NORTH-EASTERN HILLUNIVERSITY
Shillong - 793 001

AGENDA (FIRST PART) FOR THE 18TH MEETING OF THE ACADEMIC COUNCIL

Contd/...

Item No. 2 REPORTING ITEMS :

(i) Guidelines for introduction of M.Phil Courses -

The University Grants Commission in its letter No. F.1-2/83(TF-1), dated 3rd June, 1983, had forwarded the revised guidelines for introduction of M.Phil Courses as recommended by the Committee appointed by it.

The revised guidelines for introduction of M.Phil Courses is placed at Annexure - 1 for information of the Academic Council.

Annexure - 1

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

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(PII), 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.

UNIVERSITY GRANTS COMMISSION
NEW DELHI

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 would 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 students 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. 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 students understanding of the subject.

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iv) M.Phil students should be required to attend and participate in atleast six seminars to be organised by the department/centre for the purpose of discussing new results and developments in the subject and/or interpretation of data. The M.Phil scholar shall be required to give atleast 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/part-time candidate or as an ex-student within the maximum period of four semesters for 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.

ATTENDANCE :

M.Phil students should berequired 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.

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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 of study with programme and circulated to the students. The dissertation based on project/design work should be evaluated separately.

Normally the students on 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.

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 courses including the system of evaluation;

(c) assign these courses to the concerned teachers of the departments;

(d) organise seminars/tutorials, 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.

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ACADEMIC STAFF & ORGANISATION :

1. For the introduction of M.Phil course, a university department should have atleast 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 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 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 programme 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 proper and well defined academic basis.

5. No teachershould ordinarily do more than one teaching course per semester in M.Phil programme.

Item No. 3 RATIFICATION OF ACTION TAKEN BY THE VICE-CHANCELLOR :

(i) Condonation of shortage of attendance -

Subject to ratification by the Academic Council, the Vice-Chancellor has granted condonation of the shortage of attendance in respect of Shri Bhagwan Singh, a Second Semester B.Ed. candidate of the Department of Educational Research & Studies, Mizoram, 1993.

The Academic Council may kindly ratify the action taken by the Vice-Chancellor.

(ii) Fixing the rate of a Duplicate Mark Sheets of five years course B.Sc.(Agri.) -

Subject to ratification by the Academic Council the Vice-Chancellor has fixed the rate for Duplicate U.G. Transcript for B.Sc.(Agri.) containing all the marks secured by the candidate of B.Sc.(Agri.) in all the Ten Semesters Courses at Rs 10/- each.

The Academic Council may please approve the action taken by the Vice-Chancellor.

Item No. 4 DEFERRED ITEMS :

(i) 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 30th May, 1985 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 held on 8th/9th June, 1985, but consideration of this , was deferred. Hence, the same is placed again before the Council for consideration and decision.

Item No. 5 ACADEMIC MATTERS :

5.1 Statutes, Ordinances, Regulations, etc -

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

The Executive Council in its 31th 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 - 2.

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

Appemdix - 3.

Draft Regulations goberning direct Ph.D. registration for personsworking 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 fieldand having publication of afew 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 speciliaed 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 ad-equately 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.

(ii) Amendment of Clause 4(3) a (e) of Ordinance 9 on the Board of Post-Graduate Studies.

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.

ORIGINAL CLAUSE	PROPOSED AMENDMENT	CLAUSE AFTER AMENDMENT
9:4(d)- To recommend to the Committee for Advanced Studies and Research applications of the students as 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 alongwith 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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5.2 Syllabus -

(i) Syllabus of B.Sc. Home Science 3rd Year and Syllabus for Non-Traditional Course -

Placed as Annexure - 3 is the syllabus of B.Sc. Home Science and syllabus of Non-Traditional Courses recommended and approved by the Board of Under-Graduate Studies held on 11th March, 1983 for consideration of the Academic Council.

Annexure - 3

B.Sc. Home Science : III Year

Clothing and Textiles 100 marks.

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 finishes - 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, Smocking, 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 Bail Co.
4. Golden hands, "Complete Book of dress making" New York Random House.
5. Golden Hands, "Encyclopadia of Dress making" Collins, Glass glow and London, 1977.

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Paper - V - Customs Designing : 100

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 draping and flat pattern method in dress designing.

E. Basic principles of fitting and figure problems.

F. Study of a well designed dress.

References -

1. Brij Bhushan, Jamila, "Costumes and Textiles of India", Taraporevala, Bombay, 1958.

2. Erwin Nobel D., "Practical dress design", 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 fibers.

2. Effect of the structure of the fibers on the properties of fabrics made from them.

B. Different methods of fabric construction :

1. Weaving
2. Knitting
3. Crocheting
4. Felting

C. Finishes :

1. Introduction to finishes
2. How properties of fibers 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. Mallory L. Joseph, "Introductory Textile Science" Holt, Rine Hart and Winston, New York, 1972.

2. Herbert R.W., "Mathews textile fibers".

3. Mongriff R.W., "Man made fibers" London Butterworth.

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

A. Advanced Clothing Construction :

1. Preparation of samples of seams, fasteners, pleats tucks and darts.
2. Drafting and construction of garments for adults.
   a. Skirts
   b. Bodices
   c. Sleeves and their variation
   d. Man's shirt
   e. Night 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 address designing
   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 textile fibers 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 material
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.
4. Evaluation of finished garments
5. Production of garments for commercial purposes.
6. Taking orders and supplying of garments.

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FOODS & 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, B Complex, C
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, facts 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 (monoand 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, β-oxidation, electron transport chain. Interconversion 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.

5:2:1(7)

Paper - VI

Food Preservation 75 Marks.

A. Physico 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.

C. General methods and principles of fruit and vegetable preservation; food additives and leavening agents.

D. Role of enzymes in food processing, browning reactions in foods.

E. Classification and composition of vegetable.

F. Classification and composition of fruits; pectin and pectic substances; chemistry of pectin.

G. Melly 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 chtney 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 standard and laws in India.

P. F.P.O. limits for permitted preservatives.

PRACTICAL

FOOD AND NUTRITION

Paper - VII - Nutrition, Food Science, Biochemistry and Microbiology 150 marks.

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-caloric 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. Dietory 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 bacteria, yeasts and melds.
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.

5:2:1(9)

Paper - VIII

Food Preservation 75 marks
(25-internal)
(50-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 : cornels, brittles, butter scotch.

5:2:1(10)

Home Science

List of reference books :

I. Foods and Nutrition:

1.	Roban, C.W.	"Normal and Therapeutic Nutrition" Oxford & IBH Publishing Co. India Edition 1977.
2.	Ross, M.L., Chaney, M.S.	Nutrition, Houghton Mifflin Co, 1971.
3.	Gopalan E, et al	Dietary allowances for Indians 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. & Mudaali, S.R.	Human Nutrition - Principles and application in India, Prinetince 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.	Nash, E	Cooking Craft, 1971.
10.	Jacob, T	Food Adulteration, Macmillan, Delhi, 1976.
11.	Griswold, 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.

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Child Development

Paper - IV - Principles of Child Development 100 marks.

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 concept of family and child welfare :

1. Meaning of family welfare and child welfare
2. Importance of family and child welfare progeammes.

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.

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D. 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, Vit. A deficiency.
2. Dietary measures for solving nutritional problems.

Practical

Child Development

Paper - VII - Principles of Child Development and Family and Child Welfare — 100 marks (50-internal) (50-external)

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 — 100 marks
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, Phil.,Conger, J.J., Kagan, J — Child Development and Personality, Harper & Row Publication
2. Hurlock, E.B. — Child and Growth Development, McGraw Hill Publication
3. Strang, Ruth — An Introduction to Child Study, Mc Millan & Co.
4. Dirkmeyer, D.C. — Child Development, Printice Hall
5. Crow & Crow — Child Development and Adjustment, Mc Millan
6. Smart & Smart — Readings in Child Development and Relationships, Light & Life Pub. Co.
7. Thouson G.G. — Child Psychology, Subject Publication
8. Ausubel, D.P. — Theory & Problems of Adolescent Development" Grune & Stratton Pub.
9. Caplan, G. & Lebovico, S — Adolescence - Psychological Perspecting, Basic Book Publishers.
10. Nash, J — Developmental Psychology Printice Hall
11. Watson, R.I. — Psychology of the child, John Wiley Pub.
12. Hand Book of Research Methods in Child Development — Edited by P.H. Mussen Wiley Publication

5:2:1(15)

B.Sc. (Home Science) - III Year

Home Management

Paper - IV - Advance Home Management 100 marks

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, composition, 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, principles 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, ligating, ventilation.

C. Types of family residential units : Independent house, apartment house, renting, 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.

5:2:1(16)

Paper - VI - Principles of Design & Interior Decoration 100 marks.

A. Elements of design : Line, form, colour, texture.

B. Types of designs :

1. Structural designs
   a. Shapes & outlines. b. Materials and processese 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-arrangement, 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

Practical

Home Management — 100 marks
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 groups.
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 : Alpana, rangoli, kolam, flower carpet
4. Furnishing of different rooms : Living room bed-room, kitchen, dining room, bathroom.
5. Arranging flowers for different occasions.
6. Illistration from everyday life: Furniture, tableware, utensilvs, 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 :

II. Home Management :

1. Nickell, Rice, Tucker - Management in Family Living, John Wiley & Sons, Inc.

2. Nickell & Dorsey - 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, Prinbice Hall of India Pvt. Ltd, New Delhi.

5. Gross & Crandle - Management for modern families, Indian Edition-Sterling Pub. Pvt, Ltd. Delhi - 6.

6. Mann, M.K. - Management for Indian Families, Kalyan Publisher, Delhi.

7. Rutt, A.H. - Home Furnishing, John Wiley & Sons, Inc.

8. Goldstein & Goldstein - Art in everyday life, Oxford & IBA Pub.Co. Calcutta, New Delhi.

9. Bigelow, H.F. - Family Finance, J.B.Lippincotl, 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.S. - 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.

a. Infants

b. Pre-school children

c. Elementary school children

d. Adolescents

e. Adult man and woman - light, moderate and heavy workers.

f. Pregnant and lactating women

g. Elderly people

2. Sources, function, requirements and deficiency diseases of energy, fats, proteins, minerals and vitamins

3. Food fads and beliefs in N.E. India.

B. Infant growth and Nutrition -

1. Monitoring of growth

2. Nutrient requirements

3. Breast-feeding and weaning foods

4. General care of the infant and common ailments; rehydration therapy.

C. Community nutrition -

1. Food intake of the community in urban and rural areas of N.E. India.

2. Food and nutrient requirement of the community.

3. Nutrition programmes and involvement of different agencies (government and voluntary organisation) in the programme.

Practicals

1. Formulation of weaning foods using locally available foods.

2. Monitoring of child growth

3. Dietary survey

4. Rehydration formula.

Item No. 3 RATIFICATION OF ACTION TAKEN BY THE VICE-CHANCELLOR :

(i) Condonation of shortage of attendance -

Subject to ratification by the Academic Council, the Vice-Chancellor has granted condonation of the shortage of attendance in respect of Shri Bhagwan Singh, a Second Semester B.Ed. candidate of the Department of Educational Research & Studies, Mizoram, 1983.

The Academic Council may kindly ratify the action taken by the Vice-Chancellor.

(ii) Draft syllabus of the Three Year Degree Course in Geology -

The Board of Under-Graduate Studies in Geology in its meeting held on the 18th September, 1982, had finalised and approved the syllabus of the Three-Year Degree Course in Geology.

The Syllabus is placed at Annexure - 4 for consideration and approval of the Academic Council.

Annexure - 4

GEOLOGY

3 years degree Course:

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

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

THEORETICAL:

PAPER - I

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

PAPER- II

GROUP-A	(i) Igeeous Petrology (ii) Sedimentary " (iii) Metamorphic "	40 marks
GROUP-B.	(i) Principles of Stratigraphy (ii) Indian Stratigraphy	40 marks
GROUP-C	Paleontology	20 marks
	Total:	100 marks.

P R A C T I C A L

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
	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 - B

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, pleachroism, extinction, double refraction, refractive index, interference colour, nicol prism, distinguishing characters of isotropic and anisotropic, and uniaxial and biasial 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 damsites, tunnels and landslides, Occurence, origin uses and distribution in India of the following: gold, copper, alluminium, iron, manganese, chromium, limestone, radioactive minerals, coal and petroleum.

contd/-.....

PAPER - II

G R O U P - A

Petrology: (i) Igneous: Magma, its composition, crystallisation and consolidation and differentiation, mode of accurence 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: Charnockite, 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, Scist, gneiss, quartizite, 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.

G R O U P - 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 quarternary system of Assam.

G R O U P - 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, graptoloidea, vertebrate fossils of the Siwaliks and the Gondwana floras.

contd/-.....

P R A C T I C A L :

Paper - II

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 speximens by their physical characters: Silica minerals, orthoclase, microcline, plagioclases, augite, hornblende, tremolite, actinolite, elivine, muscovite, biotite, sillimanite, kyanite, garnet, apatite, beryl, tournaline, calcite, graphite, bornite, malachite, chalcopyrite, pyrite, haematite, magnetite, limonite, chromite, pyrolusite, psilomelene, bauxite, apatite, asbestos, corundum, coal, gypsum, barite, fluorite & galena.

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

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

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

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

Basalt, diorite, dolerite, granite, gabbre, 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, cyprea, cerethium, murex, physa, turritella, belemnites, nautilus, perisphinctes, calymene, phacops, glossopteris, ganganopteris, vertebraria.

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 economic importance. Writing of field report.

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

contd/-.....

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.P.
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. Prassad.
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 (IIIrd Year): HONOURS COURSE:

Theoretical Papers :	3, each carrying 100 marks :	300 marks
Practical Papers:	2, each carrying 100 marks:	200 "
	Total:	500 marks.

THEORETICAL:

P A P E R - I

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

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

P A P E R - I I .

GROUP-A. Crystallography
Mineralogy
Mineral Optics — 40 marks.

GROUP-B. Petrology
Igneous
Sedimentary
Metamorphic — 60 marks

P A P E R - III

GROUP-A. Principles of Stratigraphy
Indian Stratigraphy — 60 marks

GROUP-B. Palaeontology ..... 40 marks

P R A C T I C A L :

(Two papers of 100 marks each)

P A P E R -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.

P A P E R -V.

Maps	20 marks
Structural problems	15 "
Palaeontology	25 "
Field Report	30 "
Viva	10 "
Total:-	100 marks.

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 gectectonics: 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 beating 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. Metallogenetic provinces and epochs. Coal and petroleum province.

Study of mode of occurrence, origing 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/-.....

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	:	Sphenoidal 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 structure. 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) $KALSiO_4$ - Ne AL SiO_4 - 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 recrystalisation, composition, of sediments(mineralogical). Texture of sedimentary rocks, scaler 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 ferruganous rocks.

An introduction to Evaporities, saltdomes and Carbonates.

Metamorphic Petrology: Recent concepts of metamorphic peyrology: 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 differentation, 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, quartizite, marble, amphibolite and pyroxene-granulites,granulites.

contd/-.....

5:2:2(12)

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 facers 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.

(a) Mysore (b) Singhbhum (c) Assam Plateau (d) M.P.
(e) 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) Jurrasic of Cutch: Palaeontology and lithology.
(e) Cretaceous of South and North-East India: Palaeogeography, palaeontologic and lithologic relationship.
(f) Tertiaries and quarternaries of North-East India: Economic importance, palaeontology. structure and lithology.
(g) A brief survey of the Tertiary formation of Himalaya.

Contd/-.....

G R O U P -B 40 marks

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 & graptoloidea. A general idea of the bertebrate 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 idstinguishing 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 unixial 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, phylite, 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, anorthesite, 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.

5:2:2(15)

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, inconformity, igneous activity. Drawing of Cross-section.

2. Topographic survey with the help of prismatic compass and plane table. Uses of Clinometer/Brunton 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, cephalitis
   (c) Cidaris, lovenaster, micraster, clypeaster
   (d) Orthis, rhipidomella, athyris, productus, spirifer, terebratula, rhynchonella.
   (e) Arca, corbula, cardita, exogyra, glycimeris, hippurites, inoceramus, lima, mytilus, nucula, pecten, ostrea, spondylus, trigonia.
   (f) Pelecypoda, conus, columbaria, cypraea, murethium, fusus, murex, natica, physa(Bulinus), turritella, voluta.
   (g) Baculites, belemnites, ceratites, ammites, goniatites, nautilus, perisphinctes, scaphites.
   (h) Calymene, phacops.
   (i) Glossopteris, gangamopteris, ptilophyllum, 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.

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.N.
7.	Economic Mineral Deposits	Bateman, A.M.
8.	Metallic & Industrial Mineral Deposits.	Lindgren
9.	Indian Mineral Wealth	Brown, J.C.& Dey, A.K.
10.	Mineral 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 - Shimer, H.W.	
20.	Vertebrate Palaeontology	Romer, A.S.
21.	An Introduction to Palaeobotany	Arnold, C.A.
22.	Field Geology	Lahee, F.E.
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.W.Robbs, with W.D. Means & P.F.Williams.
27.	Principles of Sedimentology	G.M.Friedman & J.E.Sanders.
28.	Mineralogy for students	W.A.Battery, Longman.

Contd/...

29.	Field Manual of Minerals	M. Kuzin, N. Egorov
30.	Geology of Mineral Deposits	V.I.Smirnov.
31.	Text book of Sedimentary Petrology	V.K.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.Datta
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.R. 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

(iii) Restructuring o M.A. Courses in the Department of Philosophy -

Placed as Annexure - 5 is the course structure of the Department of Philosophy, for consideration and approval of the Academic Council.

Annexure - 5

PHILOSOPHY DEPARTMENT

RESTRUCTING OF M.A. COURSES: PHILOSOPHY

In view of the implementation of 10+2+3 pattern of education is 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 disciplines.

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 under-graduate 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 areashave been designed to give a broad back-ground to the student. While the P.G. Courses have been designed to make 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 in 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 Wittgenstoin will be compulsorily studied by the student. The introduction of the text presupposes aquaintance 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 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 really complete without inclusion of course in the area of Analitical 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)

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.

contd/-.....

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)
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 Grammer (both Indian & Western).
2. Indian Logic (including Nyaya & Bhuddhism).
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.

Brief Summary.

1. In depth study of different philosophical classics is considered to be our main objective. In philosophical studies, classics

cont:/-.....

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 otherwords, the underlying rationals 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 shoul mak in-depth study of classcis 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 notes 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 overlap 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 tune with our main objective of our programme. But this is not to curtail the freedom of the teacher. Only the chances of duplication and overlap have been reduced. But freedom and flexibility have been otherwise ensured within the system.

contd/-.....

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.

Then 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.

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

5.3 Research

(i) Research proposal of Shri David R. Syiemlieh, Department of History -

The Board of Research Studies in Humanities/ Social Sciences in its meeting held on the 31st May, 1983, had approved the research proposal of Shri David R. Syiemlieh, Department of History as recommended by the School Board and had also recommended to the Academic Council for consideration and approval.

(ii) Permission to Shri A.K.Z.Ahmed, Zoology Department for submission of his thesis.

Shri A.K.Z.Ahmed, joined the Department of Zoology on 1st November, 1977 with a fellowship granted by the University Grants Commission for doing research leading to Ph.D. Degree under the guidance of Prof. S.G.Michael. On 30th August, 1983, he has completed 5 years and 10 months but has not yet submitted his thesis. The maximum tenure permissible as per U.G.C. rules is 4 years and there is no provision for further extension. As per the NEHU Ordinance a candidate has to complete within a maximum period of 5 years (4 years normal + 1 year extension). Shri A.K.Z.Ahmed (teacher fellow) has exceeded by 10 months. He has not given any reasons for this delay.

The matter is, therefore, placed before the Academic Council to decide whether the candidate be allowed to submit his thesis as a special case.

Item No. 5:4 EXAMINATION MATTERS :

(i) Panel of Examiner for the Ph.D. Thesis of Shri M.K.S. Nair -

The Panel of Examiners for evaluating the Ph.D Thesis of Shri M.K.S. Nair is placed before the Academic Council for consideration and recommendation to the Executive Council for approval.

The Panel will be tabled by the Chair.

(ii) Panel of Examiners for the Ph.D. thesis of the Department of Chemistry.

The Panel of Examiners for examining the Ph.D. thesis of the following candidates of the Department of Chemistry is placed before the Council for consideration and recommendation to the Executive Council.

1. Kum. Mitra Bhattacharjee
2. Shri M.N.Bhattacharjee
3. Shri K.K.Bhattacharjee
4. Shri S.K.Ghosh

The Panel will be tabled by the Chair.

(ii Re-scrutiny of the answer-script of Shri Khrieseviliu Yohomi a student of M.Sc. M.Sc.(Chemistry) ..

Shri Khrieseviliu Yohomi a student of M.Sc. (Chemistry) of academic years 1992-93 in his application has requested for re-scrutiny of his answer-script of First Semester on the course "Organic Chemistry" as he is not satisfied with the evaluation. The Academic Ordinances and Regulations do not provide for re-scrutiny of answer-scripts for the post-graduates.

Since the above examination had been done externally, re-scrutiny may be allowed in the case of under-graduate, i.e., the marks against each question answered by the candidate and the total thereon is informed to the candidate without showing the scripts maintaining its confidentiality at the same rate i.e., Rs 15/- per p may be charged.

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

(iv). Private appearance for B.A. Examination (TLC)

With the switching over to the Three Year Degree Course by the University certain queries have arisen as to whether female and male teachers could appear privately in the II year Examination of the Three Year Degree Course.

As per Ordinance relating to the Regulations and Syllabi for the B.A. Two Year Degree Course there is provision for the above (Copy enclosed vide Annexure - 5).

In anticipation of the approval of the Academic Council permission was given to all the Principals to allow the students to appear B.A. privately in the II year examination'84 of the Three Year Degree Course.

Secondly, the Council may decide whether Honours could also be done privately in the **Third Year** of the Three Year Degree Course. This was not admissible in the old course.

The matter is placed before the Council for framing of Ordinance and for ratification of the action taken by the Office.

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(v) : ADMISSION TO P.G. CLASSES IN 1985

As the Second Year of the Three Year Degree Course would be held for the first time in 1984, the Council had already decided that no admission would be made in the P.G. classes in 1984. Now a query has arisen about the fate of the Honours students (both Arts and Science) who are appearing and who pass the Old Course in the next Final Examination'84. Students who are desirous of going in for higher education i.e. whether they would be eligible to take admission in the P.G. classes in 1985 or not.

The matter is placed before the Council for decision.

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Annexure - 6

EXTRACT FROM THE ORDINANCE RELATING TO THE REGULATIONS AND SYLLABI FOR THE B.CHELOR OF ARTS TWO YEAR DEGREE COURSE.

19.(a) A female candidate may be permitted to appear in the B.A. Examination as a private candidate after a lapse of two years from her passing the 2 year Pre-University Examination of this University of the 12 year Higher Secondary School Leaving Certificate Examination of a recognised Board or an equivalent examination considered as such by the Executive Council, provided that she must not have attended any college for one year previous to the date of the examination.

19(b) A male teacher candidate may be permitted to appear at the B.A. examination as a private candidate, if he has been serving as a teacher in a recognised institution (recognised by the University or Board recognised institution includes institutions recognised by the University or the Board or any other Educational authority approved by the University), for a continuous period of at least 2 year (up to the date of examination) subsequent to his passing the 2 year Pre-University Examination of this University or the 12 year Higher Secondary School Leaving Certificate Examination of a recognised Board, or an equivalent examination considered as such by the Executive Council.

19.(c) The services of the following categories of persons may be counted for the operation of section (b):

(i) Demonstrators, Laboratory Assistants of this University or colleges affiliated to this University.

(ii) Inspecting officers of the Education Departments of the Govt. of Meghalaya, Nagaland and Mizoram and Arunachal Pradesh.

(iii) The members of the Library staff :

(a) University Library

(b) Govt. libraries (Central and State libraries)

(c) Libraries of affiliated colleges and recognised educational institutions of High School standard,

(d) Libraries of Association, Bodies or Institutions to be approved by the Executive Council.

Persons claiming eligibility under this rule must produce a certificate to the satisfaction of the University and Principal concerned.

19.(d)(i) A private candidate shall not be permitted to offer any subjects under Group B.(i.e. subject involving Practicals)

(ii) A Private candidate shall not be allowed to offer Honours in any subject.

19(e) Applications for admission to the examination as private candidate shall be made to the University through the Principal of an Affiliated College before such date as may be prescribed by the University. Principals of affiliated colleges are entitled to grant permission to the Male students and Females to appear as Private candidates after satisfying themselves that these candidates are eligible according to the Regulations prescribed above.

Any case of doubtful eligibility should be referred to the University for clarification.

19.(f) A private candidate shall be required to pay admission fees and other fees in addition to the fees prescribed for regular students.

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(vi) Memorandum presented by the Principal of Colleges in Shillong -

Placed as Annexure - is the Memorandum presented by the Principals of Colleges in Shillong in connection with the examination system, for consideration of the Academic Council.

Annexure - 7

Shillong, Meghalaya
02-8-83

Memorandum presented by the Principals of Shillong Colleges

The Principals of the various Colleges in Shillong, in their meeting held on 29th July, 1983, considered the discontent that is spreading among the students due to the present examination system, and decided to present the following memorandum to the Academic Council, North-Eastern Hill University. The Principals are of the opinion that the examination system can be improved if:

I.1. In the evaluation of answer scripts the responsibilities of the examiners, scrutinisers and the head-examiners be clearly defined, and there be standardisation of marks.

I.2. An Examination Committee reformed, with adequate representation from the Colleges, to supervise the examinations.

I.3. A Moderating Body for each subject to be set up.

I.4. The Examination Branch be not the sole responsibility of one person.

I.5. The Examination Committee or the Moderating Body fix the number of grace marks to be granted. The grace marks should be shown in the mark sheet and the grace mark should be deducted from the total marks.

I.6. The students should be allowed to have their papers re-examined by a different examiner, and not merely be re-scrutinised on payment of an adequate fee.

I.7. Paper setters, paper examiners and externals for practicals for all examinations should be college teachers and not from the University.

I.8. The Pre-University and Degree examinations should not be dragged out. The Examination could start by the middle of February and end by the third week of March, (or when the proposed change comes into effect, from the middle of November to the middle of December). The examinations could be held concurrently, e.g., Pre-University examinations in the morning hours and Degree examinations in the afternoon.

Contd/...

2. Pre-University and Degree results should be published latest by mid-May (when the proposed change comes into effect latest by mid-February), as it would not be possible to cover the third year Honours course without having atleast six working months. The B.Ed. results should be published by mid-February.

3. B.A./B.Sc.(Hons.) candidates who failed in 1983 examinations be given another chance to do Honours examinations with the old syllabus.

4. All Pre-University/Degree syllabi should be circulated to the colleges for comments, before being finalised.

5. Correspondence course seems to be not suitable for Shillong conditions as there are evening classes and no rush for B.A. accommodation in colleges, even for the day shift.

As the Principals realise there could be difficulties in the proposed examination reforms, they are willing to offer their services in organising and conducting the examinations.

Yours truly,

Sd/- D.S.Rawat, 2.8.83

Sd/- Illegible,
Sd/- Illegible
Sd/- Illegible
Sd/- Illegible
Sd/- Illegible
Sd/- Illegible
Sd/- Paul Petta.

(vii) Permission to appear as private candidates for physically handicapped students -

One candidate, viz., Shri Tapas Kumar Bhattacharjee who had passed his HSLC Examination of Meghalaya Board in 1983 as a private candidate is a physically handicapped person and unable to walk without support of an escort, he has requested this University to grant him permission to appear P.U.(Arts) Examination in 1985 as a private candidate, an attested copy of a Medical Certificate from the Civil Surgeon, East Khasi Hills, Shillong, in support of his prayer has been submitted by him.

In this connection, a copy of letter No. EV/VII(124)'77 dated 12 July, 1977 from the Evaluation Officer, Association of Indian Universities and the General Rules for Female and teacher private candidates are enclosed as Annexures - 8 and 9 for information of the Council.

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

Annexure - 8

Copy of letter No. EV/VII(12)77 dated 12.7.77 from the Evaluation Officer, Association of Indian Universities, addressed to the Registrars of Member Universities/Institutions.

Sub:- Concessions/Relaxation to the Physically Handicapped.

At the 36th Annual Meeting of the Association held at Dharwar in 1981 a proposal sponsored by the Ministry of Education, Govt. of India regarding concessions to be granted by the educational institutions to the physically handicapped students was considered and the undernoted resolution adopted thereon was communicated to the universities:

"..... considering that it is desirable to afford to physically handicapped students adequate educational opportunities and having regard to their special needs, this Board recommends the following measures to the various universities :-

a) That all physically handicapped students who can produce reasonable evidence of having difficulty in attending normal institutions should be permitted to appear as private candidates for non-technical examinations, not involving practical training.

b) That wherever necessary physically handicapped candidates should be provided free of cost the services of competent amanuenses who need not be less qualified than the examinees.

c) That wherever physically handicapped examinees so desire, they may be permitted to typewrite their answers.

d) That blind students should be permitted to take up an Arts subject in place of Mathematics or Science at the Matriculation or an equivalent examination.

Res. The Board understand that the provisions with regard to physically handicapped students are such as have been suggested by the Government of India and adopted in several universities and the Board recommends that these provisions be introduced by all the universities as far as practicable".

The Govt. of India now desire to have data in respect of the extent of which the above resolution has been implemented by the various universities. I am to request you, therefore, to supply us complete information in the enclosed proforma of which two copies are enclosed. One copy may be retained by the university for its record.

Kindly ensure that the information is sent to us within the next two weeks or so.

Annexure - 9

General Rules for Female and Teacher Private Candidates.

(i) A private candidate (both male and female) will be allowed to appear in Arts only, and shall not be allowed to offer any subject involving practical.

(ii) A male candidate is permitted to sit for the Pre-University examination as a Non-Collegiate candidate on condition that he has been serving as a teacher in an institution (recognised by the SEBA or the University) for a continuance period of 30 months upto the date of examination and from the date of his passing the Matriculation or the HSLC examination.

Demonstrators, Laboratory Assistants, Librarians of approved institutions, Inspecting Officers of Education Department within the jurisdiction of Gauhati University and Army Instructors attached to the NCC units under this University, will also be treated as teachers for the purpose.

Librarian of the following approved categories only are eligible for this purpose -

(a) All Government Libraries (Central State and District State)

(b) Librarian of affiliated colleges and recognised institutions of High School standard.

(c) University Library.

(d) Libraries of Association, Bodies or Institutions to be approved by the Executive Council.

(iii) Pre-University Examination in Science and Commerce is open only to regular candidates studying in College.

(iv) A Female candidate may appear at the Pre-University Examination after a lapse of two academic years from the date of her passing the Matriculation Examination of Gauhati University or SLC Examination of SEBA provided she has not attended any college within one year previous to the date of the examination in which she desires to appear.

Item No. 5:5 - ESTABLISHMENTS OF NEW DEPARTMENTS/CENTRES/ETC:

(i) Opening of Sanskrit Department -

Three teachers of the Department of Sanskrit, Lady Keane 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 many of the Sanskrit for P.U. and B.A. is reproduced below:-

Examination	Year	APPEARED (with Sanskrit) M.	F.	TOTAL	RESULT (PASSED) FEMALE 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
	1980	1	2	3	---------NIL---------				
B.A. (PASS)	1981	x	6	6	-	-	-	3	3
	1982	2	6	8	-	-	-	5	5
	1980	x	4	4	1	2	-	1	4
B.A. (HONS)	1981	x	4	4	2	-	-	2	4
	1982	x	1	1	-	1	-	-	1

NOTE: MALE CANDIDATE HAS PASSED IN SINGLE PASS.

The matter is placed before the Academic Council for consideration.

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