rock forming minerals under polarising microscope in this section. Quartz, chalcedony, orthoclase, microcline, plagioclase, nepheline, leucite, hypersthene, diopside, augite, muscovite, biotite, phlogopite, enstatite, hornblende, actinolite, olivine, serpentine, epidote, apatite, garnet, sillimanite, andalusite, kyanite, staurolite, chlorite, zircon, calcite, tourmaline, magnetite and ilmenite.
- (ii) Determination of vibration direction, pleochroic scheme, optical orientation and order of interference colour of minerals with the help of accessories. Determination of extinction angle of plagioclase. Study under microscope of uniaxial and biaxial interference figure, microscope of optical sign of centred and off-centred figures of uniaxial minerals, use of quartz wedge, mica plate and sensitive tint for optical study of minerals.

Contd/-.....

3. Petrology : (i) Recognition of the following rocks in hand specimens.

- (a) Various types of granite, syenites, gabbro, Nerite, diorite, granodiorite, rhyolite, andesite, trachyte, basalt, dolerite, peridotite, pyroxenite, dunite, tractolite, anorthosite, charnockite, pegmatite, aplite.
- (b) Conglomerate, breccia, shale, sandstone, limestone, dolomite.
- (c) Slate, phyllite, schist, gneisses, granulite, amphibolite.
- (ii) Study of texture and structures of the igneous, sedimentary and metamorphic rocks under the microscope.
- (iii) Study of the following rock slides under polarising microscope.
 - (a) Granites, syenite, gabbro, nepheline, syenites, nerite, diorite, granodiorite, dolerites, basalt, trachyte, monzonite, rhyolite, peridotite, pyroxenite, picrite, dunite, anorthosite, aplite, lamprophyre.
 - (b) Sandstone, shale, limestone.
 - (c) Chlorite schist, gneiss, granulite, amphibolite, quartzite, charnockite, eclogite, mylonite, augen-gneiss, magnetite, marble.

4. Economic Geology :

- (i) Identification of the following minerals in powdered form with the help of dry tests : Malachite, graphite, realgar, hematite, calcite, sphalerite, chromite, rocksalt, gypsum, zincite, galena, stibnite, psilomelene, nickolite, magnetite.
- (ii) Recognition of the following economic minerals in hand specimens : Calcite, graphite, azurite, malachite, chalcopyrite, pyrite, hematite, magnetite, siderite, chromite, pyrolusite, psilomelene, magnesite, rhodocrosite, sphalerite, realgar, orpiment, stibnite, molybdenite, bauxite, laterite, sulphur, apatite, asbestos, corundum, coal, gypsum, barite, dolomite, fluorite, galena, cinnabar, pyrrolite, bornite, covellite, arsenopyrite, crysolite, cuprite, zincite, limonite, monazite.

Paper - V.

1. (a) Maps- Interpretation of topographic maps. Drawing of profiles and study of geomorphological features from contoured maps.
 - (b) Working out of problems relating to true dip, apparent dip and thickness of beds of inclined strata. Graphical solution of dip-strike problems.
 - (c) Determination of dip and strike from bore hole data.
 - (d) Completion of outcrops of beds from surface and bore hole data.
 - (e) Interpretation of structure from geological maps with or without folds, faults, unconformity, igneous activity. Drawing of Cross-section.
2. Topographic survey with the help of prismatic compass and plane table. Uses of Clinometer/Brunten compass in field.

3. Palaeontology :

Identification of the following genera of fossils by their external morphology and their stratigraphic ages.

- (a) Nummulites, alveolina, discocyclina
- (b) Calceola, zaphrentis
- (c) Cidaris, hemidaster, micraster, clypeaster
- (d) Orthis, referisquina, athyris, productus, spirifer, terebratula, rhynchonella.
- (e) Arca, corbula, cardita, exogyra, glycimeris, hippurites, inoceramus, lima, mytilus, nucula, pecten, ostraea, spondylus, t. igonia.
- (f) Bellerophon, conus, conularia, cypraea, corethium, fusus, nuxes, natica, physa(Bulinus), Turritella, voluta.
- (g) Lacculites, belemnites, coratites, hamites, goniatites, nautilus, perisphinctes, scaphites.
- (h) Calymene, phacops.
- (i) Glossopteris, ganganopteris, ptillophyllum, vertebraria.

4. Field Work :

Geological field work of areas of stratigraphic structural and economic importance and the preparation of a detailed field report on the study made.

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Text Books and Reference Books recommended
for the Honours Course in Geology

- | | |
|--|---|
| 1. Physical Geology | Leet, L. Don & Judson, S. |
| 2. Geomorphology | Cotton, C.A. |
| 3. Structural Geology | Nevin, C.M. |
| 4. Outlines of structural Geology | Hills, E.S. |
| 5. A text book of Mineralogy | Dana, E and Ford, W.E. |
| 6. Elements of Optical Mineralogy
(Vol. I, II & III). | Winchell, A.M. |
| 7. Economic Mineral Deposits | Bateman, A.M. |
| 8. Metallic & Industrial Mineral
Deposits. | Lianey |
| 9. Indian Mineral Wealth | Brown, J.C. & Dey, A.K. |
| 10. Minerals Deposits | Lindgreen, W. |
| 11. The Evolution of the Igneous Rocks | - Bowen, N.L. |
| 12. Petrography of the Igneous and
Metamorphic rocks of India | Chatterjee |
| 13. Manual of Sedimentary Petrography | Krumbein, W.C. &
Pettijohn, F.J. |
| 14. Sedimentary Rocks | Pettijohn. |
| 15. Metamorphism | Harker, A. |
| 16. Igneous and Metamorphic Rocks | Turner, F.J. & Verhoogen, J. |
| 17. Petrology for students | S. R. Nockolds, R.W., Knox
& G. A. Chinner. |
| 18. Geology of India | Wadia, D.N. |
| 19. An Introduction to the Study of Fossils | - Shiner, H.W. |
| 20. Vertebrate Palaeontology | Romer, A.S. |
| 21. An Introduction to Palaeobotany | Arnold, C.A. |
| 22. Field Geology | Lahee, F.H. |
| 23. Optical Mineralogy | Roger & Kerr |
| 24. Introduction to Geology (Vol. II) | H.H. Read & J. Watson |
| 25. The way the earth works | P. J. Wyllie |
| 26. An outline of structural Geology | B.E. Hobbs, with W.D.
Means & P.F. Williams. |
| 27. Principles of Sedimentology | G.M. Friedman &
J.E. Sanders. |
| 28. Mineralogy for students | M.H. Battery, Longman. |

Contd/...

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29. Field Manual of Minerals M. Kuzin, N. Egorov
 30. Geology of Mineral Deposits V. I. Snirnov.
 31. Text book of Sedimentary Petrology V. S. Verma & C. Prasad
 32. Industrial Rocks and Minerals of India (Vol. I & II) S. Deb
 33. Principles of Geochemistry Brian Mason
 34. Structural methods for the exploration geologists Peter C. Badgley
 35. Mining Geology Hugh Exton McKinstry
 36. Fundamentals of Soil Science H. D. Foth, L. M. Turk
 37. Hydrology Oscar E. Meinzer
 38. A text book of Geology Longwell, C. R. Knopf, A & Flint, R. F.
 39. Introduction to Physical Geology A. K. Dutta
 40. Text book of Geology P. K. Mukherjee
 41. A text book of Geology S. Roy
 42. Structural Geology Billings, M. P.
 43. Rutley's Elements of Mineralogy Read, H. H.
 44. Study of rocks in thin section Moorhouse
 45. Ore deposits of India Gokhale
 46. The Principles of Petrology Tyrrell, G. W.
 47. Petrology Huang
 48. Stratigraphic principles & Practice Weller
 49. Geology of India & Burma Krishnan, M. S.
 50. Principles of Invertebrate Palaeontology Shrock, R. F. and Twenhofel, W. H.
 51. Palaeontology Invertebrate Woods, H.
 52. Minerals and Microscope Wells
 53. Text book of Petrology Hatch, F. H., Wells, A. K. & Wells, M. K.
 54. Laboratory Manual of Geology A. K. Sen

PHILOSOPHY DEPARTMENT

(vii)

RESTRUCTURING OF M.A. COURSES:PHILOSOPHY

In view of the implementation of 10+2+3 pattern of education is imperative on us to make necessary changes at the post graduate level.

Any post-graduate programme in philosophy must aim at the following objectives.

1. The programme should be broad based so as to cover all the important branches of the discipline.
2. It should lay special emphasis on philosophical classics.
3. It should generate insight in the students to carry on further studies and research, in discipline.
4. It should aim at fostering interest in interdisciplinary research particularly with social sciences and humanities.
5. It should aim at critically reflecting on what is broadly called ancient Indian wisdom.

Accordingly, a meeting of the teachers in the department was convened to discuss the problem. It was agreed that the P.G. programme in philosophy must be research oriented. The courses of studies are to be designed in this light only.

We also took into account the job opportunities available to the students. But then it was decided that general courses in philosophy, so as to help the student to appear at different competitive examinations like I.A.S. could be offered only at the graduate level. Accordingly, this point has been adequately taken care of in our undergraduate courses.

It is agreed that there are certain courses which should be made compulsory for students joining the M.A. programme. Accordingly, four courses, in the following major areas should be made compulsory in the first semester.

SEMESTER - I

1. Indian Philosophy (Text based)
2. Symbolic Logic
3. Moral Philosophy (Text based)
4. Philosophy of religion (Text Based)

Contd/-.....

Our undergraduate course in these areas are not text-based, they are topic based. The under-graduate courses in these areas have been designed to give a broad back-ground to the student. While the P.G. Courses have been designed to take in depth study based on classics in the area concerned. However, since we do not have a course in symbolic logic in the under-graduate level, our course in logic is only elementary at the P.G. level.

SEMESTER - II

1. Indian Philosophy (Text Based)
2. Tractatus Logic Philosophicus (Text)
3. Social & Political Philosophy (Text-Based)
4. Analytical Philosophy (Optional courses are to be devised later on in this area).

In the second semester, the students will also be required to study one text based course Indian Philosophy. The introduction of two text-based courses in Indian Philosophy will give our student a feel of what is called the ancient Indian Wisdom, Tractatus, another philosophical classic by Wittgenstein will be compulsorily studied by the student. The introduction of the text presupposes acquaintance with symbolic logic and this we have included in the first semester. We have a course in socio-Political philosophy in the under-graduate level. But that course has been designed with a view to acquainting the students with the broad outline of the subject. At the P.G. level we propose to strengthen this course by way of introducing classics both Indian and Western in the subject. No P.G. Programme is complete without inclusion of course in the area Analytical Philosophy. Accordingly, we propose to offer optional course in this area.

SEMESTER - III

1. Plato (Text-based)
2. Existentialism (Text-based)
3. Philosophy of Mind.
4. Analytical Philosophy (Optional Courses to be devised as this area)

Contd/-..... ..

No programme in philosophy can afford to ~~exclude~~ Plato from its teaching and research. Accordingly we propose to offer compulsory course (text based) on Plato. The contemporary philosophical movements in the continent like existentialism simply cannot be excluded. For the simple reason that it has affected our attitude to a very large extent in the sphere of art and literature.

Contemporary discussions on philosophy of mind are enormous. The issues discussed here have far reaching consequences in cognate area like philosophy of literature, art appreciation philosophy of morals, even some branches of social sciences. That is why it is included as one of the compulsory papers. The academic importance of Analytical philosophy can simply never be overestimated. That is why we propose to offer optional courses in area concerned.

SEMESTER - IV

1. Kant(Text based)
2. Philosophy Investigations(Text)ba
3. Philosophy of Social Sciences
4. Elective.

In the fourth semester all the papers except one will be compulsory. But we have also delimited and specified the areas in which optional courses could be offered. Accordingly, we have proposed the following areas in which such courses could be given.

1. Philosophy of language including Grammar(Both Indian & Western).
2. Indian Logic (including Nyaya & Buddhism)
3. Contemporary Indian Philosophy.
4. Philosophical Classics (Indian & Western)
5. Phenomenology.
6. Advanced Mathematical Logic.
7. Philosophical Logic.
8. Philosophy of Natural Sciences.
9. Moral Philosophy (Both Indian & Western).

As Plato is a must, so also are Kant & Wittgenstein for any meaningful programme in Philosophy. As such we propose to text-based courses on Kant & Wittgenstein. Again, the importance of a course in Philosophy of Social Sciences cannot be over-rated. This will help the student to interact with social sciences in the school. The fourth paper in the fourth semester is proposed to be optional. But we propose to delimit the area of optional courses too. Optional courses will be offered in the area(s) which have not been otherwise covered or which need special attention.

Contd/-.....

Brief Summary.

1. In depth study of different philosophical classics is considered to be our main objective. In philosophical classics simply cannot be excluded. But while selecting the classics utmost care has been exercised. Only those classics that have played a very significant role in shaping and revolutionising the course of philosophy have been chosen. Accordingly, the works of Plato, Kant and Wittgenstein have been chosen.
2. Due weightage has been given to Indian Philosophy by way of introducing the text based compulsory courses.
3. Analytical philosophy has been given due weightage by way of making provision to offer number of optionals in the area both in 2nd and 3rd Semester.
4. Contemporary continental Philosophy like existentialism, and inter-disciplinary courses like philosophy of social sciences have also been proposed to be introduced as compulsory courses.
5. Broad and Basic subject like symbolic logic, Moral philosophy and political & social philosophy have also been proposed to be introduced as compulsory courses.

In other words, the underlying rationale behind the proposed course structure is that a student doing M.A. in Philosophy after three years degree course must not only be conversant in the major area of philosophy but should make in depth study of classics with a bias towards inter-disciplinary research with the help of modern and up-to-date analytical tools and acumen available in the subject. We have increased the course content and have taken note on recent developments in the area concerned.

But we have reduced the number of optionals to the minimum. Most of the times, in the name of optionals courses unnecessary duplication and palpable take place. Sometimes we just move in the periphery instead of coming to the heart of the subject. This we cannot afford. We feel that there are certain areas and courses which every student doing M.A. ought to study. So we have enlisted such areas and courses and accordingly have accorded compulsory status.

Even if we have provided some rooms for optional courses yet we have specified the areas in which such courses can be offered. This has been done in order to keep ~~time~~ with our main objective of our programme. But this is not to curtail the freedom of the teacher.

contd/-.....

Only the chances of duplication and overlap have been reduced. But freedom and flexibility have been otherwise ensured within the system.

This we think to be the minimum objective of any meaningful academic programme in the P.G. level.

Preparation of Text Books.

We have already started working on preparation of two text books for the +2 courses. We hope to complete it soon.

Thus we will take up the work of preparation of text books for the degree course in each paper. Some of our colleagues are working on it.

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...*****.....

(viii) Proposals from the Board of Post Graduate Studies in Zoology -

The Board of Post-Graduate Studies in Zoology proposed that the question papers of the post -graduate examination be moderated by a Board consisting of five members, two specialists from outside the University and three from within the University including the Chairman of the respective Board of Post-Graduate Studies , who would be the convener of the Board of Moderators.

Further, in case any specialisation is not covered by the participating members of the Board at the time of the meeting , the faculty member teaching the course should be co-opted.

It is also recommended that similar arrangements be made for B.Sc.(Hons) courses also.

It is also proposed that the cost of atleast 100 reprints of the scientific paper(s) published by the staff and students of NEHU be allowed to be met from the contingency grant of the Departments.

The proposal is placed before the Council for consideration.

(ix) PERMISSION FOR A B.V.Sc. AND A.H. DEGREE HOLDER
TO APPEAR B.A. EXAMINATION AS A REGULAR CANDIDATE.

A Bachelor of Veterinary Science and Animal Husbandary Degree holder has asked for permission to appear for the B.A. II Year Examination (Old Course) as a regular candidate.

The duration of the B.V.Sc. and A.H. Course is 4 years after passing the 1 year P.U. Science course (1+3) and it is equivalent to the B.A. Three Year Degree Course (2+3).

. As there is no provision in the Ordinance for him to appear the B.A. Examination straight away without doing the course, the matter is placed before the Council for a decision whether he could appear for the said Examination.

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(x) Opening of Sanskrit Department-

Three teachers of the Department of Sanskrit, Lady Doree Girls' College, Shillong represented to the Vice-Chancellor NEHU that there is a need to promote the study of Sanskrit under NEHU to the Post-Graduate level. They state that many of the Students of the region discontinue the study of Sanskrit after graduation or do not take up Sanskrit in the Under graduate classes because of non-availability of facilities for Post-Graduate studies and research in the subject in the University.

A statement showing the results of the University from 1980 to 1982 in respect of Sanskrit for P.U. and B.A. is reproduced below:-

Examination	Year	APPEARED			RESULT (PASSED)				
		(With Sanskrit)			Female				
		M	F	Total	I	II	III	P	Total
P.U. (Arts)	1980	x	16	16	1	3	4	x	8
	1981	x	13	13	1	3	4	x	8
	1982	x	14	14	1	2	6	x	9
B.A. (Pass)	1980	1	2	3	-----NIL-----				
	1981	x	6	6	-	-	-	3	3
	1982	2	6	8	-	-	-	5	5
B.A. (HONS)	1980	x	4	4	1	2	-	1	4
	1981	x	4	4	2	-	-	2	4
	1982	x	1	1	-	1	-	-	1

NOTE:- :MALE CANDIDATE ONE PASSED IN SIMPLE PASS.

The matter is placed before the Academic Council for consideration.

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- (xii) To consider the Introduction of Classical Languages vis. Pali, Prakrit, Arabic Persian and Sanskrit.

The UGC appointed a panel on Classical Languages viz. Pali, Prakrit, Sanskrit, Arabic and Persian. The said committee has formulated certain guidelines and course structure for the above languages at both the undergraduate and postgraduate levels. The UGC vide their letter No.F.5-7/82 (IRI) dated 29th June, 83 forwarded these guidelines to the Universities asking for comments.

In this connection, it may be stated that the University has none of these languages at post graduate level. Only Sanskrit is taught at the under graduate level. Provision for private appearance for Arabic and Persian languages at Pre-University level exists although no one at present offering these languages. The working paper suggesting re-structuring of courses as sent by the UGC is placed below for the consideration of the Academic Council, so that the comments of the University, if any, may be forwarded to the UGC after it has been duly considered by the Academic Council.

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI

No.F. 5-7/82(HR I)

Dated June, 1983.

The Registrar,
North-Eastern Hill University,
P.O. Lower Lachumiere,
Shillong - 793001.

Subject: Working papers regarding the Structure of Syllabus in
Classical languages.

Sir,

The Panel on Classical languages at its meeting held on 3rd November 1982 considered the working papers prepared by the Sub-Committee in Pali, Prakrit, Sanskrit, Arabic and Persian regarding the structure of syllabus in these languages and resolved that the working papers may be circulated to the Universities for their comments.

It is therefore requested that the comments on working papers may please be sent to the UGC immediately.

Yours faithfully,

Sd/-

Dr. (Mrs) Naseem Bhatia
Education Officer.

Copy to the Head of the Department of

for necessary action.

Dr. (Mrs) Naseem Bhatia,
Education Officer.

.....

Working paperRestructuring of Courses in Sanskrit

By Prof. Ramranjan Mukherjee.

The thinking of the day is that syllabus for all stages should be restructured in such a way that it becomes relevant to modern society as a result of which graduates undertaking training in these courses could find it easier for them to adjust themselves with the changes in contemporary society and contribute effectively to the changing social structure. While attempts have been made to restructure courses in other areas in accordance with this philosophy, the syllabus for Sanskrit has more or less remained static and has refused to recognise allied concepts, linguistic and literary, philosophical & religious, Political & metaphysical - undergoing transformations and taking new shapes in sister disciplines. If graduates in Sanskrit are to be made fruitful citizens competent to face the challenges of modern society and employable in all areas and avenues, modern concepts are to be incorporated so that Sanskrit can be experienced as a living discipline, containing the sources of many thoughts and theories that are accepted as modern ones. Induction of this new component will enable the students to appreciate old concept in big or perspective and to realise the Sanskrit is competent to play a vital role in contemporary society as well, and that Indian Society can draw inspiration and nourishment even now from the endless flow of Sanskrit learning and culture. Though much depends on the approach of the teacher and the technique followed by him in communicating ideas and translating experience to be taught, modification of the existing syllabus is a necessity, since the courses provide a starting point to the teacher and indicate which direction the imagination of the teacher is to take

Contd/-.....

and the height to which the taught is conducted. The following suggestions in regard to courses at different levels may be helpful in bringing into consummation the objectives enunciated before.

POST-GRADUATE LEVEL

A. GENERAL SUBJECTS

Paper I

The Vedas and the Upanisads - In this paper attempt will be made to make an analysis of the Vedas from the linguistic and literary points of view as also to make an assessment of the religious social, political and economic life of ancient India from the Vedas.

While emphasis will be on the original texts of the Upanisades the interpretation of the Upanisads by such modern schools as the School of Rana Krishna and Sri Aurobinda shall be an essentiality.

Paper II

Grammar and Linguistics:- While select portion of panini's Grammar shall be taught with emphasis, the object will be to make a critical appraisal of the principles of morphology, phonology and semantics from the point of view of ancient grammar as also linguistics.

This paper will make an attempt to make the young reader acquainted with philosophy of Grammar and the Principle behind employment of languages.

Contd-----

Paper IIIElements of Indian Philosophy - The Nyaya and Vedanta Systems.

This paper will make an attempt to make the students acquainted with the Nyaya Metaphysics and Epistemology as also to make him conversant with the Vedanta metaphysics and the Vedanta doctrines of the means of acquiring knowledge.

Paper IV

History of Sanskrit literature- This paper will make a study of history of Sanskrit literature with the objective of tracing the main trends in the development of literary thoughts and literary forms in the fields of Poetry, Prose and Drama. This will also make an attempt to make the reader conversant with the contributions of regional literary stalwarts and critics to Sanskrit literature with the objective of tracing how Sanskrit literature in a particular region has conversed into the vernacular literature and how thoughts presented in Sanskrit literature have intimately blossomed forth into new thoughts in contemporary or subsequent vernacular literature of the region.

Paper V

Literature- Poetry, Prose and Drama- In this paper representative specimens of poetry arts, prose composition and dramatical creations will be taught in order to enable the students to have an idea of the poetic minds and dramatic talents of representative literary artists and dramatists.

Contd/-.....

B: Fields of Specialisation

(a) Literature and Literary Criticism.

Paper VI

Poetry, Prose and Drama The students will be required to make a detail study of one poet, one literary artist, dealing with prose literature and one dramatist. The emphasis on this paper will be on technique adopted by the artist and his approach to the problems of life and society.

Paper VII

Literary criticism of the East - This paper will be devoted to the study of the main trends in literary criticism with special emphasis on the Doctrine of Dhvani and principle of Propriety.

Paper VIII

Western Criticism - This paper will be devoted to the Study of Longinus, Aristotle, Abercrombie, Shelley and Coleridge.

(b) Nyaya and Vaisesika Systems

Paper VI

Nyaya Metaphysics - Representative works of the Nyaya system including the works of Jayantabhatta and Goutama will be taught with the objective of making the students acquainted with the fundamental of Indian logic.

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Paper VIII

Epistemology of the Nyaya and Buddhist Logic- This paper will be indicated to make a detailed study of the different instruments of knowledge including inference and its component of universal concomitance which is so essential to deduction of inference of Indian Logic. This paper will also make an attempt to present the view points of the Buddhist Logic of Inference namely, the Logic presented in the works of Dharmakirti.

Paper VIII

Western Logic - This paper will try to make a study of the view points of Dradly, Taylor, Copi and Russel on the concepts introduced in Western Epistemology, Metaphysics and Logic.

(c) The Vedanta System of Philosophy.

Paper VI

Vedanta Metaphysics- This paper will try to make the student acquainted with the commentary of Sankara on Brana-Sutra alongwith the exposition of Bhamati.

Paper VII

Vedanta Epistemology - This paper will enable the student to have an idea of the valid means of knowledge as postulated in the Vedanta system of Philosophy.

A portion of this paper shall be devoted to an analysis of the exposition of the Bhahna-Sutra by Ramajuja, a School divergent from the School of Sankara.

Contd/-.....

Paper VIII

Modern Interpretation of Vedanta - This paper will try to expound the Philosophy of Vivekananda, Aurobindo and Gandhiji on the tenants presented by the Vedanta system of Philosophy. In this paper the religion of Gita shall be taught and the influence exerted by Gita on the social, religious and cultural life of India shall be analysed.

(d) Drama-Shastras.

Paper VI

Important texts on Dhrama-Shastras - This paper will try to make the readers acquainted not only with the theories on social and religious life as propounded in ancient India but also with the objective of appraising him of the technique followed by the Dhrama Sastra Literature.

Paper VIII

Concepts presented in the epics and historical literature including the interpretation of the Mahabharata and the Purana.

Paper VIII

An analysis of the religious, social and political life of ancient India in different ages - This paper will try to trace the evolution of religious, social and political life of ancient India, beginning from the period of the Vedas to the modern age, through the stages represented in the Dhrama-Sastras and Inscriptions.

(B) Buddhism and Jainism.

Paper VI

Texts on Buddhism:- This paper will deal mainly with Philosophical texts on Buddhism including Buddhist logic with the objective of making the students acquainted with the original composition of Dharma-Kirti, Ratna-Kirti and Jñānesarimisra.

Contd/-.....

Paper VII

Texts on Jainism:- This paper will deal mainly with original texts on Jainism, dealing with Jain metaphysics and epistemology.

Paper VIII

Flights of Buddhism through the ages - This paper will deal with modern concepts and will try to analyse the influence exerted by Buddhism and Buddhistic thoughts on the social and religious life of India, as also of the neighbouring countries.

(F) Veda and Mimansa Systems.

Paper VI

Select portions of the Vedas including the Brahmanas:- This paper will try to emphasise the characteristic features of the vedic Samhitas and Brahmanical literature and will try to trace how the vedic religion takes a new shape in the Brahmanas.

Paper VII

The Mimansa System of Philosophy:- This paper will deal with original texts of Mimansa System - the theories of knowledge presented by the system, the problems in regard conceptual cognition raised by it as also the issues in regard to authenticity of vedic injunctions proposed by it.

Paper VIII

Modern Interpretation of Vedas: This paper will try to analyse how the Vedas have been interpreted in different areas, and while starting with the interpretations of the Vedas by the first commentator Yaska it will end with the interpretation of Vedas offered by Shri Aurobinda.

In Institutions where instruction is imparted in a traditional method through traditional types of courses serious thought has to be given to the proposition of introducing one paper in order to enable the students to have some ideas of the modern development in respective fields of specialisation. An option may be given to answer this paper through the medium of English, Sanskrit or regional language.

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Syllabus for Under-Graduate Course.

While the general level or pass course shall consist of three papers the Honours course shall consist of six papers, the first three papers being common with the pass general level papers.

Paper I

Poetry and Prose Text:- This paper will try to acquaint students with the master-minds in the field of poetical and prose literature and will also deal with such collections of stories as the Hitopadesa and the Pancatantra. While expounding the tenets of the Hitopadesa and the Pancatantra and students may be advised to identify the concepts presented in ancient India texts on policy and statecraft.

Paper II

Selected Dramas:- This paper will take care of at least two important Dramas. While dealing with these dramas it will take care to see that the plays are presented in the context of world Dramas and the students get an opportunity of making a comparative estimate of the dramas with those of the West.

Paper III

Sanskrit Grammar and Composition:- This paper will deal with original rules presented in the Paninian system of Grammar and the student will be required to demonstrate his skill in making original compositions in Sanskrit.

Paper IV

Poetic:- While the intention of this paper will be to make the students acquainted with at least two representative works on literary criticism, an opportunity should be extended to them to make themselves acquainted with the main trends in development of Sanskrit literary criticism, as a result of which they can make an assessment of the contribution of the literary critics read by them to the entire fields of literary criticism.

Contd/-.....

Paper V

Comparative Philosophy and History of Classical Literature including contribution of the particular region to Sanskrit Literature.

Paper VI

Vedic Texts and elements of Nyaya - This paper will try to give the students a general idea of the Vedic literature and will also try to make them acquainted with the fundamentals of Nyasa system of Philosophy which is regarded as the gate-way to all types of learning-.

While teaching Philosophy emphasis should be on the concepts rather, than on the verbal expressions and while teaching poetry and drama emphasis should be on appreciation and critical analysis of the poetic minds. The technique of presenting meanings and expounding the general idea should be avoided. Instead of the technique of analysing the expression. The technique of analysing the poetic mind should be followed as a result of which the poetic genius is revealed to the student, enabling him an opportunity of experiencing the fascinating genius of the poet.

It is felt that though induction of these new components Sanskrit will be made more attractive and graduates offering Sanskrit as their major subjects will become more employable in diverse fields. In order to create employment opportunities the proposition of making Sanskrit compulsory in the Secondary Stage is to be examined with great care and implemented at the earliest opportunity.

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THE PROBLEMS OF RESTRUCTURING THE SYLLABI OF COURSES AND METHODOLOGY OF TEACHING OF ARABIC IN INDIAN UNIVERSITIES.

By

DR. SYED EHTISHAH AHMAD KADVI,

Prof. & Head of the Department of Arabic,
Calicut University
673 635 , Kerala.

The syllabi of Arabic language and literature taught in Indian Universities and Colleges are outdated and in need of drastic changes . This change should be brought about with three basic aspects of the teaching of Arabic at higher level in mind.

The very pattern of teaching should be changed. For example, when an arabic teacher, even at University level, goes to the class room to teach history of Arabic literature he does not deliver lectures on the basic trends of Arabic literature, he does not throw light on the literary feature and achievements of the poets and writers but instead he simply takes a book on the history of Arabic literature, translated it into English or Urdu while a student reads. He dictates notes borrowed from Nicholson 's history of Arabic literature. This method is alright for teaching of prose and poetry. Let the student read the book and let the teacher do the explaining, instead of mere translation. But subjects like history of literature and Islamic history, which are taught as a background for literature, linguistics and grammar, should be taught as a modern subject and Lecturing method should be adopted. The American method of Seminar discussion on the given subject should be given preference ever the English method of teaching. I donot understand how students can be benefited simply by teaching the book or dictating the notes borrowed from orientalist. It reminds me of my old bad experiences when the teacher of the history or Arabic literature copied from the book of Nicholson and dictated to us in English. This is nothing but wasting the students time.

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In the structure and pattern of the teaching system of Arabic, drastic and effective changes are to be made, to get desired results. We are in fact following the old medieval method of teaching of Arabic used by Arabic Madrasahs. Of course, the students of Madrasahs are strong in the language but they are weak in literature. We should adopt modern pattern of teaching. Delivering of lectures and discussion on certain given topics should commence without delay.

At higher level in the present method of Arabic teaching, there is no provision for correction of the language. The student at B.A. and M.A. levels does not write Arabic and hence none of his mistakes are corrected. This is because only the book is taught and the student has no room for a composition and essay writing and thus there is no provision, even at masterate level, for the correction of students language.

At higher levels essay writing and correction must be made essential. This is the reason that Arabic students and even teachers are unable to express their ideas in Arabic. There is a paper at M.A. level for essay which is actually not taught in the class. Most students guess the topics which came in the examination and memorise them from the printed books. I recall an incident when I was examiner of Essay paper and one of the students wrote an essay on a topic which was not asked in the question paper. The teacher was unhappy when I gave him no marks he said that all the students memorised the topics and that this boy was unfortunately had missed the target.

2. The main source of weakness in teaching Arabic is the medium of instruction. In the whole country Arabic is taught either through Urdu or English. Hence students can express in those languages better than Arabic. They do not have circumstances to express their ideas in Arabic. In effect, Arabic is not taught as if it is a dead language.

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In fact many Arabic M.A. degree holders can not write a letter in Arabic as a ntriculate writes letter and applications in English. The reason is obvious. No progress will be obtained until the medium is changed and inportance is given to corrections and exercises. In fact the students should have already completed this stage at school level. The problems of teaching of Arabic are strange and intricate.

Many students opt for Arabic at College level. This is the main hinderance for adopting Arabic Medium at College level. Such students feel comfortable only with English or Urdu as the medium. When I discussed this problem with college teachers, they argued that changing the medium would amount to cutting the root of Arabic studies in this Country. They would not get students at all. Most students who opt for Arabic at Pre-University or B.A. level will be driven away from it if the medium is changed, and hence we cannot take this extreme and harmful measure below post-graduate level.

The simple and effective remedy for this ill is to adapt Arabic Medium at M.A., M.Phil and Ph.D. levels. Based on personal experience, I can claim that it indeed is very successful. The students who actually know grammar conjugations syntax, construction of sentences and have rich vocabulary, they can develop the habit of writing and speaking within a few months. All the students in Calicut University write answers to questions in Arabic in M.A. Examinations. They write their thesis in Arabic. In Seminars, they speak in Arabic. Ultimately, many of them developed a remarkable degree of fluency.

In this regard, writing of a dissertation at M.A. level has paramount importance. This is possible only if the students are given ample chances to write Arabic and develop their abilities of writing. The supervising teacher has to correct it. In a small measure this will be an exercise for research work.

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It will pave way for research. I have found it very useful and suggest that writing dissertation should be made compulsory. Students should write a minimum of 200 pages within two years of M.A. Course in Arabic either in the shape of dissertation of sessional mark may be given for such work.

The present structure of the syllabi of M.A. course has no place for linguistics. I suggest that linguistic be introduced and the paper may be made compulsory for the present. But the difficulty in this regard is the non-availability of the basic books on Arabic literature. For example no book is available in India on the methodology of research or the book on the methodology of teaching for the training college students. At masterate level, we are suffering from lack of dramas, Novels and collections of poetry, without teaching good dramas, fiction and novels, the students cannot pick up the standard language. We get in India books only on Islam, literary criticism, history of literature and dictionaries.

To solve the problem I suggest that UGC may undertake a plan to provide basic books by generous grants to the Universities. First a small committee may visit Egypt and Beirut and collect the books or take photostat copies of the needed books. The reprinting the copies may be arranged with some books sellers. If the basic books are printed in India naturally the problem will be solved. Alternately the best works in short stories. Novels and collection of poems each in 3 or 4 volumes may be selected and published by the help of UGC under its text book plan.

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Thus I am to conclude that methods of teaching of Arabic should be changed. Lecturing & Seminar methods should be adopted by the teachers (exempting the teaching of Prose and Poetry).

Novels, prose and fiction should be taught and included in the syllabi emphasis should be laid on dissertation and composition.

The medium at M.A. and M. Phil, and Ph.D. stages should be made Arabic. A paper on linguistics should be introduced after making the arrangement for the availability of books in Arabic.

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Improvement of syllabus is not possible until and unless the basic books of modern Arabic are provided with. Books on classical literature are generally available in the country simply because the book-sellers publish them due to local demands. Classical literature is taught in our colleges and Universities because the books on modern literature are not available. In fact the problem of books can easily be solved by wide range selection from dramas, short-stories novels and modern poetry. Teaching of the works, of modern poetry and modern authors is essential. Actually, even the teachers do not have generally the knowledge of modern trends in Arabic literature. The knowledge of modern Arabic, modern literary movements and the basic changes in Arabic literature are known even to the teachers, who impart knowledge to the students at University.

In my opinion some important books should be published indigenously and they should be made available. New syllabi may be prescribed giving more emphasis on modern Arabic, Dramas, Novels and Fictions. They must be given proper place in our syllabi of the courses in the Universities. For such a selection a committee may be appointed and it has to visit Cairo and Beirut in order to get proper material for selection which are available in those countries.

In my opinion, the modern poets may be taught. Daroodi, Hafiz, Shouq, Matran, Yeelia Abu Maddi, Umar Abu Risha, Zahavi, Ruafai.

In Prose:- Taha Hussain, Aqqad, Manfaluti, Rafai, Taufiqul-Hakin.

As far as classical literature is concerned, I have nothing to say on the ground that our syllabi are leaning towards classical literature. But without modern Arabic literature, we are actually cut off from the Arabic world. It is high time we gave emphasis to modern Arabic, modified the pattern syllabi, trained the students to write Arabic and to cultivate habit of translation from Arabic into English and vice-versa.

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Working paper for Restructuring the Syllabus of Prakrit language.

The following points may be considered in this connection:

1. The Prakrit language can be studied fruitfully in connection with Sanskrit and Pali;
2. Prakrit Grammar should be studied fully keeping in view the modern researches in middle Indo-Aryan languages and the modern grammars also followed in western Countries;
3. The Prakrit extracts and passages selected for study at all levels should be representative of the literary, economic, social and cultural life of those periods, in addition to their religious and philosophical ideas;
4. Prakrit should be treated as on a par with Sanskrit and Pali, for competitive examinations of the States and the Centre;
5. Equal opportunity with Sanskrit and Pali should be given to the study of Prakrit at all levels of Schools, Colleges, Universities and research programmes.
6. Inscriptional Prakrits should be given due importance in the courses of studies in Prakrit.
7. The middle and late Indo-Aryan languages alongwith Hybrid Sanskrit should also find an adequate representation in the Prakrit courses.
8. Considering the living context of the Prakrits and late Indo-Aryan languages with the political social and economic life of the people through the ages, due importance should be given to these languages in the courses of studies in subjects like literature, philosophy, linguistics, archeology, history, culture, etc.
9. In foreign countries, Prakrit, Pali and Sanskrit are never studied in isolation. This should be kept in view in restructuring the courses in these languages at all levels of teaching and research.
10. At undergraduate and post-graduate levels, the course of studies in Sanskrit languages literature should reserve 25% marks for Prakrits necessary for higher research in Sanskrit language literature.
11. The development of late Sanskrit languages (e.g. Jaina and Buddhist Sanskrit) should be studied from their original sources.
12. Diploma courses in Early and Middle Indo-Aryan languages may be introduced for school and university students interested in the cultural trends of our country.
13. For restructuring the course in Prakrit on the above noted Principles, a workshop may be arranged by the Sub-Committee of Prakrit in February, 1982 at Ladnun.

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The following scholars may be invited at the workshop for finalising the cour. :

1. Prof. Dr. S.N. Ghosal, Asatosh,
Professor of Sanskrit , Calcutta University,
Calcutta.
2. Dr. V.P. Jain, Reader in Prakrit,
Jabalpur University, Jabalpur.
3. Dr. Khadabadi, Reader in Prakrit,
Karnatak University, Dharwad.

Nathmal Tatia, Convener,
Sub-Committee of Prakrit.

B. Bhatt, Member of the Sub-Committee of Prakrit.

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Working paper for restructuring the courses of Pali

Taking into account the changes that have taken place in the economic and social life of the country, keeping in view the latest researches and changes in the trends of teaching of the disciplines in India and other countries, and taking into account the employability of the students receiving instructions in different courses of Classical Languages, the following courses of reading of Pali are posed for various levels.

(A) Guidelines for courses of Pali for Intermediate of Art

(1) Simple pieces of prose and poetry should be selected from the Vinaya-Pitaka and Sutta-Pitaka; Specimens of Prose from the Milinapanha and Jataka-attha-Vannana should also be given. Emphasis should be given in selecting the pieces presenting the sublime the connected with human values.

(ii) Free composition in Pali in direct method should be introduced. Attempts should be made to bring the students nearer to the mode of expression of the Tipitaka by inserting the apt illustrations.

(iii) Elements of grammar should be introduced on the basis of an original text like Balavatary and the students should be made acquainted with the declension and conjugation of important words and verbs respectively.

(B) Guidelines for Courses of Pali for B.A. (Pass)

(i) Selection of Prose pieces from Vinaya-Pitaka and Sutta-Pitaka dealing mainly with philosophy, Ethics, Psychology and other Social Sciences. A descriptive picture of the Buddha's view of a complete harmonious life-both household and monastic, should be revealed through these pieces. Pieces from the Milindapanha, depicting the aforesaid theme should be selected.

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(ii) Poetry pieces should be selected from the Sutta-Pitaka, mainly depicting the themes of developing congenial atmosphere for a ~~sound~~ harmonious social order. The episodes of practical application of Philosophical concepts in day today life should be emphasized. Some pieces from non-cannonical literature should also be introduced.

(iii) The basic rules of grammar should be introduced through a text like Dalavata or Kaccanavyakarna. The rules should be explained with illustrations through direct method.

(iv) A descriptive account of the History of Pali literature from 600 B.C. to 5000 A.D.

(v) A survey of the preservation of Pali Literature through three Buddhist Councils.

(C) Guidelines for Courses of Pali for B.A.(Hons)

(i) The first half of the Honours course in Pali should contain the same as stated with reference to B.A.(Pass.Course). There should be the following addition in the second half.

(ii) (a) Pieces of Prose and Poetry from the Vinaya Pitaka, Sutta-Pitaka and Ahhidham-Pitaka depicting the concept of Buddhist thought and (b) Specimens of Prose from the non-cannonical literature and commentarial literature should be included.

(iii) (a) History of Pali literature from the 500 A.D. to upto-date.

(b) History of Buddhism in India.

(iv) A historical survey with detailed account of the place of Buddhist interest in India.

(D) Guidelines for M.A. Courses in Pali-Part - A.

(i) Portions from the Vinaya-Pitaka depicting the true picture of monastic life.

(ii) Portion from the Sutta-Pitaka giving a clear picture of Buddha's Carika and Prescribing the norms of happy life with depiction of the Philosophical and moral concepts.

Contd/-.....

- (iii) Portions from the Abhidhamma-Pitaka presenting the description and ultimate reality.
- (iv) Pali Grammar and composition based on the Kaccana or Naggalana-School.
- (v) Critical history of Pali Literature.

Part B

There should be nine groups containing four papers each, as stated below.

Group A Pali Literature

Pitaka, Anu-Pitaka, Atthakatha Manual and some portions of Epic Literature.

- Group B Buddhist Sanskrit Literature.
- Group C History of Buddhism in India and Abroad.
- Group D Buddhist Philosophy.
- Group E Chinese Buddhism
- Group F Tibetan Buddhism
- Group G Japanese & Korean Buddhism
- Group H Modern trend of Buddhism in India.
- Group I Buddhist Logic.

The general outlines for structuring the courses of Pali at different levels have been given. It is further suggested that a workshop for three days for framing and finalising the details of each course may be arranged in the first week of March, 1982 preferably for which the following scholars should be invited for participation:-

1. Prof. Mathnal Tatin,
Director,
Jain-Viswa Bharati,
Ladnun, Dist. Nagore.

Contd/-.....

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2. Prof. Angraj Chowdhary,
Prof. of Pali,
Nava Nalanda Mahavihar,
Nalanda.
 3. Dr. U. Yagarabhivanga,
Nava Nalanda Mahavira,
Nalanda.
 4. Prof. D.N. Banerjee,
Prof. of Sanskrit & Pali,
Vidya Bhavana,
Viswa Bharati,
Santiniketan.
 5. Prof. D.K. Barua,
Professor of Pali,
Calcutta University, Calcutta.
 6. Prof. H.N. Chatterjee,
Professor of Pali,
Govt. Sanskrit College,
Calcutta.
 7. Dr. Bhag Chand Jain,
Pali Prakrit Deptt.,
Nagpur University, Nagpur.
 8. Dr. M.G. Dhalphale,
Professor of Pali,
Fergusson College, Poona.
 9. Dr. N.M. Sansani,
Deptt. of Sanskrit & Pali,
Banaras Hindu University,
Banarasi.
 10. Prof. Jaganath Upadhyaya,
Retired Professor of Pali,
Deptt. of Pali,
Sanskrit University, Varanasi.
 11. Prof. C.R. Lama,
Indo-Tibetan Department,
Viswa-Bharati,
Santiniketan.
 12. A.C. Banerjee,
Director,
Sikkim Institute of Technology,
Gantou.

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Department of Persian,
Aligarh Muslim University,
Aligarh.

Persian Text-books proposed for (1) B.A. and
(2) M.A. classes.

Persian Text-books

There are to be two comprehensive books, that is, (1) Prose, and
(2) Poetry.

The books are to cover the teaching of two/three years or 4/5
semesters, in the case may be, of entire B.A. (Hons) courses.

It will contain three sections: (A) Classical Prose,
(B) Modern Prose, (C) Modern Poetry.

Books from authors famous as historians, ethical philosophers,
and writers of social themes, travel books and anthologies.

Books may be made from the following authors:

۱. بلخی ترجمه تاریخ طبرستان - ابوالفضل بیهنی
۲. طبقات الصوفیه - امام غزالی
۳. کیمیای سعادت - ابوالفضل بیهنی
۴. قابوس نامہ - سرزبان ابن حکیم
۵. سرزبان ابن حکیم - سرزبان ابن حکیم
۶. کلبہ و دمنہ - حافظ تہجد
۷. حاشیہ علی اخلاق حسنی - ابوالفضل بیهنی
۸. حاشیہ علی اخلاق حسنی - ابوالفضل بیهنی
۹. حاشیہ علی اخلاق حسنی - ابوالفضل بیهنی

Literature produced in India deals with a variety of
 subjects and is full of interest and instruction, in both matter and
 manner. It is a first rate achievement of men, Indian and foreign,
 writing independently as well as under royal and noble patronage.
 The range of productivity is scattered over a long time, that is, from
 10th to 18th century A.D. to be sure, it is part of our own national
 heritage. For Iranians are neither quite familiar nor much interested
 therein.

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Selections from the following authors may be included:

۱. ادب - الحرب والک
۲. علی بن حیدر کوفی تاریخ ایران ۳۰۰ قمری
۳. فیاضی
۴. همدان همدانیت
۵. علی اصغر حکمت داستانهای شیک
۶. علی شیبانی
۷. همدان (حمیدی و حافظ)
۸. شورنگر انسان
۹. اوراد و طبراد
۱۰. داستانهای دکنس

(C) Modern Prose

Iran's intellectual communication with West began from the 19th century. It led to a new movement of literary ideas and a transformation occurred in the pattern of thought as well as expression. Modern writers discarded their traditional ways, adopted fresh style, and made bold experiments by writing prose and also poetry, that reflected the actual situation they faced.

Instruction at B.A. level may be imparted by selecting stories from the following writers:

۱. همدان
۲. شورنگر
۳. حاجی بابا اصفهانی
۴. همدان
۵. علی اصغر حکمت داستانهای شیک
۶. علی شیبانی
۷. همدان (حمیدی و حافظ)
۸. شورنگر انسان
۹. اوراد و طبراد
۱۰. داستانهای دکنس

(D) Book of Verse

As in the case of prose book, mentioned above, it will be advisable to divide the book of verse into similar three categories:

(a) Classical Poetry

The following poets

۱. فردوسی
۲. سنویب
۳. ابوسعید ابی الجیر
۴. رشام
۵. سنویب
۶. غزلیات

(1) Classical Poetry

- | | |
|------------------|----------------|
| ۱- ابوسعید | ۳- کسایی |
| ۲- نبطی | ۴- کجوری |
| ۳- سرفراز لاهیجی | ۵- سرمد کاشانی |
| ۴- اشعری | |

(2) Modern Poetry

The following poets:

- | | |
|-----------------|-----------------|
| ۱- بیار احمدی | ۳- پروین امنی |
| ۲- میردین توتلی | ۴- نیا بو شنج |
| ۳- سهراب سهراب | ۵- ابرح سررا |
| ۴- قزوینی | ۶- مریدون نسیمی |

2. M.A. Classes:

There are eight papers and a viva-voce examination conducted at M.A. level, covering previous and final, in Universities which follow year-length pattern. The Universities having adopted semester system divide the above load of teaching into double number of courses with wider options. However, the papers/ courses in which text-books are essentially required for class room instruction will be as follows:

Book 1: CLASSICAL LITERATURE (Prose and Poetry)

The following authors:

- (a) Prose:
- | | |
|-------------------|-------------------------|
| ۱- طبری (تذکره) | ۲- شمس الدین |
| ۳- نظام الملک | ۴- خواجه عبدالله انصاری |
| ۵- نظامی | ۶- غزالی |
| ۷- نصر الدین طوسی | ۸- خواجه نصیر الدین |

(b) Poetry:

- | | |
|----------|----------------|
| ۱- نعتی | ۳- نبطی |
| ۲- کجوری | ۴- کسایی |
| ۳- کجوری | ۵- سرمد کاشانی |
| ۴- ابوری | ۶- کاشانی |
| ۵- کجوری | |
| ۶- کجوری | |

Book of Sufi Literature (Prose and poetry)

A historical survey of the development of sufism in Islamic society and its correlation with similar disciplines existing in Vedic, Buddhist, and Christian systems. Also, textual extracts from the following authors:

(a) PROSE

1. علی بن عثمان دینوری، کتاب الحلیہ
2. ابن عربی، فہمات السلف
3. ابن عربی، فہمات السلف
4. ابن عربی، فہمات السلف
5. ابن عربی، فہمات السلف
6. ابن عربی، فہمات السلف
7. ابن عربی، فہمات السلف
8. ابن عربی، فہمات السلف
9. ابن عربی، فہمات السلف

(b) POETRY

1. ابن عربی، فہمات السلف
2. ابن عربی، فہمات السلف
3. ابن عربی، فہمات السلف
4. ابن عربی، فہمات السلف
5. ابن عربی، فہمات السلف
6. ابن عربی، فہمات السلف
7. ابن عربی، فہمات السلف
8. ابن عربی، فہمات السلف
9. ابن عربی، فہمات السلف

Book of Sufi Literature (Prose and Poetry)

Selections from the following authors:

(a) PROSE

1. ابن عربی، فہمات السلف
2. ابن عربی، فہمات السلف
3. ابن عربی، فہمات السلف
4. ابن عربی، فہمات السلف
5. ابن عربی، فہمات السلف
6. ابن عربی، فہمات السلف
7. ابن عربی، فہمات السلف
8. ابن عربی، فہمات السلف
9. ابن عربی، فہمات السلف
10. ابن عربی، فہمات السلف

(b) POETRY

Extracts from the following poets:

- | | |
|--------------|--------------|
| 1. ابن عربی | 1. ابن عربی |
| 2. ابن عربی | 2. ابن عربی |
| 3. ابن عربی | 3. ابن عربی |
| 4. ابن عربی | 4. ابن عربی |
| 5. ابن عربی | 5. ابن عربی |
| 6. ابن عربی | 6. ابن عربی |
| 7. ابن عربی | 7. ابن عربی |
| 8. ابن عربی | 8. ابن عربی |
| 9. ابن عربی | 9. ابن عربی |
| 10. ابن عربی | 10. ابن عربی |

Book 4: MODERN LITERATURE (Prose and Poetry)

(a) Prose pieces:

۱. سبزه گناههای ادب	۱. انشراحات برای کهنی
۲. سبزه ترجمه ای	۲. انشراحات در نامه ای
	۳. انشراحات داستانی

(b) Poetry pieces:

۱. انشراحات از بهار " ابرج " سردین انصاری
 ۲. سبزه " تصویر اثر " ایری میرزا کوی " فروغ زحرفراد " بهار بوسج
 ۳. انشراحات در نامه ای

sd/- Shamsuddin Ahmad,
 Professor & Head,
 Deptt. of Persian,
 Kashmir University, Srinagar.
 CONVENOR

sd/- Nabi Hadi,
 Professor of Persian,
 Deptt. of Persian,
 A.W.U. Aligarh.

(7)
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(xii) MINUTES OF THE FOURTH BODY MEETING OF THE COLLEGE OF AGRICULTURE, MEDZIPHOMA, NAGALAND HELD ON 21ST JUNE, 1983, AT COUNCIL HALL, KOHIMA.

The Chief Minister of Nagaland, the Chairman of the Governing Body presided over the meeting. The Minister of Agriculture, Government of Meghalaya conveyed his inability to attend the meeting. The list of participants is given in Annexure-I.

The Chairman welcomed the members of the Governing Body to the meeting. He expressed his desire to see that the College of Agriculture becomes a premier institution in the country. He gave the background of the establishment of the College. He expressed his satisfaction on the pace of development of the College.

The Vice-Chancellor gave a brief resume of the latest development. He laid special emphasis on the responsibility of the University for social and economic development of the people of hill region of North East India. He further added that the University has taken a number of steps for the College of Agriculture which included the follows:

1. As decided the University has already switched over to 10+2+4 of education in the College of Agriculture. The batch of the students for +2 P.U.(Agri) course had been admitted in 1982-83 session and the admission for +4 system B.Sc.(Agri) will be given in 1985.
2. The post-graduate curriculum has been already prepared in the important disciplines for hill region such as Horticulture, Soil Conservation, Animal Sciences and Rural Development. The admission in post-graduate courses will be given when physical facilities and staff will become available.

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3. To provide experienced staff for post-graduate courses, the University has already taken the initiative and steps have been taken to appoint a visiting faculty course in the disciplines of Agric. Botany, Extension and Rural Development, Agronomy and Horticulture.
 4. The University has appointed a full time Principal for the College who has joined in August, 1982.
 5. The University has already relooked the status of the College of Agriculture to the School of Agricultural Sciences and Rural Development to bring with the par with the other Schools of the University. This School will provide leadership in Rural Development with establishment of a Centre for Rural Development.
 6. The proposed Centre for Rural Development will have two sub units one each in Meghalaya and other in Mizoram. The sub centre for Rural Development for NEHU Shillong will be in the Department of Geography and Aizawl in the Department of Economics.
 7. An elective course in Rural Development, Planning and Extension has been introduced in the College of Agriculture, Medziphema in last session. The proposed Centre for Rural Development will have the structure shown in Annexure - II. The different post under Rural Development Programme has been advertised.
 8. The University has initiated the correspondence-cum-institutional course in Agriculture and allied subjects. In the first stage, it will take the Junior Certificate and Certificate for those actively engaged in progressive farming in Rural area. The Junior Certificate course is designed for those who have read upto Class VIII. The certificate course will be given to those who have passed high school and are working in the villages in their own land and these agricultural farms, extension in service and as VLWs.

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9. The University has started non-traditional course in general arts and Science streams. In the first phase it has taken up the Jitkai Christian College, where a well-fledged course in horticulture has been started from last year.

The Governing Body then proceeded to consider the agenda item-wise:

- Item No. 1. The Minutes of the 12th Governing Body meeting held on 6th March, 1982 were confirmed.
- Item No. 2. The Governing Body decided that the Governments of Meghalaya, Mizoram, Tripura may be requested to contribute Rs 5,000/- each towards the activity fund for the year 1982-83.
- Item No. 3. Additional land for farms : The Government of Nagaland decided not to provide more land for College farm as they have already given 30 acres total.
- Item No. 4. Water Supply : The inadequate supply of water in the campus come up for discussion and it was pointed out by the Principal of the College that installation of pipe line and construction of main tank as well as distribution tanks has not been completed. Moreover, supply of water to the campus through the existing pipe line is neither adequate nor regular and that causes lot of problems to the staff and students in the campus. The Joint Director (Agri.), Directorate of Agriculture, Kohima assured the Governing Body that he will settle the matter with the Public Health Engineering Department and regular supply of water to the campus will be restored very soon.

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Item No. 5. Additional Buildings : In view of the introduction of new system of 10+2+4 system of education in Agriculture and starting of post-graduate programme coupled with increase in seats in under-graduate classes, it will be necessary to augment the facilities in the temporary campus of the College. This includes additional hostel facilities, laboratories, facilities for staff quarters. During the course of discussion, the Vice-Chancellor pointed out that unless the land at the present site is handed over to the University, the University is not in a position to invest any amount on the construction of the buildings. The Government of Nagaland decided to hand over the land at permanent site to the University. After discussion it was decided that the things will be sorted out by the Chief Secretary, Government of Nagaland and the Vice-Chancellor. However, it was made clear that unless hostel accommodation and staff quarters are provided, it will be difficult to admit the new students to the college.

Item No. 6. New Site : It was noted that the land at new site has not been handed over to the University on the date of the Governing Body's meeting. The Secretary, Agriculture, Government of Nagaland informed that the papers are ready for handing and taking over the land. But the Vice-Chancellor pointed out that unless the area is demarcated and pillars are put on the boundary line, the handing over and taking over will not be possible. It was decided that the Directorate of Agriculture will demarcate the area and put up the pillars on the boundary. This will be completed by 22nd July, 1983 and on that day a Joint Committee consisting of Additional Deputy Commissioner, Peren, Joint Director(Engg.)

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Directorate of Agriculture, Nagaland, Kohima; Deputy Registrar NEHU, Kohima and the Principal, College of Agriculture, Medziphema will visit the site and if the Committee is satisfied, the handing over and taking over will complete on the same day in the College of Agriculture, Medziphema.

Item No. 7. Items proposed by the Government of Nagaland :

(a) Introduction of local candidates in the academic and non-academic posts in the College of Agriculture similar to the policy of the Government of Nagaland. During course of discussion, Vice-Chancellor pointed out that all appointments to the posts in the University are governed by the Statutes and Ordinances. Moreover, the University has three campuses in three States, and separate rules cannot be framed for different section of the staff. The Chief Minister, Nagaland, stress that he wanted best talent from all over the country in the academic posts in the College of Agriculture, so that the College develops as a grade institution. He, however, suggested that for non-academic posts other things being equal, preference should be given to the local candidates. On this point, the Principal, College of Agriculture pointed out that in practice bulk of the posts are going to local candidates. At this point attention was also invited to the communication from the Minister of Agriculture, Government of Meghalaya in which he had disagreed with the proposal. It was agreed that the entire matter may be examined by the University and place before the appropriate authorities for their decision.

(b) The inclusion of 3 years B.Sc.(Agri.) condensed course for inservice village level workers: The proposal was welcomed by the Vice-Chancellor of the University. Further, which may be placed before appropriate authorities of the University for further consideration.

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Annexure - I

LIST OF PARTICIPANTS

1. Mr. S.C.Jamir Chief Minister, Govt. of Nagaland.
2. Dr B.D.Sharma Vice-Chancellor, NEHU, Shillong.
3. Mr. E. Longkumer Chief Secretary, Govt. of Nagaland.
4. Mr. Kheheto Sema Minister of Agriculture, Govt. of Nagaland.
5. Mr. C.N.Ngullie Secretary(Agric) Govt. of Nagaland.
6. Mr. Kiremwati Ao Director, Higher Education, Govt. of Nagaland.
7. Mr. Kevichusa Joint Director Agri.(Engg), Govt. of Nagaland.
8. Dr(Mrs) P.N.Das Pro-Vice-Chancellor, NEHU, Kohima.
9. Dr S.N.Tewari Principal, College of Agriculture, Medziphema.
10. Mr. J. Singh Reader, College of Agriculture, Medziphema, special invitee.

What Role should NEHU Play ?

As an academic Body, NEHU's principal involvement in rural development process should be furtherance of studies and research related to rural development and dissemination of the knowledge.

In order to reach the effective level of communication and also promote acceptability of its ideas and models, the proposed Centre may take "Gram Vikas" or Village Development on selected basis. This operational arm of the University may be utilised in training and research also.

Structure of Rural Development Centre

Therefore, the structure of the Centre should have three components, viz.,

C E N T R E

- | | | |
|-------------------------|-------------|---------------|
| a. Education & Research | b. Training | c. Operation. |
|-------------------------|-------------|---------------|

A. Education & Research

At the first stage, the Centre should initiate a one year diploma course in rural development planning which may later on be developed into a two year graduate degree course. At present, Science and Agricultural Graduates may be admitted into this diploma course. Sons and daughters of farmers families with some basic education may also be admitted.

Course content : (3 theory papers of 300 marks : Paper contents are to be organised from the following):

1. Social History
2. Social structure and local Govts.
3. Geography with particular emphasis on land scale analysis and a study of water resources.
4. Ecology and environment
5. Soil and soil erosion.

Contd/...

6. Minerals
7. Resource analysis from cost benefit view point
8. Agriculture, Horticulture
9. Animal Husbandry and Veterinary Services
10. Fisheries
11. Forestry
12. Delimitation of land productivity zones.
13. Social behavioural patterns, manpower mobilisation
14. Settlement types and hierarchy
15. Methods of scheme formulation
16. Methods of scheme appraisal
17. Monitoring and evaluation
18. Developmental organisations and network including management of village industries
19. Co-operation, institutional financing and marketing.
20. Development administration
21. Block level planning.

Practical : 100 marks.

Methodologies of various types of survey, tabulation and processing techniques, thematic mapping and village development work.

B. Training

R.D.C., NEHU could organise "short-term training for the benefit of officials and non-officials connected with development planning and administration. It also can provide training for unemployed youth in connection with TRYSEM under

Following training courses are suggested :

1. Development administration (for B.D.O., Panchayat Officer, Secretary of Village Council, P.O. & A.P.O's DRDA).
2. Resource inventory
3. Methodologies of block survey
4. Land use mapping
5. Scheme formulation
6. Monitoring of progress
7. Evaluation

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- 8. Rules related to institutional financing
- 9. Accounting procedures
- 10. Development Administration

II. Development Techniques (for representatives of farm families (3 months)

- 1. Techniques of land surveys
- 2. Elementary principles of agri engineering
- 3. Productivity analysis following topological classification of production zones
- 4. Horticulture, plantations and social forestry
- 5. Animal production and veterinary services
- 6. Pisciculture
- 7. Management of small industries
- 8. Organisation of infrastructural facilities under various conditions
- 9. Drafting of progress reports
- 10. Field visits

III. Organisation/Management of small industries (for unemployed youth (4 months).

- 1. Bee keeping
- 2. Weaving
- 3. Dyeing, bleaching, design
- 4. Carpentry
- 5. Blacksmithy
- 6. Leather goods
- 7. Soap making
- 8. Elementary lesson on cooperative laws, credit rules.
- 9. Organisation of trade and marketing(workshop oriented training (6 months).

IV. Development Management (for BDO, AEO, PO, A.P.O. Panchayat Village Council Secretaries and Members)

- 1. History and social characteristics of various tribes.
- 2. Tribal organisations
- 3. Village level development organisations
- 4. Resources mobilisations
- 5. Case studies of social aptitudes.

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6. Cooperative organisations
 7. Role of voluntary organisations in development
 8. Mechanism of public relations
 9. Seminars with selected executives
 10. Field visits.

C. Operation

(2 1/2 months)

Purpose of the operational wing of the Centre would be (a) demonstration (b) to offer practical lessons in connection with training courses and (c) to act as feed back to education and research.

Under operational wing, at the first stage, villages would be selected as per the resources situations, under "Gram-Vikas" or village development programme, to develop the principal activity in each of the selected villages, viz.,

1. To show that the culture could be remunerative
2. To show that animal husbandry could be remunerative
3. To show that village industries could be remunerative
4. To show that replacement of present agricultural practices by proper land use planning could meet both the needs of better production and conservation of resources.

The other role of operational wing would be to produce development literature in regional languages.

Organisation : The Rural Development Centre should function under one Professor Director, who should be chosen because of his establish ability of formulating rural development plans, execution and evaluation.

To start with, in addition, two posts of Readers be created one for Animal Sciences and the other for three culture.

A post of Lecturer conversant with organisation and management of small industries would be helpful.

Existing faculty members of NEHU could meet the other requirements of the Centre on mutual terms.

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Non-teaching staff complement might be :-

Stenographer	
Research/Field Assistant	3
Stenographer	1
Typist Despatcher	1
Peon	2
Duplicating Machine Operator	1
Draftsmen	1
Driver	1
Durwan	1

In addition, Officer-Incharge (3) for three workshops at three States with minimum supporting staff would be needed. (Cost estimate may kindly be worked out by the University as per their pay rules. Equipments like Xerox, Ammonia Machine, Survey Instruments and a Vehicle are other requirements).

Complementary assistance from other organisations :
Possibilities are :

1. IRD programme of the State Governments would meet the infrastructural requirements of providing training.
 2. ICAR and KVIC could share training responsibilities.
 3. North East Council may fund research activities.
-

(xiii) TEACHING-LEARNING FOR MATURE LEARNERS
- METHODS AND MODELS -

(A Draft Outline)

Bishwa B. Chatterjee

INTRODUCTION:

In 'teaching' the emphasis is on what the instructor does, for imparting information, knowledge, understanding, skill, or induce changes in attitudes, interests, values, etc., in the pupils. In 'learning' the emphasis shifts to the pupils & their growth and development, their acquisition of information, knowledge, skills, attitudes, interests and values, assume importance.

In modern pedagogy, instead of viewing 'teaching' and 'learning' as disparate entities, they are viewed integrally-forming a gestalt of 'teaching-learning', which becomes a co-operative process, between the teacher and learner. In this gestalt, the maximum premium is set upon optimisation of activity and its proper allocation among the teacher and learner.

COMMON INGREDIENTS OF TEACHING-LEARNING:

In any genuine teaching-learning situation, there are always present certain common elements or components:

- a. The teacher, with his varying attributes
- b. The learner, with his varying characteristics
- c. The content of learning, as envisaged in the syllabus, curriculum, unit, lesson or exercise.
- d. The 'process' of communication taking place between the teacher and learner.
- e. The learning situation or milieu, including the institutional or non-institutional setting, and the quality of the physical and social environment, classroom climate, school ethos, morale, etc.

A good lesson is the result of proper combination of components from the five classes of ingredients listed above.

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They cannot be any such thing as 'the method' or 'the ideal method'. Just as goals and outcomes vary, different 'mixes' of components will give rise to different methods, which may be optimum for one outcome, but not for another.

TAXONOMY OF METHODS:

When we are dealing with mature, adult learners, at fairly advanced levels of competence, the entire teaching-learning gestalt is very different from what obtains in the primary and secondary schools, or even under-graduate classes in colleges. Here the learner brings with him a fund of accumulated knowledge, information, skills, experience, attitudes and values. His personality is not as plastic as that of child; it is already moulded. Its scope for further vertical growth is limited. The methods that may be useful and optimal for relatively young and inexperienced learners, are not so suitable for the mature, advanced learners of a fairly advanced level of general competence. Keeping this basic point in view, how can the different methods of teaching-learning, suitable for mature learners be classified? Any taxonomy proposed for classifying the methods, may start with the nature of 'mix' and relative emphasis laid on, the components from the five classes of ingredients that have been listed above, which comprise the 'teaching-learning' situation. Let us see what sort of taxonomy results from such exercises.

I. Learner attributes : Here an important element is the size of the learning group, which may vary all the way from one learner (the 'private tuition' situation) to as many as 100 learners in a class. As class size increases, the quantum of pupil and pupil-teacher interaction decreases. We have the following methods in classical pedagogy which tried to tackle with this aspect of teaching-learning:

1. The Conversational Method, the Dialectic Method.
2. The Socratic Method.
3. The guru-shishya sambad.

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The vaad-vivod and vichar sabha of traditional India and the modern 'debate' fall in this category. The crux of the problem is: how to individualise and to what extent, in group situations ?

II. Teacher Characteristics : With the same group of learners, either one teacher or two teachers, or many teachers can be used simultaneously. Modern pedagogical theory sets much store upon group-centered methods of teaching-learning, the more important of which are :

- a. Conference
- b. Forum
- c. Symposium
- d. Seminar
- e. Syndicate
- f. Workshop
- g. Pre-Seminar

The degree of structuredness and intensity of learner activity and involvement varies from one group method to another.

III. The 'Content' Characteristics : Certain methods of teaching-learning are intimately related to the subject matter, that is, the substantive content of learning.

One important dimension along which methods of instruction varies is the degree of structuredness of the method of presentation of the material to be learned. The last word in structuredness is the 'programmed lesson', where the entire sequence of steps are pre-analysed, and chalked out in advance, with no scope left for flexibility in the locus of progress towards the ultimate learning outcome. On the other hand, a method like the 'heuristic' method, and the 'inductive' method, has a lot of unstructuredness built into the lesson. Examples of some of the classical methods that vary in the degree of structuredness and degree of individualisation of instruction, are:

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- 9/10
- a. Dalton method, with maximum scope for student innovation
 - b. Project method
 - c. Problem method
 - d. Heuristic method
 - e. Morrison plan for scientific topics
 - f. Laboratory method.

IV. Methodological characteristics : The most important dimension of this component is the degree of activation and participation of the learners. Let us give an illustration. In a primary class, memorisation and recitation and testing by quizz, are appropriate. With adult, advanced level learners, an assignment that will entail library consultation, referencing, indexing, critical review of existing materials, etc., will be more appropriate. The cognitive processes that are emphasised in higher level learning situation are application, integration, organisation of knowledge and information, calling for discrimination, evaluation, logical analysis, weighing, judging, selecting, deciding, and so on. Flexibility and not rigidity characterises this approach.

V. The Learning Situation : A very important dimension of this component, in the adult situation, is the formal versus informal nature of the institutional set up under which learning is to take place. We have the formal classroom situation, with attendance register, roll call, lecture, note taking and so on. On the other we may have a study trip or local visit to a museum or art gallery. On the one hand the student may be working for a degree, diploma or certificate. On the other it may be his interest alone that makes the student go in for a course offered by an open University, or Folk School. On the one hand, certain pre-requisites for entry and exit into a course may be prescribed, on the other, the groups may be impromptu and purely informal.

Another important dimension is that of the relative emphasis laid upon the cognitive, affective and behavioural domain of change sought in the learner. In current pedagogic theory, methods that are geared to changing affective and cognitive aspects of the learner personality is assuming great importance. The walls of the classroom are becoming increasingly permeable,

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and sometimes they completely fall off. Here are some examples:

- A. Field trips and field visits
- B. Field demonstrations : method demonstration and result demonstrations.
- C. Block placement, probationary placement; in-service training.
- D. Practicum, housemanship; internship; clinical apprenticeship.
- E. Case study, case work, case analysis.

On the other hand, we have methods, where content is minimal and a means, but behaviour modification, understanding of the self, and restructuring of inter-personal relationship are the main goal. The main examples are:

- a. Buzz session, brain storming session
- b. Laboratory group ; L-Group; T-Group; Encounter Group
- c. Role play
- d. Psycho-drama;Socio-drama
- e. Mediation; zen; existentialist meditation; yoga, etc.

Some of these methods are more within the domain of therapeutic sessions. But the dividing line between therapy and learning, is very thin. The focus is on the optimum self-realisation of the learner, and the teaching and instruction assume more and more self-obliterating roles.



- (xiv) "To consider the desirability of holding workshops for every discipline in the School in connection with the contemplated restructuring of the M.A. courses in the University with effect from 1985".

The exercise undertaken by the University in connection with the restructuring of the Under-graduate courses proved extremely fruitful not only in the purely practical work of framing detailed syllabi for the various subjects but also as an academic exercise in itself. Although there are detailed UGC guidelines concerning the framing of syllabi for the M.A. Programme, in view of the special situation of this University and its specific objectives, different kinds of considerations may need to enter into the framing of our syllabi. A workshop for each discipline to this end may well prove as useful as the ones we had in connection with the restructuring of the Under-Graduate courses.

This is placed before the Academic Council for its consideration.

(xv)

" To consider the need for the members of our teaching staff particularly in the School of Social Sciences, to acquire an adequate knowledge of at least one of the languages spoken in the region".

It seems to me that one of our primary academic tasks in this University is to bring the resources of our separate intellectual disciplines to bear upon our understanding of the region. The social sciences are concerned with the understanding of people. And an extra-ordinary important fact about people is that they are themselves self-explaining , self -understanding creatures. I think it can be said without much fear of controversy that one's understanding of another person is bound to be inadequate or even distorted, if it cannot be properly related to the person's understanding of himself. The same is true of societies or cultures. A society or culture grasps its own reality in terms of concepts which are, frequently peculiar to itself. This may be true both of concepts which may be thought of as basic (e.g. space, time) and concepts which are not so basic (e.g. sin) and these concepts- their individualities, their nuances, complexities of application-are embodied in the language of the people. Thus it is that without a grasp of the language it will not possible to grasp the peculiarities of the concepts embodied in it and without this it would be impossible to achieve a proper perception of the self-understanding of the people whose language it is.

Hence, our academic responsibility to the region includes the responsibility to learn the languages of the region. Since, however, it will not be possible for one person to acquire an adequate knowledge of very many of these languages or even perhaps more than one of the languages, I would suggest that every member of the teaching staff, particularly on the faculty of humanities and Social Sciences should learn, as a matter perhaps of requirement, at least one of the languages of the region. Adequate facilities for this should be provided in our School of languages.

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(xvi) Note for the Academic Council Meeting.

One of the Senior Professors in the University, Prof. J.P. Thepliyal has suggested instituting an Essay Competition for the students at the Under-Graduate Level. He suggested that the University may conduct an Essay competition on the following topics. (i) Animals, (2) Plans (3) Social, Cultural and Economic Structures. The best Essay may be awarded a cash prize as decided by the University.

It was proposed that this competition should be open to the students of all colleges affiliated to or maintained by the University. The essay should not exceed twenty typed pages which may be accompanied with photographs or lined diagramme etc.. The essay should be written in English. The awarding of the prizes may perhaps be given at the time of convocation.

This matter was placed in the Deans' Committee which met on 9th August, 1983, when it was decided that the matter be placed formally before the Academic Council for a decision. It may be mentioned here that the university has instituted similar prize at the post-graduate level and also a joint essay competition on "Development of my dreams" at under-graduate level.

Submitted for consideration of the Academic Council,

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Prof. J. P. Thapliyal, Head,
Department of Zoology.

July, 25, 1983.

No.17/ZOO/PER/83-1582

To

Dr. B.D. Sharma,
Vice-Chancellor,
North-Eastern Hill University,
Shillong.

Dear Sir,

I congratulate you for taking wise, bold and timely decisions like open University, University, University lecture series and substantial awards for the Pre-Ph.D. students of the University and M.Sc. students of all the departments for the best seminar and the best paper published, which I am sure will not only stimulate the academic community of NEHU in their best but will also improve the image of the University. I would call these decisions of historical importance.

Further, since this is the time in the life of this University when everything is being done for the betterment of the University. I am approaching you with a humble suggestion. You have announced annual academic awards for the higher students, now is the turn of B.Sc. Students. I submit that the question of instituting similar awards for best essay on the (1) Animals, (2) Plants, (3) Social and Cultural academic Structure, etc. by undergraduate students be considered.

These should be open to students of all colleges governed by NEHU. The essay should not exceed 20 typed pages plus photographs, line diagrams, etc. Further while the students may seek guidance from teachers and other knowledgeable persons, the essay must be written by him/her (in English) alone. These prizes may be awarded at the convocation of the University. Academic/Administrative arrangements be made to implement these decisions.

Yours faithfully,

Sd/-

(J.P. Thapliyal)

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(xvii) GOVERNMENT OF NAGALAND
DIRECTORATE OF SCHOOLS & PHYSICAL EDUCATION
NAGALAND: KOHIMA

No.ED/SEE/H/20/82-83

Dated Kohima, the 3rd Sept., 1983.

To

The Vice-Chancellor,
North-Eastern Hill University,
Shillong.

Sub:- RESERVATION OF SEATS FOR STUDY LEAVE GRANTEES FOR POST GRADUATE COURSES.

Sir,

On the subject indicated above, I am to state that 12 (Twelve) graduate teachers were selected and granted study leave for Post-Graduate Courses as per copy of the order enclosed. Please reserve seats for them in respective departments.

Enclo:- As stated.

Yours faithfully,
Sd/-
(P. MOASOSANG)
Joint Director(School Education)
Nagaland, Kohima.

No.ED/SEE/H/20/82-83

Dated Kohima, the 3rd Sept., 1983.

Copy to: 1. The Pro-Vice-Chancellor, NEHU Campus, Kohima along with a copy of the order for necessary action.

(P. MOASOSANG)
Joint-Director(School Education)
Nagaland, Kohima.

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GOVERNMENT OF NAGALAND
DIRECTORATE OF SCHOOL & PHYSICAL EDUCATION
NAGALAND: KOHIMA

O R D E R

Dated Kohima, the 3rd Sept., 1983.

No.ED/SLE/H/20/82-83: In accordance with Government's approval vide Ni,EDS/17-22/79 dt. 29.8.83 the following teachers are hereby granted study leave for undergoing further studies in the subject. Place and Period of studies mentioned against each w.e.f. the date of their release for joining the course.

The Government servants granted study leave are entitled to leave salary and study allowances as follows:-

1. Leave salary equal to half average pay as defined in rule 9(2) of the fundamental rules.
2. Study allowance at the rates of half of the daily allowance to which the Govt. servants would have been entitled under the rules regulating the T.A. on tour.

<u>Sl.No.</u>	<u>Name of the Course</u> <u>Name & Designation</u>	<u>Duration</u>	<u>Name of the</u> <u>University.</u>
1.	Mr. Linatōshā, A.T., Govt. High School, Changtongya.	: M.A (Edn) 2 yrs	NEHU, Kohima
2.	Mr. Duovituo Kuolie H.M., G.M.S. Chedema under D.I.S., Kohima.	: M.A (Pol. 2 yrs. Sc.)	NEHU, Shillong.
3.	Mr. Vilakhoto Senotsy A.T., G.H.S. Jotsona	: M.A. (Edn) 2 yrs.	NEHU, Kohima.
4.	Mr. Inrongtumen Aier P.T., GJU, P.School, Sangratsu.	: M.A (Edn) 2 years	NEHU, Kohima.
5.	Mr. Koratuden A.T., G.H.S., Kubolung.	: M.A. (Edn) 2 yrs.	NEHU, Kohima.
6.	Mrs. Intilula, P.T., Govt. Primary School, Nyongching under D.I.S., Longleng.	: M.A. (Edn) 2 yrs.	NEHU, Kohima.

Contd/-.....

<u>Sl.No.</u>	<u>Name of the Course</u> <u>Name & Designation</u>	<u>Duration</u>	<u>Name of the</u> <u>University</u>
7.	Mr. Intisungba, A.T., C.H.S. Mangkolamba, : M.A(Pol.Sc)	2 yrs	Dibrugarh Uni- versity.
8.	Smti. Lochumi, M. Tarhuja, A.T., G.H.S., Kohima : M.A(Edn)	2 Yrs.	NEHU, Kohima.
9.	Smti. Sasietuonuo Kire, A.T., G.H.S., Kohima. : M.A(Eng)	2 yrs.	NEHU, Kohima.
10.	Mr. Akangrenba Ap, H.H., Govt. Pro. High School., Melungkinong. : M.A. (Edn)	2yrs.	NEHU, Kohima.
11.	Mr. Khrienelic, A.T., G.H.S., Diphupar. ; M.A. (Eco)	2 yrs.	NEHU, Shillong.
12.	Mr. K. Toshihe Shoho, Library Assistant, N.C.E., Kohima. : M.A(Pol.Sc)	2 yrs.	NEHU, Shillong.

Sd/Sd/-

(P. Moasosang)
Joint-Director (School Education)
Nagaland, Kohima.

NO.ED/SEE/H/20/83-

Dated Kohima, the 3rd Sept. 1983.

Copy to:

1. The Headmaster.
2. The D.T.S.
3. The Inspector of Schools, Kohima/Mokokchung.
4. Individual concerned.
5. Office Orders Book.
6. Guard File.

They are requested to issue release order immediately. They are requested to obtain and forward necessary undertaking bond to be signed by every individual before they are released for study leave in duplicate. A copy of agreement bond is enclosed herewith.

Sd/-

(P. Moasosang)
Jt. Director (School Education)
Nagaland, Kohima.

ALL INDIA
(xviii) SENIOR SCHOOL CERTIFICATE EXAMINATIONS, 1983 AND 1984
SCHEME OF STUDIES FOR CLASSES XI & XII

(To be effective from Class XI of academic session 1981-82 and 1982-83)

A. SUBJECTS FOR STUDY :

I. Compulsory Group :

1. Language (Core): One of the following:-

English, Hindi, Assamese, Bengali, Gujarati, Kannada, Marathi, Malayalam, Manipuri, Oriya, Punjabi, Sindhi, Tamil, Telugu, Urdu, Sanskrit, Arabic, Persian, French, German, Nepali, Portuguese, Russian, Tibetan,-One Paper-100 marks each.

NOTES ;

- a. In place of a language (Core) a student may offer a language (Elective as a compulsory language. In that event also the student will have the freedom to opt for another language under the elective group.
 - b. It is desirable that the same language is not offered as core and elective. However, in case a candidate offers the same language as core and elective, the Board will have no objection.
 - c. Some Universities/Institutes require passing in two languages compulsory for admissions to their higher courses. One more language, therefore, can be offered as an additional language. This language should, however, be different from the one offered under this group as a compulsory requirement.
2. Socially Useful Productive Work/General Foundation Course, (Please see notes 3,4 and 5 on the following pages).

Contd/-.....

II. Elective Group: At least three from the following:
(Please also refer to notes on pages (xxiii) and (xix).

(a) General Education Course:

1. One of the languages at Elective level (mentioned above under the Compulsory Group).

The Syllabi in this Group will be different from the ones for core language (Please see notes, a, b and c above).

2. Economics, 3. Political Science, 4. Geography,
5. History, 6. Sociology, 7. Psychology, 8. Philosophy,
9. Mathematics, 10. Physics, 11. Chemistry, 12. Biology,
13. Engineering Drawing, 14. Commerce, 15. Accountancy,
16. Home Science, 17. Fine Arts - (i) Painting or
(ii) Graphic OR (iii) Sculpture, 18. Applied Arts,
Commercial Arts, 19. Music, 20. Dance, 21. Agriculture,
22. Physical Education, 23. Insurance.

(b) Vocational Courses: (Please see appendix 'A').

NOTES:

1. A student can offer all the required number of elective subjects from the General Education Course or the Vocational Course or a combination of subjects from the two provided all the papers in a given vocational course are offered except in case of Commerce Group.
2. In addition to 3 elective subjects or a vocational course, a student may offer upto two additional subject, if he so wishes. While offering the number of subjects or their combinations candidates are advised to keep admission requirement for higher courses in view. (Please also refer to note 4 under pass criteria on the following pages).

Contd/-.....

- 109
3. If a student has taken up subjects which are predominantly vocational he will have to offer General Foundation Course subject to the condition that if he takes two or more general education subjects he will have to offer Socially Useful Pro-Active Work in its place.
 4. The candidates having physical deformity or otherwise unable to take SUPW shall have to offer another elective subject in lieu of SUPW with the approval of the Board. Request for such permission should be supported by a documentary evidence like Medical Certificate from a Medical Officer not below the rank of an Asstt. Surgeon in the case of illness, etc.
 5. Patrachar Vidyalaya/Private candidates are not allowed to offer SUIW. They may offer one language and three electives as per scheme of studies.
 6. The Candidates from Patrachar Vidyalaya shall not be allowed to offer vocational courses and subject involving practical work except Home Science and Geography.
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110

5:1:1(1)

Item No. 5 ACADEMIC MATTERS :

5:1 - Syllabus -

(i) Syllabus in Horticulture (Non-Traditional Course) for Undergraduate.

Paper I Theory - Introductory Horticulture, Olericulture, Spices and Floriculture.

Paper II Theory - Pomology and Plantation Crops (Tree culture)

Paper III Practical -

Paper I (Theory) Introductory Horticulture, Olericulture, Spices and Floriculture.

Course Content
1. Definition, Importance and scope of Horticulture, Classification of Horticulture and Horticultural crops.

2. Scope and Importance of vegetables. Types of vegetable gardening. Study on cultivation of important vegetables and spices viz. Potato, Tapioca, Cauliflower, Cabbage, Cucumber, bitter gourd, Bottle gourd, Pumpkin, tomato, Chillies, Brinjal, Radish, Turnip, Carrots, beans, Ginger, Turmeric, Cardamon and black pepper with special reference to hill region.

3. Importance and scope of Floriculture, Planning and maintenance of annuals, hedge, lawn, Ornamental foliage and flowering trees and Climbers. Cultivation practices for important annuals, rose and canna.

Paper II (Theory) Pomology and Plantation crops (tree culture).

1. Importance and scope of Pomology in North-East region. Cultivation practices of important fruit crops such as Pineapple, Citrus, Mango, Guava, Litchi, Jackfruit, Pomegranate, Banana, Papaya, Sapots, Carambola.

Contd...2/-

13
~~14~~

5:1:1(2)

- 2. (a) Importance and scope of plantation crops with special reference to hill region.
(b) Study on cultivation of
1. Tea , 2. Coffee, 3. Coconut, 4. Arecanut.
- 3. Method of plant propagation and their advantages and disadvantages
(a) Sexual (b) Asexual :-
(1) Cutting (2) Layering (3) Grafting
(4) Budding (5) Separation and Division.

Paper III (Practical)

- A - Selection of sites and layout of nursery for vegetables, spices and ornamental plants.
Identification of important vegetables, Spices and flowering plants. Practice of plants, Propagation in relation to ornamental plants.
- B- Selection of sites and layout of nursery and Orchard for fruits and plantation crops.
Practices of different method of plant propagation and maintenance of fruits and plantation crops.

Field trip to different nurseries and gardens.

.....

(ii) Starting of M.Phil Programme in the Department of Anthropology, NEHU.

Letter No.903 dt.3.11.83 from Dr. A.P.Sinha, Head, Department of Anthropology addressed to the Vice-Chancellor which is self-explanatory is reproduced below for consideration of the Academic Council.

-##-

This is in connection with the starting of M. Phil programme in this Department. We would like to start the programme from this year. We have four courses which have been approved by the B.P.G.S., and we are sending it to the School Board for approval.

Two batch of M.A. students have so far passed out from this Department, and we have received applications for the M.Phil also. Provisionally we have admitted six students for the M.Phil programme.

According to the provisions of the Ordinance, it is mentioned that a Department can start the M.Phil programme if it has at least four faculty members with a doctoral degree. As this is a new Department, and it has still to have its full compliments of faculty members, we as at present have only three faculty members with a doctoral degree. We approach you to give us special permission to start the M.Phil programme from this year.

This special consideration may be made as for all practical purposes we have the full association of Dt. B.D. Sharma, Prof. M. Miri, Prof. M.N. Karna, in the teaching of full courses in the Department. Moreover, under the new pattern of M.Phil programme in the School, out of the four courses, two are offered by other Departments, and also that the M.Phil programme has become a School level programme rather than remaining a completely Department level programme.

Submitted for your approval.

5:2

EXAMINATION MATTERS;

5:2:1(i)

(2)

Panel of examiners of the Ph.D. Candidate , Shri K.P. Sharma, School of Life Sciences.

The Dean , School of Life Sciences has forwarded the Panel of examiners of the Ph.D. Candidate, Shri K.P. Sharma, duly approved by the School Board, held on 9.6.83 for having it approved by the Academic Council and for recommending the same to the next meeting of the Executive Council.

The panel will be tabled by the Chair.

.....

(11) Extension of time for submission of
M.Ed. Dissertation

Miss Noreen Diengdoh, a M.Ed. student of 1979-80 batch of Shillong has represented for permission to submit her M.Ed. dissertation as the same could not be submitted during the scheduled period on account of her illness.

As per the provision of the Academic Ordinance 11.2 - "Ordinarily a student has to complete the six courses during the period of two semesters. However, a student admitted to the M.Ed. Programme can participate in the curricular programme of the course to a maximum of four semesters". As such, the candidate has no more chance to submit her dissertation.

The matter is placed before the Academic Council for consideration and decision.

(111)

Appearance at the Second Semester Examination -

Shri Deba Prasad Dam, M.Sc.(Bot) student of the academic years 1976-78, was unable to qualify for the M.Sc. Degree within the period of three years from his first admission, as provided in the academic Ordinance, as he could not sit for the second semester examination due to his ill-health.

A request for permission to sit at the second semester examination was made by the student to the Department concerned on 11th June, 1983. It was refused as there is no provision for granting the request. A second petition was directly given to the Vice-Chancellor on 27th June, 1983 and he was informed of our inability to consider due to a long gap involved. Now on the third petition dated 3rd August, 1983 the Vice-Chancellor has decided to place his request before the Academic Council for deciding action.

Academic Ordinance 10.15 says "No candidate will be allowed to appear in any course more than twice and no candidate shall be allowed to appear in any course beyond six semesters of his first admission to the programme, i.e., a candidate must qualify for the award of the Degree within three years of his admission to the course". Normally all requests for permission to repeat are disposed off by the aforesaid Ordinance.

In the present case, it may be noted that since Shri Dam was admitted in 1976, his case is far beyond the stipulated time prescribed for granting his request.

However, the matter is placed before the Council for consideration.

(1) Establishment of a full-fledged Home Science Faculty in NEHU.

.....

In the last meeting of the Academic Council held from 26th to 28th September, 1983, an Agenda Item entitled "Strengthening Under-graduate Education in the Region" was placed where the above noted subject was part of the said item but due to limited time the same could not be taken into consideration. In the mean time the Vice-Chancellor has taken an advance information of the matter to the Executive Council at its meeting held on the 6-10-83. The Resolution to that effect adopted by the Executive Council is reproduced below for the information and consideration of the Academic Council:

.....

"The Chairman informed the Council that a formal Agenda Item in connection with the strengthening of Under-graduate education in the region for establishing a full-fledged Home Science Faculty in the University was placed before the last meeting of the Academic Council, but due to limited time available, the matter could not be discussed.

However, the Chairman informed the Council that at present Home Science is taught as a subject only in the St. Mary's College. He also explained the necessity for setting up a full-fledged Home Science faculty in the University. The Chairman further suggested that till such time, perhaps, the University should handle the Home Science teaching at Honours level.

The Council welcomed and approved the above proposal with an observation that a formal approval of the Academic Council be obtained".

.....

(ii) Proposal for starting the Department of Library Science -

The University is having a few job-oriented courses at present. The Department of Continuing Education in 1977 conducted a needs assessment survey of select groups in Shillong to determine priorities for educational programmes. Library Science received the first rating among occupational groups.

This fact has been validated by observing the rush for admission to Certificate Course in Library Science being conducted by the Library under the auspices of the Department of Continuing Education since 1979. Professional aspirations and possibilities of getting employment are further impelling the interested persons to inquire frequently as to when the Department of Library Science is coming into existence in the University? This appears to be justified on the following grounds :-

1. A sizeable portion of the staff working in the Libraries of North-Eastern Region are either untrained or trained at para-professional level.
2. The Government and Public of North-Eastern States are fully conscious of the role that Libraries can play in the economic, social and cultural transformation of the region. This consciousness is being manifested in the number of Libraries that are coming up in the region. All these Libraries need trained staff to manage them. Further, some of the States are planning to enact Library legislation to create a network of Libraries.
3. The Government of India has set up a number of research and other establishments in this region and a number of new ones are being planned. Libraries of all these establishments need trained staff.
4. Librarianship needs personnel having full familiarity with the language and culture of the region. This cannot be achieved until and unless the persons of this region are trained.

Contd/...

5. Very few persons of this region can afford to go to other Universities for training in Library Science. This is evident from the number of persons trained so far.

In the light of the facts as stated above, it naturally falls upon the University which is committed to develop the intellectual, academic and cultural background of the hill people of this region to start Department of Library Science with a view to produce trained man-power for the Libraries which are one of the basic instruments in democracy to bring and foster the type of social change as stipulated in the preamble of the University Act.

It will not be out of place to mention here that the establishment of the Department of Library Science under School of Education has been engaging the attention of the University authorities since 1974. The University document - "Fifth Five Year Plan Proposals, 1974-79" mentions about the Department of Library Science at Page 165.

As regards, courses and teaching staff are concerned, the Department may start one year's course leading to B.Lib.Sc. at the initial stages with the help of professionally trained library staff of the University till the posts are sanctioned by the U.G.C. Later on when necessary teaching strength is available to the Department, it may start courses leading to M.Lib.Sc., M.Phil and Ph.D.

The matter is placed before the Academic Council for consideration and decision.

5:4:1(1)

5:4 - Others :

- (i) Criteria, Guidelines and pattern of assistance to autonomous Colleges -

Placed as Annexure - 'A' is a letter received from Dr Rais Ahmed, Vice-Chancellor, University Grants Commission where the Commission has proposed to give autonomy to colleges to frame their own curricula, courses of studies, method of evaluation, examination, etc.

The proposal of the Commission is placed before the Academic Council for consideration.

5:4:1(2)

Annexure - A

VICE-CHAIRMAN

University Grants Commission
Bahadur Shah Zafar Marg
NEW DELHI-110002

D.O.No.F.14-1/75(CP)

October 5, 1983.

Dear Vice-Chancellor,

The Commission had sent to the University in October, 1983, a copy of the criteria, guidelines and pattern of assistance to autonomous colleges. A copy of the guidelines is again enclosed. The Universities were requested to send proposals under this programme in the light of the criteria indicated therein.

The Central Advisory Board of Education at its meeting held in June, 1983 noted that the progress in the scheme of autonomous colleges was slow. The Board is of the view that Universities and State Governments should confer autonomy on deserving colleges in greater measure, so as to allow institutions, a measure of flexibility in their course offerings and related examinations which would encourage initiative, innovation and development of excellence. Periodical review of the performance of autonomous colleges should also be taken with a view to strengthening further the concepts underlying autonomy.

As the Commission attaches high priority to this programme, I should be grateful if you could kindly personally look into the matter and arrange to send specific proposals for consideration of the Commission/may, in the first instance, be considered by the concerned authorities of the Universities, as prescribed under the Act, and the colleges so identified may be requested to prepare detailed proposals giving the goals and objectives, their plans and academic programmes which they would like to take up consequent upon their obtaining the status of autonomous colleges within the University. When such a proposal is available, the University may proceed to appoint a committee to examine the proposal in detail.

the proposals to be sent for consideration of the Commission ...

Contd/-.....

The UGC would agree to nominate a representative to work on such a Committee, if the University so desires. The University may intimate the Commission of the steps to be initiated by the University in this regard at an early date.

With regards,

Yours sincerely,

Sd/-Illegible

(Rais Ahmed)

Dr. B.D. Sharma,
Vice-Chancellor,
North-Eastern Hill University,
PO Lower Lachumiere,
Shillong-793001.

.....

**CRITERIA, GUIDELINES AND PATTERN OF ASSISTANCE TO
AUTONOMOUS COLLEGES.**

Objectives

Autonomous colleges represent a radical departure from the existing structure of the University system in India in which under graduate or collegiate education which caters to more than 80% of students in higher education at University level, does not enjoy any academic freedom because of the prevailing affiliation system. The Education Commission regarded the exercise of academic freedom and critical scholarship on the part of teachers as crucial to the "Promotion and development of the intellectual climate in the country which is conducive to the pursuit of scholarship and excellence". All attempts at reform of university education in the way of Curriculum development, changes in the system of examination, promotion of research and its subsequent feed-back into the teaching process, and changes in teaching methods in keeping with changing times and the changing content of university education, have tended in the last few years to get defeated by the existing rigidity in the structure of universities, particularly because of the absence of academic autonomy of the institutions. The large majority of teachers and teaching institutions, viz., colleges have never experienced the freedom and innate responsibility to design the courses of study, to devise appropriate teaching methods and technology and to plan academic development or measures which would help to improve the quality of instruction as well as the learning process.

Distortions and Consequences of Affiliation System

The system of affiliation was designed at a time when the number of universities and colleges was small and the function of universities was limited to conducting standardised examinations in order to qualify and grade the products for purposes of general employment, mainly in the secretarial services. Universities at that time were not teaching institutions nor was the promotion of scholarship and research considered to be one of their major functions. The situation today is vastly different. The number of students seeking higher education and the number of colleges and universities have multiplied at a phenomenal rate and the expectations of public authorities and the society at large are far more complex, demanding scholarship and training of high calibre. But the systems of affiliation and mass examination with all their backwash effects have not only distorted the learning process but have created enormous social problems in the way of corruption, terrorism and vilence in the conduct of examination. They have encouraged impersonalization of teaching and administration, academic stultification and cynicism and alienation of students and teachers from the learning and teaching process. In the case of Universities the existence of these

Contd/-.....

- 2 -

large number of colleges with uneven standards of teaching and facilities has become a definite drag on processes of modernization, reform and improvement of standards. In the case of the better colleges which have both the resources and the determination to do quality teaching, the control of the university in matters of curricula and examination has curbed all initiative and imposed rigid structure of courses and examinations on even such institutions which realise the irrelevance and lack of purpose of much of the work that they are doing. Such colleges feel that the affiliation system has prevented all their efforts towards modernization and improvement. Academic autonomy has always been regarded as a functional necessity for institutions of higher education. The conspicuous absence of this academic freedom and institutional autonomy in the case of colleges in India has been the greatest disfunctional factor responsible for the gradual decline in standards.

Relationship of Autonomous Colleges with the University.

In the context of the general situation prevailing in India the conferment of degrees can be done by a University established by an Act of the legislature or an institution deemed to be university under the UGC Act. It would, therefore, be necessary for the autonomous colleges to preserve this link with the University. The college should enjoy autonomy in framing its courses of studies, devising its methods of evaluation and its principles for admission of students. This would require the constitution of its own academic bodies. The relationship with the university should be one of association and exchange. The college may draw on the university departments for expertise in framing its curricula, devising evaluation methods and conduct of examination, selection of teachers etc., but the autonomy of the college should not be solely dependent on university leadership. It must also have an academic council on lines similar to the academic council of a unitary university and must ensure involvement of faculty at all levels, senior as well as junior teachers, in the framing of the academic policies, courses of study etc. The boards of studies constituted by the autonomous colleges may have external experts including a representative of the university to which the college is affiliated. The decision taken by the academic council of the college need not be subject to any further modification by university academic council or other statutory bodies of the university. The functions of the academic council of an autonomous college could also be defined by university statutes. The university degree will continue to be conferred by the university concerned but the name of the autonomous college will be mentioned.

contd/-.....

The freedom to design courses would necessarily extend to revision of new courses and combination of courses not provided for within the existing university curriculum. This would encourage experimentation with desirable educational ideas, and initiate a process for broadening the frame-work of courses to make them more meaningful and relevant in the context of local and regional requirements for skilled manpower. It may be easier for an autonomous college to respond to such local requirements than for a university with large territorial jurisdiction and the need to ensure uniformity or standardise the provision of courses in institutions of varied resources and capacity, generally at the level of lowest common measure.

Autonomous status may be conferred on the college as a whole or in the case of postgraduate colleges on an individual department or faculty for postgraduate course. It is essential to involve the university as well as the State Government in the process of identification of colleges which are to be conferred such an autonomous status. The proposals for autonomous status should, therefore, as far as possible be sponsored by the university concerned. The criteria for selection should be as under:

- (a) Academic reputation and previous performance in University examination and other academic, cultural activities.
- (b) Academic attainments of the staff.
- (c) The mode of selection of students and teachers viz., whether such selection is without regard to caste, creed or social class.
- (d) Physical facilities, e.g., library, accommodation and equipment.
- (e) Institutional management, viz., whether it is motivated by and responsive to academic or non-academic considerations.
- (f) The financial resources that the management can provide for the development of the institution.
- (g) The responsiveness of the administrative structure to the views of staff and students.
- (h) Extent of freedom enjoyed by the staff for advanced scholarship, research and experimentation and involvement in educational innovation and reforms.

An autonomous college would be ordinarily expected to have plans to shed its pre-university/intermediate classes when the 10+2+3 scheme becomes operational, so as to devote its efforts primarily to the development of academic programmes at the degree and postgraduate levels.

contd/-.....

Procedure for Conferment of Autonomous Status

The proposals for autonomy have to be normally sponsored by the University though the Commission may, on the basis of identifications made by expert bodies from time to time, suggest to the University the desirability of such colleges to be considered. All proposals reviewed from the universities would be examined by the UGC and its decision communicated to the universities. It would also be desirable to provide in the Statutes of the university relating to autonomous colleges that conferment of autonomous status will be subject to the concurrence of the UGC. In order to ensure concurrence of the State Government, the State Government may be associated, wherever required, in this connection. In the case of Government colleges, it would be necessary to obtain an assurance from the State Government that the competent staff will not be transferred the institution after the conferment of autonomous status and an advisory board constituted on lines similar to that in other autonomous colleges.

The functions and powers of the Governing Body /Management Committee should be clearly defined so as to ensure that decisions taken by the academic council of the autonomous colleges are accepted for implementation by the college. However, in case of any dispute in such matters, the Vice-Chancellor of the University may be requested to take a decision, keeping in view the need for ensuring academic freedom in all such matters.

The privilege of autonomy may not be conferred once for all but will have to be continually earned and deserved. The status may be granted initially for a period of five years but a review should be undertaken after three years by the University and UGC in collaboration. In case of evidence of deteriorating standards, it should be open to the university after careful scrutiny to revoke the autonomous status.

Pattern of Assistance.

Conferment of autonomous status on a college will not be itself entitle the college to any extra financial privileges; not does autonomy mean any transfer of financial commitments to the UGC from the managements or the State Governments. Any extra assistance arising out of the autonomy would be only marginal and related to the special academic programmes developed by such colleges. This extra assistance would become available from the UGC on a cent per cent basis for a period of five years. The question of continuation of such assistance beyond a five-year period either as developmental assistance or as maintenance assistance could be reviewed, taking all relevant aspects into consideration. These colleges would also continue to be eligible for assistance from the UGC in respect of all development programmes applicable to other colleges.

.....

OTHERS:

Item No. 5:4:(ii)

To Nominate Three persons not below the rank of Readers as members to the various Boards of Under Graduate Studies.

.....

The provision of the Ordinance on the subject ~~is~~ quoted above is reproduced below:-

" Clause 1(i): Three persons not below the rank of Readers to be appointed by the Academic Council - one of whom shall be appointed as Chairman by the Vice-Chancellor provided that one of them should be a member of the Academic Council:"

Under the provision of the Ordinance the following names are suggested and those with asterik marks are members of the Academic Council. It is therefore placed before the Council for consideration and approval:-

Nepali:

- | | | |
|---|---|--|
| 1. Shri T.B.Chetri,
Reader in Nepali
North Bengal Univ. | 2. Prof.Ramlal Adikari
Govt. College,
Darjeeling. | *3. Dr. A.P. Sinha,
Head, Dept. Anthropology
NEHU, Shillong. |
|---|---|--|

Hindi

- | | | |
|---|--|--|
| 1. Dr. H.D.Trivari,
Dept. of Hindi,
Gauhati Univ. | 2. Dr. K.N.Prasad,
Dept. of Hindi,
Gauhati Univ. | *3. Dr. M.N.Karna
Prof. Sociology Dept.,
Nohu, Shillong. |
|---|--|--|

Assamese.

- | | | |
|--|-----------------------------------|--|
| 1. Dr. G.G.Goswami,
Reader, Gauhati Univ. | 2. Dr. M.N.Bora;
Gauhati Univ. | *3.Dr. B.K.Dev Sarma,
Dept. of Mathematics,
NEHU., Shillong. |
|--|-----------------------------------|--|

Sanskrit.

- | | | |
|--|--|------------------------------------|
| 1. Dr. R.R.Mukherjee,
Jadavpur Unive.,
Calcutta. | *2. Dr. R.N.Tripathi,
Dept. of Botany,
NEHU, Shillong. | 3. Dr. M.M.Sarna,
Gauhati Univ. |
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Garoi:

- | | | |
|---|--|---|
| 1. Shri I.K.Sangma,
Dy.Director of Public
Instruction,
Govt. of Meghalaya. | 2. Dr. Milton Sangma,
Reader, History Dept.,
NEHU, Shillong. | *3.Dr.Hanler Barch,
Head, Dept. of
Creative Arts,
NEHU,, Shillong. |
|---|--|---|

Bengali:

- | | | |
|--|--|---|
| Dr. B.Dutta,
Head, Dept. of Bengali
North Bengal Univ. | 2. Dr. S.Biswas,
Head, Dept. of Bengali,
Gauhati Univ. | *3. Mr. Tapan Maitra,
Shillong College,
Shillong. |
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OTHERS

Item No. 5:4:(iii)

Copy of D.O. letter No. FM.53/81/143 dt.11.11.83 from the Minister, Finance, Revenue, PWD., etc., Mizoram addressed to the Vice-Chancellor, NEHU., is reproduced below for the consideration of the Council:

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With reference to my discussion with you in my office Chamber at 11 A.M. on 11/11/83 I am to inform you that with the permission of the Govt. of Mizoram the first Law College in Mizoram namely the "Aizawl Law College" was started in August, 1983 and was inaugurated by the Hon'ble Chief Minister of Mizoram. As many as 255 students have been admitted into the Preliminary LLB class this year, and the Law College has been functioning smoothly ever since it was started. This Law College was started with a view to giving the opportunity to the people of Mizoram in matters of legal education as the people of Mizoram are still lagging behind, in matters of Law consciousness, even after 35 years of Indian Independence. Moreover, while our neighboring states namely Nagaland and Meghalaya are having 2 (two) Law Colleges each Mizoram is having none. And I am the President of the Managing body of this Law College.

Further, for want of temporary affiliation by NEHU the Aizawl Law College could not be given Grant-in-aid by the Govt. of Mizoram. As such, and early temporary affiliation by NEHU is necessary for the progress and smooth functioning of this Law College. I would also like to inform you that the position of this Law College relating to Finance is sound and suitable plot of land is allotted by the Govt. of Mizoram for the permanent place of this Law College.

It is, therefore, my sincere desire and hope that you may be kind enough to consider the application for temporary affiliation, submitted by the Principal of the Aizawl Law College at the earliest opportunity.

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