NORTH-EASTERN HILL UNIVERSITY
SHILLONG- 793 001

No:AC:39-1/Conf/89-210 Dated Shillong the 16th June, 1990:

To

The Members of the
Academic Council,
North-Eastern Hill University.

Subject: Agenda papers for the 39th Meeting of the Academic Council.

Sir/Madam,

I am forwarding herewith the Agenda papers for the 39th Meeting of the Academic Council scheduled to be held on the 23rd June, 1990 at 11:00 A.M. for favour of your information and consideration.

Yours faithfully,

(H. W.T. Syiem)
Officer on Special Duty

Enclo:a.a

NORTH-EASTERN HILL UNIVERSITY
SHILLONG - 793 001

AGENDA PAPERS

THIRTY-NINETH

MEETING
OF THE

ACADEMIC COUNCIL

23rd June, 1990, Shillong.

NORTH-EASTERN HILL UNIVERSITY
SHILLONG

AGENDA RAPERS FOR THE THIRTY-NINETH MEETING OF THE ACADEMIC COUNCIL

Contd..2/-

5:3 - Research -

(i)	Recognition of Dr. A.S.Gupta, Scientist S-3 Head, Division of Plant Breeding, ICAR Research Complex, N.E. Region as Ph.D. Supervisor -	5:3:1:(1)
(ii)	Appointment of Supervisor to guide research of Shri D. Wanswett, Department of Zoology for Ph.D. -	5:3:2:(1)

5:5 - Examination Matters :

(i)	Panel of examinars for M.Phil/Ph.D	5:5:1:(1)

5:6 - Establishment of new Departments/Centres/ Courses.

(i)	Introduction of Astrology in the curriculum of Indian Universities -	5:6:1:(1)
(ii)	Permission to appear in M.A. examinations as private candidates -	5:6:2:(1)
(iii)	Introduction of a course leading to the Degree of Master of Information Technology/Information Management.	5:6:3(1)
(iv)	Introduction of a Course on Numerical Method as applied to Computers to provide computational skill to Post-Graduate students and Research Scholars-Report of the Committee.	5:6:4:(1)
(v)	Opening of new Departments and a Centre under the School of Environmental Sciences -	5:6:5:(1)

5:8 - Others :

(i)	Nomination of a member in the Board of Under-Graduate Studies in Nepali -	5:8:1:(1)
(ii)	Nomination of members of the Board of Under-Graduate Studies in Garo -	5:8:2:(1)
(iii)	Report of the Committee on Membership of Heads of Campus Departments in the Academic Council.	5:8:3:(1)
(iv)	Proposal for establishment of the "Prof. M.K.Khare Memorial Prize"	5:8:4:(1)
(v)	Nomination of a member in the Board of Institute of Self Organising Systems and Bio-Physics -	5:8:5:(1)

Contd..3/-

(vi)	Revival of the one year M.Ed Course -	5:8:6:(1)
(vii)	Correspondence Course leading to B.A. Degree -	5:8:7:(1)

Item No. 6 ADMINISTRATIVE MATTERS :

6:1 - Selection Committee -

(i)	Relaxation in Qualification/Specialisation pertaining to recruitment of teaching positions in Anthropology Department, N.E.H.U. Shillong.	6:1:1:(1)

6:3 - Leave/Deputation -

(i)	Grant of leave with full pay and allowances to Scholars receiving Fulbright Grant -	6:3:1:(1)

Item No. 1 Confirmation of Minutes of the 38th Meeting of the Academic Council held on the 3rd March, 1990.

The Minutes of the 38th Meeting of the Academic Council held on 3rd March, 1990 were circulated amongst the members. No comments were received from the members. The minutes may, therefore, be considered for confirmation.

Item No. 2 REPORTING ITEMS :

(i) Action taken on the Minutes of the 38th Meeting of the Academic Council

(a) The Executive Council in its 68th meeting held on 30th March, 1990 approved the following:

1. No. AC:38:90:03:(iii):(Award of Ph.D. Degree)

2. No:AC:38:90:5:05:(i):(Panel of Examiners Ph.D)

3. No. AC:38:90:5:05:(ii):(Panel of Examiners for M.Phil)

4. No. AC:38:90:5:08:(ii):(Donation of Rs.25,000/-by Mr. Justice V.R.Krishna Iyer,Former Judge,Supreme Court)

5. No. AC:38:90:5:01(ii):(Draft Regulations for the M.A and Diploma Programme in Public Administration).

6. No:AC:38:5:01(i):(Amendment of the Table under Statute 20) - approved with modifications and the matter is being referred again to this meeting of the Academic Council.

7. No. AC:38:90:5:05:(iii):(Amendment of Ordinance OD-6)

8. No. AC:38:90:5:02:(i):(Regulation on the M.Sc(Agril.) Programme)

9. No. AC:38:90:5:06:(i):(Establishment of P.G.Department of Commerce at Shillong).

10. No. AC:38:90:03:(1):(Nomination of NEHU, representative to the Governing Body of affeliated Colleges,of four colleges)- Nomination of representatives in the Champhai College Governing Body was withdrawn as the College has been taken over by the Government of Mizoram.

11.

11. No. AC:38:90:5:07:(i),(ii),(iii),(iv),(v),(vi) and (vii) Affiliation Matters.

(b) Committees have beer constituted on the following cases.

1. No. AC:38:90:4:(i)- Performance Appraisal of College and University Teachers.

2. No. AC:38:90:4:(ii &iii)-Amendment of Ordinance OA-1,OA-2, and OA-3 and Establishment of a Centre for Computer Science.

3. No. AC:38:90:4:(iv & v)- Functioning of the School of Agricultural Sciences and Rural Development.

(c) Action on the following resolution is under process.

1. No. AC:38:90:5:7(viii): Affiliation of NERIST.

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

(i) Nomination of North-Eastern Hill University representatives in the Governing Body of affiliated colleges:

The Vice-Chancellor has nominated University representatives in the Governing Body of affiliated colleges as follows:-

Name of the colleges	University Representative	Term
1. Zirtiri Women's College, Mizoram.	1. Smti.Ramhmingthangi Ralte, Lecturer, Department of English,NEHU, Mizoram Campus,Aizawl.	2 years w.e.f. 9.3.1990.
	2. Shri Thangchungnung, Department of Economics,NEHU, Mizoram Campus,Aizawl.	-Do-
2. Kolasib College,Mizoram	1. Shri Lianzela, Department of Economics, Mizoram Campus,Aizawl.	2 years w.e.f. 17.7.89.
	2. Shri K.C.Boral, Department of English,NEHU, Mizoram Campus,Aizawl.	-Do-

The matter is placed before the Council for ratification.

Item No. 4 - DEFERRED ITEMS:

i) Functioning of the Department of Psychology at Aizawl, Mizoram Campus -

The U.G.C. Visiting Team, which made the assessment of the Department of Psychology at Aizawl, Mizoram Campus in connection with the 7th plan proposed to start Psychological Service Centre for the use of the community. The relevant portion of the observation of the U.G.C. Visiting Committee is reproduced below :

"The department started functioning in October, 1983. It has staff of 2 Readers and one Lecturer. The subject is taught at the under-graduate level only in one college. This is the only department in this subject in all the three campuses. It is difficult to get students as there are no students in the under-graduate classes and next year there would not be any student seeking admission to the department. It is proposed to start Psycholigical Service Centre for the use of the Community."

The department could not get students during the years 1984-85 and 1985-86 and also in the year 1987-88. In the year 1988-89, there was only one student. At the time of establishment of the Department in 1983, there were 32 students and in 1986-87, six students were admitted.

According to the assessment of the U.G.C. Visiting Committee, it would be difficult to get students and probably for that reason the Visiting Team proposed to start Psychological Service Centre. The Department, however, could admit five students in 1989-90 and these students will have to be allowed to continue until they complete their course. It will be difficult, therefore, to close the Department and to start the Psychological Service Centre.

The matter was placed before the Council in its 37th and 38th meetings. But on both the occasions, consideration of the item was deferred. The Council may consider whether the proposal of the U.G.C. Visiting Committee may be kept in abeyance. It may also consider the possibility of having both the Psychological Service Centre and M.A classes side by side.

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Item No. 5. ACADEMIC MATTERS :

5:1- Statutes, Ordinances, Regulations and Rules.

(i) Amendment of the 2nd proviso to Clause 9 of Ordinance OE-5.

Clause on of Ordinance OE-5 provides as follows:

"Subject to the provisions of Statute 27 every teacher confirmed in the service of the University, shall continue in such service untill he/she attains the age of 60 years and thereafter no further extension of service shall be given.

Provided that if the date of superannuation of a teacher falls at any time during the academic session, the teacher shall continue in service and retire on the last day of that academic session or the end of the month which ever is later.

Provided further that no teacher re-employed after attaining age of superannuation shall hold appointment as Head of Department or Dean of Faculty or any other such administrative position except in exceptional cases such persons as appointed on contract from outside the University may hold such position."

The 1st proviso to Statute 6(1) provides as follows:-

"Provided that a Dean on attaining the age of 60 years shall cease to hold office as such."

Thus, it may be seen that the Statute does not provide for any expection provided in the Ordinance. Since the provisions of the Statute prevail over the provisions of the Ordinance and the clause in the Ordinance contravenes the provisions of the Statute, is proposed to amend the 2nd proviso to clause 9 of the Ordinance OE-5 by deleting the words "except in exceptional cases such persons as appointed on contract from outside the University may hold such positions."

The matter is placed before the Council for consideration.

(ii) Amendment of the table under Clause 2 of Statute 20 on Selection Committee for Lecturers of Colleges or Institutions -

The Executive Council considered the recommendations made by the Academic Council in its 38th meeting for amendment of Table under Clause 2 of Statute 20 on Selection Committee for Lecturers of Colleges or Institutions. The Executive Council resolved to amend the Table as indicated at Annexure - 'A'.

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ANNEXURE - A

AMENDMENT OF THE TABLE UNDER CLAUSE 2 OF STATUTE 20 ON SELECTION COMMITTEE FOR LECTURERS OF COLLEGES OR INSTITUTIONS MAINTAINED BY THE UNIVERSITY.

Existing table	Prpposed amendment	Table after amendment
(i) Two persons who are not teachers of the college or Institution concerned nominated by the Executive Council out of a panel of names recommended by the Academic Council for their special knowledge of or interest in subjects with which the teachers will be concerned. (ii) A nominee of the Executive Council to be nominated out of a panel of names recommended by the Academic Council.	The entire table be subtituted by the following : "(i) Head of the Department/the Principal of the College (ii) One Professor not in the service of the University to be nominated by the Vice-Chancellor. (iii) Two persons to be nominated by the Executive Council out of a panel of names recommended by the Academic Council for their special knowledge of or interest in the subject with which the Reader or Lecturer will be concerned."	(i) Head of the Department/the Principal of the college. (ii) One Prof. not in the service of the University to be nominated by the Vice-Chancellor. (iii) Two persons to be nominated by the Executive Council out of a panel of names recommended by the Academic Council for their special knowledge of or interest in the subject with which the Reader or Lecturer will be concerned.

5:1:3:(1)

Revised Ordinances on Ph.D
and M.Phil Programmes -

The Academic Council vide its resolution No.AC:37:89:5:01(viii) adopted in its 37th meeting resolved that the Committee may be constituted to scrutinise the draft Ordinances on Ph.D and M.Phil Programmes drawn up in the Joint Meeting of the two Boards of Research Studies. The Committee constituted for the purpose submitted its report together with the revised Ordinances on Ph.D. and M.Phil Programmes. The report of the Committee may be seen at Annexure - A. The revised Ordinances on Ph.D and M.Phil Programmes may be seen at Annexure - B and C respectively.

The matter is placed for consideration of the Council.

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5:1:3:(2)

Annexure - A

NORTH-EASTERN HILL UNIVERSITY
SHILLONG - 7930 01

F.No.12-3/AC/CONF/89(Part-II)/ The 16th June, 1990.

To

The Vice-Chancellor,
N.E.H.U., Shillong.

Sir,

I am submitting herewith the revised Ordinances on Ph.D. Programme and M.Phil Programme as prepared by the Committee constituted in accordance with the resolution No. AC:37:89:5:01(viii) of the Academic Council. The Committee could finalise revision of the two Ordinances after a number of sittings. The revised Ordinances will imply amendments of the two existing Ordinances, that is, OA-6 on Boards of Research Studies, OA-7 on Boards of Schools and the existing two Ordinances - OC-4 on Ph.D. Programme and OC-5 on M.Phil Programme will have to be repealed.

Some of the salient features of the two revised Ordinance are indicated belo :-

1. Candidates for Ph.D. degree will have to register only once. Under the existing Ordinance, candidates are required to get themselves registered twice - - (i) provisional registration and (ii) final registration.

2. A candidate once registered can complete his research work within a period of five years and an extension of another two years could be granted, making a total of seven years. Under the existing Ordinance a candidate is given four years' time with a provision for extension of another one year.

3. The cases of registration for M.Phil/Ph.D will be approved by the respective School Boards and the cases need not go to the Board of Research Studies anymore.

4. The Ph.D. degree will continue to be awarded by the Executive Council on the recommendations of the Academic Council and the School Board. Recommendation by the Board of Research Studies will no longer be required. The M.Phil degree will be awarded by the Academic Council on the recommendation of the School Board concerned.

5. The categories of candidates for eligibility for admission to the Ph.D. Programme have been revised.

Under the existing Ordinance OA-7 on Boards of Schools, the School Boards are not empowered to approve courses of study for research degrees and as such the Ordinance will have to be amended empowering School Boards with the powers of the BRS/AC provided under the existing Ordinance. The Ordinance OA-6 on Boards of Research Studies will have to be amended as its powers for approval of courses of study for research degrees will be transferred to the School Boards. The power of the Boards of Research Studies to approve award of research degrees will also be transferred to the School Boards.

Boards of Research Studies : The existing Boards of Research Studies, namely, Board of Research Studies for Sciences and the Board of Research Studies for Humanities and Social Sciences may continue to perform the functions indicated below.

This is felt necessary as in the National Education Policy (Programme of Action) it is laid down that "Faculty and University level research Committees should be set up to promote (particularly inter-disciplinary research), to co-ordinate, keep a check on quality, and enlarge linkages with other relevant agencies." "A suitably high powered committee (with powers like the Academic Council) at the level of the whole University should be formed to develop linkages, co-ordinate work, remove bottlenecks and supervise quality and relevance of research undertaken. There could be a Board of Research, which would have a broad-based membership and would

join together the system of higher educational institutions in research with other agencies, industries, governments, departments etc."

Functions of the Boards of Research Studies :-

(i) To prepare a perspective of research and major thrust areas for research, if any, in the disciplines under its purview;

(ii) To review the current status of research in each Department and critically examine the progress thereof from time to time;

(iii) To indicate the priority areas in research in the Departments particularly with reference to the role and responsibility of the University under Section 4 of the North-Eastern Hill University Act, 1973, taking into account the facilities available in the University, the major thrust areas accepted for the concerned Departments and individual interests of the member of the faculty;

(iv) To perform such other functions as may be assigned to it by the Academic Council.

Yours faithfully,

(R.G. Michael)
Chairman of the
Committee.

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5.1.3(5)

Revised Ordinance on the Doctor of Philosophy Programme (Section 26(1) (b) of the NEHU Act,1973)

ANNEXURE-'B'

Addmission and Eligibility

1(1) The admission to the Ph.D.Programme willbe done preferably in the beginning of each semester. The candidates with atleast 55% marks in their Master's degree in the subject concerned/allied subject/cognate subject will be required to appear in a written test and/ or an interview to be conducted by the Department. The candidate will be selected according to merit determined after giving suitable weightage to the following :

(i) Percentage in Master's Degree or equivalent atleast 50% weightage)

(ii) Performance in the test and/or performance in the interview .

(2) Subject to availability of seats, candidates belonging to the following categories and possessing a Master's Degree may also be admitted on the recommendation of the Department.

(i) Candidates qualifying in any of the National Level tests recognised by U.G.C.

(ii) Students securing average 'A' grade of 60% and above in the course work of M.Phil Programme of this University.

(iii) Recognised teachers of NEHU and colleges affiliated to this University possessing Master's Degree with an experience of atleast one year of uninterrupted service.

(iv) Persons with M.Phil Degree.from this or any other recognised University.

(v) Persons who have completed atleast one year of research in a research laboratory/institute.

(vi) Persons having Master's degree in the relevant or allied subject and atleast seven years experience of administration, management and specialised knowledge in the proposed field of research to the satisfaction of the University Department concerned.

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(vii) Persons who have completed atleast one year of research in a University/Institution after his registration, provisional or other-wise under the supervision of a teacher, who may have since joined the University.

Supervisor

2(1) The Department shall appoint a supervisor. The supervisor shall be a Professor, Reader or a Lecturer with Ph.D. and with atleast three years experience of research/teaching experience and should be a teacher of this University.

(2) Provided that the Department may, with the approval of the School Board, appoint one or two joint supervisors in addition to the Supervisor, in which case the Supervisor shall be in overall charge of the supervision. A joint supervisor need not necessarily be a teacher of the University but should be a person recognised as per the University Regulations.

Registration

3. The application for registration for Ph.D. shall be made to the Department concerned in the proforma as may be prescribed by the University along with a detailed research proposal including the topic, scope of its study, tentative hypothesis, research methodology including sampling and design, where necessary. The Department shall forward the research proposal to the School Board alongwith the comments of two experts selected from the panels submitted by the Supervisor. The date on which the School Board accepts the proposal for registration shall be the date of registration of the scholar for the purposes of this Ordinance.

Duration

4(1) No scholar shall be permitted to submit the thesis for the Ph.D. degree, unless he has pursued research at the University for not less than two years from the date on which his candidature has been registered.

Contd/.....3/-

4(2) The name of a scholar shall be removed from the rolls of the University if he fails to submit his thesis within five years of the date of his registration.

Provided in exceptional circumstances, the School Board on the recommendation of the Department may extend the Registration of the candidate for a maximum period of two more years. If the candidate fails to submit his thesis within the extended period his registration shall lapse automatically.

Review of Progress 5. The Supervisor will regularly monitor the progress of the research work of the candidate. If the Supervisor finds that the Progress of the work is not satisfactory, a report to that effect shall be submitted to the School Board through the Department for appropriate action.

Submission of thesis 6:(1) When the Supervisor is of the opinion that the thesis is in the final stage of completion, say, about twelve weeks before the likely date of submission, the scholar shall be required to give a pre-submission seminar on his research findings. This seminar will be given in the presence of a Committee of atleast three faculty members, of which one will be from outside the Department. The candidate may incorporate the recommendations of the Committee in this thesis.

6(2) A candidate shall submit his thesis for the Ph.D. in which he may incorporate the text of any work which he may have published on the subject. But he shall not submit as his thesis any work for which a Degree has been conferred on him by this or any other University.

Contd/.....4/-

5/1:4(8)

6(3) The thesis shall satisfy the following conditions

(a) It must be a piece of research work characterised either by discovery of new facts or by fresh interpretation of facts or theories. In either case it should evince the candidate's capacity for critical examination, original thinking and judgement. It shall also be satisfactory so far as its literary presentation is concerned.

(b) The candidate shall indicate how far the thesis embodies the results of his own research or observations and on what respects his investigations appear to him to advance the study of the subject of the thesis.

6(4) The thesis shall include a certificate from the candidate and his Supervisor that the thesis incorporates the students bonafide researches and that these have not been submitted for award of any degree in this or any other University or Institute of learning.

6(5) The application for submission of the sis shall be countersigned by the Head of the concerned Department. The Head of the Department will then forward the thesis together with the observations of the committee for pre-submission seminar to the Controller of Examinations for further necessary action.

Contd/..../-

6:(6) In the case of a teacher or researcher in a Research Institute or candidate who is not pursuing research on a fulltime basis, the thesis shall be accepted only:

(i) If the candidate has stayed in the University for at least 30 days in each year including vacation and participated in such academic programmes as may be decided by the Department and the total period of such stay in the University before submission of thesis shall not be less than six months.

(ii) On the production of periodical certificates from his Supervisor 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 field of specialisation.

Panel of Examiners

7(1) A supervisor shall submit a panel of six names of examiners in the prescribed proforma to the School Board through the Head of the Department for approval and submission to the Controller of Examinations. The School Board shall also submit a copy of the panel of examiners to the Chairman of the Academic Council.

Evaluation

8(1) The thesis submitted by the candidate for the Ph.D. Degree shall be examined by at least three examiners appointed by the Executive Council on the recommendation of the Academic Council. Two of the examiners shall be those who are not on the staff of the University, while the third examiner shall be the Supervisor.

Provided that the Supervisor shall not serve as an examiner where a candidate is a wife or husband, son or daughter, brother or sister.

Contd/....6/-

Examiners Report and Viva-Voce

9:(1) Each examiner shall, after examining the thesis submitted by the candidate for the award of the Ph.D. Degree, submit a report in a prescribed proforma to the University containing a clear recommendation that in his opinion (a) the thesis is recommended for the award of Ph.D. Degree (b) thesis should be modified/revised; or (c) the thesis may be rejected. The examiners may, however, recommend a Viva-Voce examination for some clarifications, if necessary.

9:(2) If one of the examiners recommends that a Viva-Voce examination should be held, a Board may be constituted by the Vice-Chancellor for holding the Viva-Voce examination consisting of the Supervisor, who will also be the Convener, and atleast one of the external examiners. This examination shall be held within a period of six months of the receipt of the reports from the external examiners. The Convener will submit a report of Viva-Voce examination to the Controller of Examinations.

9:(3) In case an examiner suggests some modifications/improvements of the thesis on certain specific lines or points out certain lacunae in the thesis, the candidate should be asked to reply or modify the thesis as suggested and resubmit the thesis to be forwarded to the concerned examiner within a period of one year from the date of intimation of the requirement of modification by the University. If the Candidate decides to reply to the points/observations raised by an examiner and if the reply is neither accepted by the examiner nor retrieved by the candidate the matter shall be referred to a Committee of experts to be appointed by the Vice-Chancellor.

9:(4) A thesis shall be accepted for the award of the Degree of Doctor of Philosophy on the unanimous recommendation of the examiners.

If both the external examiners reject the thesis, no degree will be awarded. If there is a difference of opinion between the external examiners it should be referred to a fourth examiner to be nominated by the Vice-Chancellor out of the panel already approved by the Academic Council and the Executive Council. The opinion of the 4th Examiner shall be final.

Re-Submission of thesis

10:(1) A candidate whose thesis has been referred back for revision shall re-submit it for the award of the Ph.D. Degree within one year of the intimation of the decision of the University.

10:(2) A thesis which has been re-submitted shall be examined by the same external examiner(s). In case the examiner(s) is/are unwilling to act as such, another examiner(s) may be appointed by the Vice-Chancellor from the approved panel of examiners.

10:(3) No candidate shall be permitted to re-submit his thesis for the award of the Ph.D. Degree more than once.

Award of Degree

10. Based on the reports of the examiners and the viva-voce the School Board shall recommend to the Executive Council, through the Academic Council for the award of the degree or otherwise.

Removal of difficulties

11: Notwithstanding anything contained in the above Ordinance, the Vice-Chancellor may take such measures as may be necessary for removal of difficulties.

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5:1:3(12)

ANNEXURE-'C'

ON THE MASTER OF PHILOSOPHY PROGRAMME

Objective

1. The University shall organise an M.Phil programme with the objective of providing deeper insights in the relevant subject, broadening horizons, emphasising the unity of all knowledge normally divided in numerous disciplines, equipping scholars with necessary tools and practical experience for further reserches in different fields. M.Phil shall be the first research degree of the University.

Structure

2. The M.Phil programme shall comprise two parts, viz., (a) course work, and (b) dissertation/project work, Both the parts shall have equal weightage.

Course work

3:(1) The course work shall consist of three courses approved by the Department.

3:(2) The M.Phil scholars will be required to attend and participate in seminars which will be organised by the Department for the purpose of discussing new results, developments in the subject and /or interpretation of data. Each scholar shall be required to take at least two seminars one in the early phase of his dissertation/ project work and the other just before concluding his work.

Admission

4:(1) The admission to M.Phil programme will be done preferably in the beginning of a semester.

4:(2) The candidates with at least 55% (50% in the case of candidates belonging to SC/ST) marks in their Master's Degree in the subject concerned will be required to appear in a written test and/or an interview to be conducted by the Department. The candidates will be selected according to merit determined after giving weightage to the following:
(i) percentage in the Master's Degree or equivalent (atleast 50% weightage) (ii) performance in the test and /or interview.

The admission will be finalised on the basis of the number of seats available and the performance of the candidates. A candidate will be assigned a supervisor by the Department at the time of admission.

Contd/...2/-

An extract of the [illegible] held on 16th November, [illegible]

(iv) Constitution [illegible] in the [illegible] [illegible]

Res.EC:70;90;6:6(iv) - The Council resolved [illegible] a separate Selection committee , as indicated below, different from the selection [illegible] provided in the Statute may be constituted [illegible] the candidates to be considered in this case will be [illegible] internal.

(i) Vice Chancellor Chairman

(ii) Dean of the School concerned/Principal of a College.

(iii) Head of the Department concerned

(iv) Not more than 3 (three) [illegible] of the Department concerned.

The Council further [illegible] for [illegible] [illegible], which had been approved [illegible] Council [illegible] Executive Council, may be [illegible] of [illegible] ment and Placement of Lecturers [illegible]/ [illegible] early action may be taken to implement [illegible]

An extract of the 79th [illegible] held on 10th November, 199[illegible].

(iv) Constitution [illegible] for Placement in the Lecturer [illegible] ation made.

No. EC:79;90;6:6(iv) -- The Council resolved [illegible] a seperate Selection Committee, as indicated below, different from the Selection Committee provided in the Statute may be constituted [illegible] the candidates to be considered in this case will be all internal.

(i) Vice Chancellor — Chairman

(ii) Dean of the School concerned/principal of a College.

(iii) Head of the Department concerned.

(iv) Not more than 3 (three) [illegible] of the Department concerned.

The Council further [illegible] for [illegible] Appraisal, which had been approved by the [illegible] Council and the Executive Council, may be used for [illegible] of [illegible] ment and Placement of Lecturers [illegible]/Selection [illegible] early action may be taken to implement [illegible]

PART -II

5:6 - Establishment of new Departments/Centres/ Courses -

(vi) Three-year integrated degree programme -

No:AC:39:90:5:06:(vi): The Council considered the report of the Committee as well as the proposal submitted by the faculty members of the Departments of Geography, Economics, Anthropology and Mathematics. It was pointed out that the basic structure is always the same in all the Universities and bifurcation of the courses right from the first year will put the colleges to difficulties in providing infrastructure. The Council, therefore, RESOLVED that the Vice-Chancellor may re-constitute the Committee enlarging it by drawing members from both the groups and also nominating other members to examine the issue further. The Committee may be headed by the Pro Vice-Chancellor, Shillong.

(vii) Starting of Honours courses by the Department of English at Kohima -

No:AC:39:90:5:06:(vii): The Council considered the proposal for starting Honours courses in the Department of English at Kohima but found that it would not be practicable. The item was, therefore, withdrawn.

5:8 - Others -

(viii) Admission into first year Pre-University (Agri.) course during 1990-91 session -

No:39:90:5:08:(viii): The Council was apprised that the matter was considered by the School Board of Agricultural Sciences and Rural Development and it decided to stop admission to P.U. Agri. course commencing from the Academic session of 1990-91 and the Council RESOLVED to ratify the decision of the School Board for want of infrastructural facilities.

Item No. 6 ADMINISTRATIVE MATTERS :

6:6 Service Condition/Financial & Other Benefits -

(i) Format for Performance Appraisal of College and University Teachers - Recommendations of the Committee -

No:AC:39:90:6:06:(i): The Council RESOLVED to approve the format for Performance Appraisal of College and University Teachers, as amended and recommended by the Committee constituted for the purpose.

Contd/.../-

The National Policy on Education, envisaged the development of a system of Appraisal of Performance of teachers which is participation and data based. Accordingly the format has been finalised to serve as a system of evaluation of teachers to help them in their career development and for self- improvement.

PART - III

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

(ii) Nomination of North-Eastern Hill University representatives in the Governing Body of affiliated college -

No:AC:39:90:3:02:(i): The Council RESOLVED to ratify the nominations of NEHU representatives made by the Vice-Chancellor for the Governing Body of the Hnathial College as indicated below :

Name of College	University Representative	Term
1. Hnathial College, Hnathial, Mizoram.	1. Dr. R.S. Wangu, Head, Department of Education, NEHU, Mizoram Campus, Aizawl.	for 2 years w.e.f. 31.1.1990
	2. Dr. R.N. Prasad, Reader, Department of Public Administration, NEHU, Mizoram Campus, Aizawl.	-Do-

Item No. 5 ACADEMIC MATTERS :

5:2 Syllabus

(v) Syllabus on "Economic Planning in Theory and Practice" for the III Semester in M.A(Economics) -

No:AC:39:90:5:02:(v): The Council considered the recommendation of the School Board of Social Sciences for introduction of a course entitled "Economic Planning in Theory and Practice" in the III Semester of the M.A Economics Programme, and noted that 56 books were recommended for one course but the lists of text-books, reference books and suggested books for reading were not indicated. The Council, therefore, RESOLVED to refer back the syllabus to the Department for re-consideration.

Contd/.../-

6:6:1:(1)

Item No. 6 ADMINISTRATIVE MATTERS :

6:6 Service Condition/Financial & Other Benefits

(i) Format for Performance Appraisal of College and University Teachers - Recommendations of the Committee.

In pursuance of resolution No. AC:38:90:04:(i) adopted at the 38th Academic Council meeting a Committee was constituted to examine the University Grants Commission format for Performance Appraisal of College and University Teachers.

The Committee has submitted its report and the same is placed at Annexure-'A'. The format as amended and recommended by the Committee is placed at Annexure-'B'.

The matter is placed before the Council for consideration.

6.6.7(1)

Minutes of the Committee to examine the format for performance appraisal of College and University teachers

. . . . .

The Committee was constituted under Notification No.AC:38-4/Conf/90-92 dated 21.4.90 with the following members :

Prof. M.Miri, Deptt. of Philosophy . . Convener
Prof. H. Junjappa, Deptt. of Chemistry . Member
Prof. A.N. Rai, Deptt. of Bio-Chemistry . "
Prof. R.S.Lyngdoh, Deptt.of Khasi . . "
Prof. D.K.Ratha, Deptt.of Zoology . . "
Prof. B.Pakem, Deptt.of Pol.SC . . "
Shri H.W.T.Syiem, Officer on Special Duty. . . "

The Committee met on two occasions to examine the format circulated by the UGC for performance appraisal for College and University teachers. In the first meeting held on 8.5.90 the following members were present:

Prof. M. Miri - Convener
Prof. A.N. Rai - Member
Prof. D.K.Ratha "
Shri H.W.T.Syiem "

The second meeting was held on 15.6.90 in which the following members were present :

Prof. M. Miri - Convenor
Prof. A.N. Rai - Member
Prof. B. Pakem "
Shri H.W.T.Syiem "

The format of the performance appraisal with other enclosures was examined at length. The Committee recommended that the format may be in one consolidated report. Appendix 2 and appendix 3 were therefore clubbed together.However, the format was then divided into two parts. Further modifications were also made to the format given by the U.G.C.

The amended performance appraisal report as recommended by the Committee is submitted for consideration of the Academic Council.

Sd/-
(M. Miri)
Convener.

.....

PART I

Annexure – 'B'

PERFORMANCE APPRAISAL REPORT -I *
SELF APPRAISAL

A. General information

(a) Name Ph.No.

(b) Address (Residential)

(c) Designation

(d) Department

(e) Date of Birth

(f) Ages of Specialization

(g) Date of Appointment

(i) in the Institution

(ii) in the Present Post

(h) Honours Conferred.

B. Research Experience & Training

Research Stage	Title of Work/Theses	University where the work was carried out
M.Phil. or equavilent		
Ph.D.		
Post Ph.D. Degrees		
Post-Doctoral Research.		
Publications (give a list separately) along with off-print/xerox copy of each paper.		
Research Guidance (give names of students guided successfully) for M.Phil/Ph.D		
Training (please specify)		

C. Research Projects

Title of the Project	Name of the Funding Agency	Duration	Remarks

* For teachers already in employment at the time of introduction of the scheme and for new entrants at the time of joining of the institution.

Contd../-

D. Seminars, Conferences, Symposia Workshops etc., in which participated organised

Name of the Seminar/ Conference/Symposia Workshop etc.	Name of the Sponsoring Agency	Place and Date	Nature of Participa Organisati

E. Teaching Experience

Courses Taught	Name of University/ College/Institution	Duration how spent (No. of Tutorials etc) on Lectures/Tutorials/ Practicals/Ph.D/M.Phil Supervision
i) U.G.(B.A./B.Sc., etc. pass) (B.A./B.Sc. etc., Hons.)		
ii) PG (M.A./M.Sc., etc.)		
iii) M.Phil/ Ph.D		
iv) Any other		

Total Teaching Experience (No. of years)

(a) Under-graduate (Pass) :_____ (Mention the Academic year)

(b) Under-graduate (Hons.):_____ "

(c) Post-graduate :_____ "

F. Comments Innovation Contribution to Teaching &Comments

(a) Design of curriculum :

(b) Teaching methods/in Remedial Teaching/Student Counselling

(c) Laboratory experiments:

(d) Evaluation methods:

(e) Preparation of resource material including books, reading materials, laboratory manuals etc.

(f) Any other

Contd../

G. Participation in Corporate Life:

Please give a short account of your contribution to :

(a) College/University/Institution

(b) Co-curricular Activities

(c) Enrichment of Campus Life (sports, games, cultural activities)

(d) Students Welfare and Discipline

(e) Membership/Participation developmental bodies

H. (a) Membership of Professional Bodies, Societies etc.

(b) Editorship of Journals or membership of Editorial Committees/Boards

I. Administrative Work

J. Any other information.

6.6.1(b)

PART -II

PERFORMANCE APPRISAL REPORT-II
SELF APPRAISAL

A. Teaching

(a) Regularity and Punctuality

(b) Details of participation in the following:

(i) University Evaluation

(ii) Internal Evaluation

(iii) Paper setting

(iv) Assessment of Home assignments

(v) Conduct of Examinations

(vi) Evaluation of Dissertation etc.

B. Improvement of Professional Competence.

(a) Details regarding refresher courses/orientation attended, participation in summer schools, workshops, seminars, symposis etc. including open university courses/M.Phil/Ph.D.

C. Research Contribution

a) Number of students(M.Phil/Ph.D)

At the begining of the year	Registered during the year	Completed during the year
M.Phil		
Ph.D.		

b) No. of research papers published(please enclose list)

c) Patents taken, if any, give a brief description.

D. Assessment

(a) Steps taken by you for the evaluation of the course programme taught.

E. General Data

State brief assessment of your performance indicating (a) achievements,(b) difficulties faced and (c) suggestions for improvement.

Signature of the Teacher

F. *Verification of Factual data.

A. General Information

B. Teaching

C. Details of Innovations/Contribution in Teaching, during the year.

D. Improvement of Professional Competence

E. Research contributions

F. Extension Work/Community Service

G. Participation in Corporate Life

Signature of the Person authorised

* By a person to be nominated by Principal/Vice-Chancellor.

Name of the Candidate	Department
6. Shri Wary,	Bio-Chemistry
7. Shri H.Lallungmuana,	Khasi
8. Shri J.S.Shangpliang	Khasi

Item No. 4 DEFERRED ITEMS :

(i) Performance appraisal of college and University teachers -

AC:38:90:04 (i) : The Council considered the format adopted by the University Grants Commission for performance appraisal of teachers.

It was clarified that performance appraisal is an open, free and frank discussion between the appraiser and the appraised for improvement of performance of the latter. This seems to be the intention of the University Grants Commission. However, it was felt that some portions of the format required modification for a more useful appraisal to be made. The consensus opinion was also that the discussions on the Report should be made by all faculty members of the Department/Centre for a fair and objective appraisal and report.

It was RESOLVED that the Committee may be constituted to go into the whole matter. Suggestions may be sent to the Committee for revision of the format.

(ii) Amendment of Ordinance OA-1, OA-2 and OA-3 relating to the Establishment of School of Studies, Departments and Centres of Studies -

AC:38:90:04 (ii): The Council RESOLVED that a Committee may be constituted to go through the proposed amendments and also to examine the assignment of Departments and Centres to Schools of Studies provided under Ordinance OA-4 and the matter may be placed in the next meeting of the Council.

Item No.4- DEFERRED ITEM

(i) Performance Appraisal of College and University teachers -

The National Policy on Education, 1986 envisaged the development of system of appraisal of performance of teachers. The Mehrotra Committee also in the report on revision of pay scales of teachers in Universities and Colleges emphasised the need for developing a satisfactory system of evaluation of University Grants Commission appointed a Task Force to prepare the guidelines for introduction of a system of Performance Appraisal of teachers. The system developed by the Task Force and the format designed by it have been adopted by the University Grants Commission in its meeting held on the 4th November, 1988. The Chairman and the Secretary, U.G.C. forwarded the papers vide their D.O. letter No.F.1-4/87(PS-Cell) dated the 12th November, 1988 and No.F.1-4/87(PS-Cell)dated the 15th December, 1988 respectively for perusal and adoption by the University. The details may be seen at Annexure- "A".

The matter may be placed for consideration of the Council in the 31st meeting but was deferred

The case is put up again as a deferred item.

A... - A

(1)

0/4/1(2)

Prof. S. K. KHANNA
Ph.D. (Hons.), FNI, FNASc., FNAE

SECRETARY
सचिव

टेलेक्स TELEX : 31-66019
तार GRAMS : यूनिग्रान्ट्स UNIGRANTS
दूरभाष PHONES : का. OFF. 3318668
निवास RES. 38 11 68

विश्वविद्यालय अनुदान आयोग
बहादुरशाह ज़फ़र मार्ग
नई दिल्ली-110 002

UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

D.O.No.F. 1-4/87(PS.Cell) December 15, 1988

Dear

The National Policy on Education 1986 envisaged the development of a system of appraisal of performance/teachers which is Open participatory and data based. /of

Keeping this in view the UGC appointed a Task Force with participation of All India Federation of University and College Teachers Organisation (AIFUCTO) for this purpose. The guidelines based on the report of the Task Force were considered and adopted by the Commission in its meeting on 4th November, 1988 and these are sent herewith for your perusal and adoption.

With regards,

Yours sincerely,

(S.K.KHANNA)

The Dean,
College Development Council,
North Eastern Hill University,
PW Lower Lachumiere,
Shillong 793 001.

4:41(5)

Yash Pal
CHAIRMAN

PHONE : 331-7143
GRAMS : UNIGRANTS
TELEX : 3166311
विश्वविद्यालय अनुदान आयोग
बहादुरशाह ज़फ़र मार्ग
नई दिल्ली-११०००२
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI - 110 002

DO.No.F. 1-6/87(PS Cell) November 12, 1988

Dear Vice-Chancellor/Principal,

In discussions following the enunciation of the National Education Policy 1986, and revision of teachers' pay-scale, it was announced that a system of Performance Appraisal of College and University teachers would be evolved in discussion with teachers' organisations. The stipulation was that the system should be open, participatory and data-based.

The Commission, therefore, set up a task force, with participation of AIFUCTO (All India Federation of University and College Teachers' Organisations), for this purpose. The guidelines based on the report of this task force prepared after a number of meetings were considered and adopted by the Commission in its meeting on 4th November 1988; these are sent herewith for your perusal and adoption.

With regards,

Yours sincerely,
Yash Pal
(Yash Pal)

6:4:1(4)

Report of the Task Force on Performance Appraisal of Teachers

Considered and as adopted by the Commission in its meeting held on November 4, 1968.

UNIVERSITY GRANTS COMMISSION
NEW DELHI
1968

Report of the Task Force on Performance Appraisal of Teachers

The National Policy on Education, 1986 envisages the development of a system of ... sal of performance of teachers which is open participatory and databased. The Malhotra Committee Report on rationalisation of pay scales of teachers in Universities and colleges has emphasised the need for developing a satisfactory system of evaluation of teachers which will help their career development by ensuring feed back for self improvement.

Keeping the above recommendations in view, the UGC appointed a Task Force to prepare guidelines for introducing a system of performance appraisal of teachers in Universities and colleges. The list of the members of the Task Force is given in Appendix-I.

The Task Force held four meetings in August, 1987, March, April and September, 1988. After very careful and detailed deliberations on all issues, the Task Force developed a system of evaluation of the performance of teachers. The Task Force has also designed formats for the guidance of the institutions in this regard. The formats designed by the Task Force are presented in Appendices II & III. The Task Force recognises that at present no systematic evaluation of performance of teachers is in vogue in a large number of institutions. It is, therefore, important that introduction of a system of evaluation would need the involvement of the teacher community and the institutions.

In this context, the Task Force appreciates the efforts made by the AIFUCTO in organising regional seminars to evolve appropriate methods of performance evaluation of teachers. The Task Force

hopes that similar initiatives will be taken by universities, colleges and other organisations. The Task Force recognises that after some experience is gained, it would be possible to improve the methodology.

The Task Force is of the view that the record of evaluation made by the teachers and verified by the institutions will be an open document which should be the basis for recognition of excellence in performance as well as for further improving the overall efficiency of the system.

Appendix I

List of Members of the Task Force on Performance Appraisal of the Teachers.

1. Smt. Kiran [illegible]
10, [illegible]
New Delhi.

2. Prof. C. Padmanabhan
Department of Bio-Chemistry
Indian Institute of Science
Bangalore.

3. Prof. [illegible]
[illegible]
[illegible]
[illegible]

4. Dr. [illegible]
Vice-Chancellor
Madras University
Madras-600005.

5. Shri Devendra Kumar
Vice-Chancellor
Gandhigram Rural Institute
Gandhigram
Madras – 624302.

6. Prof. Irfan Habib
Chairman
Indian Council of Historical Research
35, Ferozshah Road
New Delhi.

7. Dr. Sudhir Roy
President
AIFUCTO
[illegible]
P.O. & Distt. Burdwan.
(West Bengal)

8. Dr. Mrinmoy Bhattacharya
General Secretary
AIFUCTO
15, Brindaban Mallik Lane
Calcutta – 700 009.

9. Prof. P.N. Madan
AIFUCTO, [illegible]
8/76, [illegible] Block Patna
Bihar.

10. Shah [illegible]
Secretary, AIFUCTO
[illegible], Vijay Nagar
Naran Pura
Ahmedabad – 380 013.

11. Prof. R. Parthasarathy
Vice-President
AIFUCTO
12, West Perumal Maistry Street
Madurai – 625001.
Tamil Nadu

12. Sister K.M. [illegible]
C/O Fr. Joseph [illegible]
St. Joseph's College
Torpa
Ranchi Distt.
Pin 835227.
Bihar.

13. Sh. J.D. Gupta
Joint Secretary
Ministry of Human Resource Development
Department of Education
New Delhi.

14. Prof. S.K. Khanna
Secretary
UGC.

Bkp.

Appendix II

PERFORMANCE APPRAISAL REPORT-I *

SELF APPRAISAL

A. General Information

(a) Name

(b) Address (Residential) Ph.No.

(c) Designation

(d) Department

(e) Date of Birth

(f) Area of Specialization

B. Academic Qualifications

Exam. Passed	Board/University	Subjects	Year	Division/Grade Merit etc.
High School				
Higher Secondary or Pre-degree				
Bachelor's degree(s)				
Master's degree(s)				
Research degree(s)				
Others (Diplomas/ Certificates etc.)				

* teachers already in employment at the time of introduction of the scheme and for new entrants at the time of joining of the institution.

C. Research Experience & Training

Research Stage	Title of work/Thesis	University where the work was carried out
M.Phil. or equivalent		
Ph.D.		
Post-Doctoral		

Publications (give a list separately)

Research Guidance (give names of students guided successfully)

Training (please specify)

D. Research Projects carried out

Title of the Project	Name of the Funding Agency	Duration	Remarks

E. Seminars, Conferences, Symposia Workshops etc. attended

Name of the Seminar/ Conference/Symposium Workshop, etc.	Name of the Sponsoring Agency	Place and Date

F. Teaching Experience

Courses Taught	Name of University/ College/Institution	Duration
i) B.Sc.(B.A./B.Sc. etc. Pass) (B.A./B.Sc.etc., Hons.)		
ii) PG (M.A./M.Sc., etc.)		
iii) M.Phil.		
iv) Any other		

Total Teaching Experience

(a) Under-graduate (Pass) :

(b) Under-graduate (Hons.) :

(c) Post-graduate :

G. Innovations/Contributions in Teaching

(a) Design of curriculum;

(b) Teaching methods

(c) Laboratory experiments;

(d) Evaluation methods;

(e) Preparation of resource material including books, reading materials, laboratory manuals etc.

(f) Remedial Teaching/Student Counselling (academic)

(g) Any other

H. Extension Work/Community Service

(a) Please give a short account of your contribution

i) Community work such as values of National integration, secularism, democracy, socialism, humanism, peace, scientific temper, flood or, drought relief, small family norms etc.

ii) National Literacy Mission

(b) Positions held/Leadership role played in organizations linked with Extension Work and National Service Scheme (NSS), or NCC or any other similar activity.

I. Participation in Corporate Life:

Please give a short account of your contribution to:

(a) College/University/Institution

(b) Co-curricular Activities

(c) Enrichment of Campus Life (Social, sports, games, cultural activities)

(d) Students Welfare and Discipline

(e) Membership/Participation in Bodies/Committees on Education and National Development.

(f) Professional Organization of Teachers.

J. (a) Membership of Professional Bodies, Societies etc.

(b) Editorship of Journals

K. Any other information.

(Signature of the Teacher)

(f) Remedial Teaching/Student counselling (academic)

(g) Any other

D. Improvements of Professional Competence

(a) Details regarding refresher courses/orientation attended, participation in summer schools, workshops, seminars, symposia etc. including open university courses/M.Phil., Ph.D.

E. Research activities

a) Number of students (M.Phil/Ph.D.)

	At the beginning of the year.	Registered during the year	Completed during the year.
M.Phil.			
Ph.D.			

(b) No.of research papers published (please enclose list)

(c) Research Projects

Title of the project	Name of the funding agency	Duration

(d) Details of Seminars, Conferences, Symposia organised

(e) Patents taken, if any, give a brief description.

(f) Membership of Professional Bodies, Editorship of Journals etc.

F. Extension Work/Community Service

(a) Please give a short account of your contribution to:

i) Community work such as values of National integration, secularism, democracy, socialism, humanism, peace, scientific temper, flood or drought relief, small family norms etc.

ii) National Literacy Mission

(b) Positions held/Leadership role played in organizations linked with Extension Work and National Service Scheme (NSS), or NCC or any other similar activity.

G. Participation in Corporate Life

Please give a short account of your contribution to:

(a) College/University/Institution

(b) Co-Curricular activities

(c) Enrichment of Campus Life (hostels, sports, games, cultural activities).

(d) Students Welfare and Discipline

(e) Membership/Participation in Bodies/Committees on Education and Educational Development.

(f) Professional Organizations of Teachers.

H. Assessment

(a) Steps taken by you for the evaluation of the course programme taught

I. General Data

State brief assessment of your performance indicating (a) achievements, (b) difficulties faced and (c) suggestions for improvement.

Signature of the Teacher

J. *Verification of factual data.

A. General Information

B. Teaching

C. Details of Innovations/Contribution in Teaching, during the year

D. Improvement of Professional Competence

E. Research contributions

F. Extension Work/Community Service

G. Participation in Corporate Life

Signature of the Person authorised*

* By a person to be nominated by Principal/Vice-Chancellor

0:4:1(13)

UGC (P) 80/1988
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November 1988

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4:(3) A candidate who is awarded a fellowship on the basis of a National level examination recognised by University Grants Commission may be admitted to the M.Phil Programme directly without being required to appear at an internal test provided under this Ordinance.

4:(4) All teachers working in the constituent and affiliated colleges of the University and recognised as University teachers shall be eligible for admission to M.Phil course. The teachers working in colleges under the jurisdiction of other Universities may also be admitted subject to availability of seats and their satisfying such conditions as may be laid down by the concerned School Board, preference being given to those working in the North Eastern Region.

Registration

5. A candidate after the admission shall apply through the Department for registration along with the Synopsis which should be approved by the School Board. The date of admission shall be the effective date of registration.

Duration

6:(1) A scholar should normally complete his M.Phil in not more than three semesters. An extension of only one semester may be allowed in suitable cases on the recommendation of the supervisor submitted to the Department. In the case of college teachers under-taking M.Phil programme one extra semester time may be given for completing the programme, over and above allowed for regular candidates.

6:(2) If a candidate after clearing the course work discontinues his dissertation work for some unforeseen reason, the School Board may condone a break of not more than two semesters and the candidate be allowed to resume his work. If the break is for more than two semesters, the scholar shall seek fresh admission to the M.Phil programme.

Attendance

7. An M.Phil student is expected to attend all lectures pertaining to his course work. The attendance of the candidate shall be atleast 75% in each course. In addition to course work M.Phil student shall deliver at least two seminars in the Department during his M.Phil programme.

Contd/..3/-

Evaluation of course work.

8:(1) The evaluation of the course work will be internal.

8:(2) The performance of the scholar shall be evaluated in the following grades.

'O'-(Outstanding), 'A' and 'B' with grade point valuation in the 10 point scale, 7-10 corresponding to 'C' grade, 6.6.99 corresponding to 'A' grade 3.5.99 corresponding to 'B' grade. Those securing less than 5 points shall be graded as 'C'. To clear a course, a candidate should secure at least grade 'B'.

Submission of dissertation

9(1) An M.Phil candidate shall be required to submit a dissertation in triplicate duly recommended by the Supervisor and forwarded by the department to the Controller of Examinations.

9(2) The dissertation/project work shall contain a certificate from his supervisor that the dissertation/ project work incorporates bonafide research of the student and that this has not been submitted for another degree of this or any other University.

Panel of examiners

10(1) At least two months before the proposed date of submission of the dissertation, the supervisor shall present a panel of four names of examiners to the Department to be forwarded to the School Board for approval and submission to the Controller of Examinations. The School Board shall also submit a copy of the panel of Examiners to the Chairman of the Academic Council.

Evaluation

11(1) The dissertation/project work will be examined by two examiners(one of them being the Supervisor)to be appointed by the Vice-Chancellor from the panel ratified by the Academic Council and the Executive Council. At least one of the examiners should be from outside the University.

However a supervisor shall not act as an examiner where a candidate is a wife or husband,son or daughter, brother or sister of the Supervisor. Where a candidate is related to the Supervisor as such, the

Contd/....4/-

dissertation submitted by a candidate for M.Phil degree shall be sent to another examiner selected from the panel of examiners.

Award of the Degree.

12(1)(a) The dissertation/project work should be accepted for the award of the M.Phil degree on the unanimous recommendation of the examiners.

12(1)(b) If there is a difference of opinion the matter should be referred to a third examiner to be appointed by the Vice-Chancellor out of the panel already submitted. The Third examiner will act as the adjudicator and his decision will be final.

12(2) In case the examiner suggests some modifications improvement of the dissertation/project work on certain suggested lines or points out certain lacunae in the dissertation/project work, the candidate should be asked to reply or to modify the dissertation/project work on the suggested lines and resubmit the dissertation/project work within a period of six months of the communication of the decision regarding revision. The revised version will be examined by the same examiners. If, owing to some unforeseen exigencies, the original examiners are unable to examine the dissertation/project work, now examiners shall be appointed from the panel already submitted.

12(3) All the reports of the examiners shall be submitted to the School Board, which, on being satisfied, may recommend to the Academic Council that the M.Phil Degree may be awarded to the candidate. A copy of the recommendation of the School Board may be sent to the Controller of Examinations for declaration of the provisional result.

Removal of difficulties

Notwithstanding anything contained in the above Ordinance, the Vice-Chancellor may take such measures as may be necessary for removal of difficulties.

@@@@@@@@@@

5:2 - Syllabus -

(1) Introduction of Tenyidie as MIL at Degree Level.

The Academic Council in its 37th meeting held on 5th and 6th September, 1989, approved in principle the proposal for introduction of Tenyidie (Angami Language) at Degree level but desired that a Committee may examine the possibility of actual implementation of the proposal.

The Committee constituted for the purpose has framed the syllabus and the same is placed at Annexure-'A' for consideration of the Council.

5:2:1:(2)

B.A.

ANNEXERE -'A'

T E N Y I D I E

(Modern Indian Language) - - - 100 marks.

A - POETRY	-	25 marks
B - PROSE	-	20 marks
C - DRAMA	-	15 marks
D - ESSAY	-	15 marks
E - FICTION	-	15 marks
F - AMPLIFICATION	-	10 marks

A - POETRY — 25 marks

Selected Poems (20 pieces)

1. Putsolie	2. Mimhienuo	3. Kethuopou
4. Kedietho Mu Kekhrie	5. Mhicu Zha	6. Keviu U Ya
7. Puolie Mu Ketho	8. Tsiakha Tei	9. Kenyi,Keju" Mu Kesi..
10. Kibenuo Kevi	11. Puotei	12. Kekho Lho" U
13. Lievipfumia"	14. U Tsiepfumia	15. Tenyi-o
16. Kepele Kecha	17. Phoumata Hie	18. Mhasi Kevi
19. Japfu"	20. Kero	

Text Books:

1. Uca-53 - Shurhozelie"
2. U-teiki Geizo- Shurhozelie"

B - PROSE — 20 marks

1. Kiju" Tevi... Kevo" Ruve - Tsolie Chase

C - DRAMA — 15 marks

1. Juketa" Nuou - Shurhozelie"

D - ESSAY — 15 marks

1. Tenyimia Kelhou Dze - Neichüriazo
   - Shurhozelie"

E - FICTION — 15 marks

1. Kiju" Lha Thenie - Vikielie Sorhie

F - AMPLIFICATION — 10 marks

1. Diechie - Shurhozelie"

.....

Tenyidie Elective

Paper I - POETRY 100 marks

(a) Old Poetry 16 pieces

(b) Modern Poetry : 14 pieces

Text Books : Uca - 53 - Shurhozelie
Tenyimia Dzeyie - Ruzhukhrie Sekhose
Uteiki Geizo - Shurhozelie

(a) Old Poetry (Pieces to be read)- 50 marks

1. Phousanyio
2. Thenu-re-tsonua
3. Mehouviu
4. Tsie nu tsu le..
5. Chahuchu
6. Vinyu
7. Gareiphezou
8. Thenu nie we...
9. Tha ramei
10. Thenu Khokhrieu
11. Thie zha zo di..
12. Hie pieu
13. Metoulhounyuo
14. Shusie a neiu
15. Rheizetuou

(b) Modern Poetry; (pieces to be read)- 50 marks

1. Thesuohie
2. Kruta Kevi
3. Ura mengulie
4. Teicie 100-Nyi(Megua-o)
5. Tsie Kelhou-u-rukrashu..
6. N ba nunu n nei kedalie
7. U phiyha kerieu
8. Vutei krupfu
9. Tekhou kechu.
10. Tenyimia Mhaphruo
11. Miavimia puo.
12. Kenourheiche
13. Doju phrelie khe.
14. Raka dzu su kru la vorzhie.

Paper II - Fiction and Drama

(a) Fiction : Rhulie Kengu I - Vikielie Sorhie - 50 marks
(b) Drama : Thenudiu - Vilhouzhalie - 25 marks
Mehouviu-Morusa - Shurhozelie - 25 marks

Paper III

(a) History of Tenyidie Literature 50 marks
Tenyimia Diemvu Dze - Beilieu

(b) Prose : Rhulie Kengu I - Vikielie Sorhie - 40 marks
(c) Grammer : Diechie - Shurhozelie - 10 marks

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(ii) Revised syllabus for M.A in English

The syllabus for the M.A Programme in English has been revised. The revised syllabus duly approved by the School Board in its meeting held on 1.12.89, is placed at Annexure-'A' for consideration of the Council.

5:2:2:(2)

ANNEXURE-'A'

Revised M.A syllabus in English

CORE COURSES

Semester I

1. Poetry I (Chaucer to Pope)
2. Fiction I
3. Drama I
4. Prose or Language I

Semester II

5. Poetry II (Romantic & Victorian)
6. Fiction II
7. Drama II
8. Indian Writing in English

Semester III

9. Modern Literature I
10. American Literature I
11. Literary Theory and Criticism
12. In-depth study of one major author or Commonwealth Literature

Semester IV

13. Shakespeare
14. Modern Literature II
15. American Literature II or Language II
16. Tragedy or Essay

Optional Courses

1. Prose OR Language I
2. American Literature II OR Language II
3. Tragedy OR Essay
4. In-depth study of one major Anthor OR Commonwealth Literature

Contd....2/-

5:2:2:(3)

SYLLABUS FOR THE MASTER'S PROGRAMME IN ENGLISH

1st Semester — COURSE I

POETRY I (CHAUCER TO POPE)

1.	Chaucer	:	The Prologue to the Canterbury Tales
2.	Spenser	:	Fairie Queene (Bk.I)
3.	Milton	:	Daradise Lost (Bk.I,II & IX)
4.	Donne	:	"The Good-Morrow"
		:	"The Sunne-Rising"
		:	"The Canonization"
		:	"The Anniversarie"
		:	"The Extasie"
		:	"Batter my heart, three-personed God"
5.	Marveil	:	"To His Coy Mistress"
		:	"The Gardon"
		:	"A Dialogue between the Soul and Body"
		:	"On a Drop of Dew"
		:	"The Definition of Love"
6.	Dryden	:	"Mac Flecknoe"
7.	Pope	:	"The Rape of the Lock"

N.B. The above poems are all meant for detailed a study.

Contd.....3/-

COURSE II

FICTION I

1.	Cervantes	:	Don Quixote
2.	Daniel Defoe	:	Robinson Crusoe
3.	Henry Fie-lding	:	Tom Jones
4.	W.M. Thackeray	:	Vanity Fair
5.	Emily Bronte	:	Wuthering Heights

N.B. Students will also be expected to study the development of the novel in the eighteenth century and the problems of the novels as a literary genre.

5:2:2:(5)

COURSE III

DRAMA I

1.	Anon	:	Everyman
2.	Kyd	:	The Spanish Tragedy
3.	Marlowe	:	Dr. Faustus
4.	Webster	:	The Duchess of Malfi
5.	Middleton	:	Women Beware Women
6.	Jonson	:	Volpone

N.B. The above texts are meants for detailed study.
Students should expect annotation questions on them.

Contd.....5/-

5:2:2:(6)

COURSE IV

PROSE (OPTION A)

1.	Francis Bacon Essays	: "Of Truth"
		: "Of Revenge"
		: "Of Adversity"
		: "Of Marriage and Single Life"
		: "Of Friendship"
		: "Of Studies"
2.	Thomas Browne	: Religio Medici
3.	John Bunyan	: The Pilgrim's Progress
4.	Joseph Addison	: "Coverley Papers" from The Spectator
5.	Charles Lamb	: ESSAYS OF ELIA
		: "The South-Sea House"
		: "Oxford in the Vacation
		: "Christ's Hospital-Five and Thirty Years Age"
		and
		Culture/Anarchy
6.	Matthew Arnold	: "Sweetness and Light"
		: Barbarians, Philistines and Populace"
		: "Hellenism and Hebraism"
7.	Aldous Huxley	: Music At Night
		: "Tragedy and the "hole Truth"
		: "Art and the Obvious"
		: "Beliefs and Actions"
		: "Wanted, A New Pleasure"
		: "Vulgarity in Literature"

Contd....6/-

5:2:2:(7)

LANGUAGE I (OPTION B)

Introduction to Modern Linguistics

I. Language and Linguistics

(a) Language

(i) The Key properties of language

(ii) Language and Animal Communication

(iii) Language and Languages

(iv) Language, Dialect, Register, Idiolect, etc)

(b) Introduction to Linguistics

(i) Traditional Linguistics and its view of language

(ii) Historical Linguistics and Comparative Philology - priorities - view of language - assumptions and limitations.

(iii) 1. Modern Linguistics : the search for a coherent object of study

2. The Saussurean dichotomies :
le langue vs la Parole - Linguistics as a study of le langue

Synchrony vs Diachrony - Linguistics as a synchroni descriptive study.
Linguistic sign and the Syntagmatic and Paradigmatic relations of linguistic signs.

3. Bloomfield, the Neo Bloomfieldians and the American Structuralism - Linguistics as an autonomous distipline - Linguistics as "empirical" and "anti-mentalistic".

4. Structural Linguistics on the continent and in England - a very brief account - no detailed account of Halliday's Scale & Category/Systemic Grammar or the Functional Sentence Perspective of the Prague School to be attempted.

5. Introduction to Transformational Generative Grammar.

(iv) Kind of Linguistics - a brief introduction to the concepts: socio-linguistics:Psycho/Neuro Linguistics, Contrastive Linguistics, etc.

Contd.....7/-

II. Phonetics & Phonology

(a) Articulatory, Auditory and Acoustic Phonetics - a brief account of how each is different in orientation from the others.

(b) Definitions - Phoneme, Phones, Allophones.

(i) The Principles of Phonemic Analysis.

(ii) The Phonology of English

(iii) Practice in Transcription

(c) Stress, the tonic syllable, Pitch (Movement) and Tone. (description from the angle of Phonetics - examples from English and the tone languages of the North East).

(III) Morphology and certain Morpho-Phonemic Processes (Structural)

(a) The Morphemes Vs. the Word - definitions.

(b) Kinds of Morphemes:
Free, Bound, Fused and Zero morphemes - Suppletion (Examples from English)

(c) Stem, Root and Affix :

(i) A brief account of their identification thro' examples

(ii) Affixes as Prefixes, Infixes and Suffixes.

(iii) Affixes as Derivational (class-changing and class-maintaining) and Inflectional affixes.

(iv) A morphological analysis of English words.

(d) Morphemes and their allomorphic variants/alternants. The Plural, the Past Tense and the 3rd Person Singular Present Tense Morphemes in English and their allomorphic variations.

(e) Morpho-phonemic Processes:

(i) Assimilation (aadeeshssandhi)

(ii) Addition of Phonemes (aagamasandhi)

(iii) Loss of Phonemes (lopasandhi)

(iv) Stress shift.

Contd.....8/-

IV. Syntax (Structural)

(a) Construction types and their constituents

(i) The Structures of Predication (Subject-Predicate). Complementation (Verbal-Complement), Modification (Head-Modifier), Subordination (Dep. Unit-Subordinator), Co-ordination (Ind. Unit-Co-Ord. Ind. Unit). (As in The Structure of American English : Nelson Francis & CIEFL PGOTE Linguistic Lessons).

(b) Immediate Constituent Analysis

(i) Binary cuts and bracketting (Tree diagram or boxes)

(ii) Immediate constituents - ultimate constituents

(iii) Regular and Discontinuous IC Analysis.

(c) Practice in IC Analysis of English Sentences

(i) In Illustration of the given construction types

(ii) In disambiguating ambiguous sentences

(iii) In illustration of regular and discontinuous ICs etc. (Highly complicated sentences are to be avoided)

(V) Traditional Semantics

(a) The treatment of meaning in Structural Linguistics: meaning only as a heuristic device and not as subject matter of Linguistic analysis - arguments.

(b) Traditional Semantics

(i) Definition

(ii) Saussurean differential meaning

(iii) Relationships of "Reference" and "Sense"

(iv) Paradigmatic & Syntagmatic relations of Sense

(c) Relationship of "Sense" among words:

(i) Synonymy and its kinds: True, Total, Complete Synonymics - Synonymay as symmetrical Hyponymy etc.

(ii) Hyponymy and incompatibility - Superordinate terms - incompatibility and difference of Sense etc.

Contd....9/-

(iii) Homonymy & Homograph

(iv) Ambiguity & Polysemy - Structural Vs Lexical ambiguity.

(v) Antonymy

2nd [illegible] COURSE V

POETRY II (Romantic to Victorian)

1.	William Blake	: Songs of Innocence and Songs of Experience
2.	William wordsworth	: The Prelude - Book I & II
3.	Coleridge	: "Tantern Abbey"
		: "The Ancient Mariner"
		: "Kubla Khan"
4.	John Keats	: "Ode to Psyche"
		: "Ode to Melancholy"
		: Ode to a Nightingale"
		: "Ode on a Grecian Urn"
		: "Ode to Autumn"
		: "La Belle Dame Sans Merci"
5.	Tennyson	: "The Lotus Esters"
		: "Ulysses"
		: "Morte D'Arthur
		: "Tithomus"
6.	Robert Browning	: "Andrea Del Sarte"
		: "Grammarian's Funeral"
		: "The Last Ride Together"
		: "Perphyric's Lover"
		: "The Bishop orders his Tomb"
		: "Prospice"
7.	Matthew Arnold	: "Memorial Verses"
		: "The Scholar Gypsy"
		: "Thyrsis"
		: "Dover Beach"
8.	Thomas Hardy	: "Neutral Tones"
		: "Afterwards"
		: "The Voice"
		: "The Oxen"
		: " I Look into my Glass"
		: "During Wind and Rain"

N.B. The above poems are meant for detailed study.

Contd.....10

COURSE VI

FICTION II

1.	Jane Austen	:	Persuasion
2.	Charles Dickens	:	Hard Times
3.	George Eliot	:	Middlemarch
4.	Thomas Hardy	:	Tess of the D'Ubervilles
5.	Henry James	:	The Portrait of a Lady
6.	D.H. Lawrence	:	Sons and Lovers

N.B. Students will be expected to have a general familiarity with the other major novels of the novelists prescribed.

COURSE VII

DRAMA II

1.	Dryden	:	All for Love
2.	Congrave	:	Way of the World
3.	Sheridan	:	School for Scendal
4.	Shaw	:	Man and Superman
5.	Eliot	:	The Family Reunion
6.	Pinter	:	The Birthday Party
7.	Osborne	:	Look Back in Anger

N.B. The above texts are meant for detailed study. Students should expect annotation questions on them.

Contd.....11/-

COURSE VIII

INDIAN WRITING IN ENGLISH

SECTION I

1.	Kalidas	: Shakuntala
2.	Premchand	: Godan
3.	V.R.Anantha Murthy	: Samakara

SECTION II

1.	Mulk Raj Anand	: The Untouchable
2.	R.R.Narayan	: The Guide
3.	Raja Rao	: Kanthapura
4.	Anita Desai	: Cry, The Peacock
5.	R.Parthasarathi	: Ten Twentieth Century Indian Poets Nissim Ezekiel, Kamala Das, A.K. Ramanujan and J.Mahapatra.
6.	Dom Moraes	: "At Seven O'Clock" : "The Visitor" : "Song" : "Sailing to England" : "Craxton" : "The Watcher" : "I Heard a Fly Buzz" : "It was not Death" : "Because I could not stop for Death" : "My Life had Stood"
7.	Thoreau	: Walden

Contd.....12/-

3rd Semester COURSE IX

MODERN LITERATURE I

1.	Joseph Conrad	:	Lord Jim
2.	E.M.Forster	:	A Passage to India
3.	Virginia Woolf	:	To The Light House
4.	George Orwell	:	1984
5.	T.S.Eliot	:	The Love Song of J.Alfred Prufrock
		:	Sweeney among the Nightingales
		:	The Waste Land
		:	Journey: of the Magi
6.	James Joyce	:	A Portrait of the Artist as a Young Man
7.	W.B. Yeats	:	Adam's Curse
		:	Easter, 1916
		:	Sailing to Byzantium
		:	Lodh and the Swan
		:	Byzantium
		:	Lapis Lazuli

Contd.....13/-

COURSE X

AMERICAN LITERATURE I

1.	Ralf Waldo Emerson	: "Nature"
		: "The American Scholar"
		: "The Divinity School Address"
		: "Self-Reliance"
		: "The Poet"

From:- Selections from Ralf Waldo Emerson, Edited by Stephen B.Wicher.

2.	Edgar Allan Poe	: "The Fall of the House of Usher"
		: "The Raven"
		: "The Philosophy of Composition"
3.	Nathaniel Hawthorne	: "The Scarlet Letter"
		: "Rapaccini's Daughter"
4.	Harman Melville	: "Moby Dick"
5.	Mark Twain	: "The Adventures of Huckleberry Finn"
6.	Walt Whitman	: "Leaves of Grass"

The following poems for detailed study:

1. I Hear America Singing
2. Song of Myself
3. I Sing The Body Electric
4. I Hear It was Charged Against Me
5. Dirge For Two Veterans
6. Over The Carnage Rose A Prophetic Voice
7. When Lilacs Last In The Dooryard Bloom'd
8. Who Learns My Lesson Complete?
9. Stronger Lessons
10. A Voice From Death

Contd....14/-

7. Emily Dickinson :

The following poems for detailed study:

1. Valentine Week
2. If I should Die
3. A Great Hope Fell
4. Immortal Is An Ample Word
5. The Soul Selects Her Own Society
6. I Felt A Funeral
7. Because I Could Not Stop For Death
8. Behind Me - Dips Eternity
9. We Pray - To Heaven
10. I Heard a Fly Buzz
11. I Meant To Have But Modest Needs
12. Why - Do They Shut Me Out of Heaven?

COURSE XI

LITERARY THEORY AND CRITICISM

1.	Plato	:	Republic (Book X)
2.	Aristotle	:	Poetics
3.	Sidney	:	"An Apology for Poetry"
4.	Johnson	:	"Preface to Shakespeare"
		:	"Life of Milton"
5.	Coleridge	:	Biographia Literaria (Chap. XIV, XV, XVI, XVII, XVIII, XIX, XX, XXII).
6.	Arnold	:	"The Function of Criticism at the Present Time"
		:	"Wordsworth"
7.	T.S.Eliot	:	"Tradition and the Individual Talent"
		:	"The Function of Criticism"
		:	"Hamlet"
8.	I.A.Richards	:	Principles of Literary Criticism

Contd.....15/-

COURSE XII

(OPTION A)

In-depth study of one Major Author (To be chosen from the following lists):-

1. Milton
2. Wordsworth
3. Keats
4. Eliot
5. Yeats
6. Hardy
7. James
8. Conrad
9. Lawrence
10. Shaw
11. O'Neill

OR

COMMONWEALTH LITERATURES (OPTION B)

1.	Chinua Achebe	:	Arrow of God
		:	No Longer at Ease
2.	James Ngugu	:	A Grain of Wheat
3.	Ezekiel Mphahlele	:	Down Second Avenue
4.	Alan Paton	:	Cry, The Beloved Country
5.	V.S. Naipaul	:	A House for Mr. Biswas
6.	Patrick White	:	The Vivisector
7.	Thomas W.Shapcott ed.	:	Australian Poetry Now

Contd...16/-

4th Semester

COURSE XIII

SHAKESPEARE

1. Hamlet
2. Macbeth
3. Measure For Measure
4. As You Like It
5. Henry IV Part I
6. The Tempest

N.B. The above texts are meant for detailed study. Students should expect annotation questions on them.

COURSE XIV

MODERN LITERATURE II

1. Graham Greene : The Heart of the Matter
2. William Golding : The Lord of the Flies
3. Kingsley Amis : Lucky Jim
4. Allen Sillitoe : The Loneliness of the Lon
5. John Fowles : The French Lieutenant's
6. Selections from the following Poets:
   1. Auden : "Consider"
      : "Petition"
      : "In Memory of W.B.Yeats"
      : "September 1, 1939"
      : "As I Walked out on Eve"
      : "Lay Your Sleeping Head"
      : "The Unknown Citizen"
      : "The Shield of Achilled"
   2. Philip Larkin : "Church Going"
      : "Ambulances"
      : "Toads"
      : "The Whitsun Weddings"
      : "Winter"
      : "To Write One Song, I Said"
   3. Dylan Thomas : "And Death Shall Have No Dominion"
      : "The Force that throught the Green Fuse Drives the Flower"

Contd/....17-

COURSE-XV

AMERICAN LITERATURE II (OPTION A)

1. Scott Fitzgerald : The Great Gatsby
2. William Faulkner : The Sound and the Fury
3. Ernest Hemingway : The Old Man and The Sea
4. Ralph Ellison : Invisible Man
5. Robert Frost:- The following poems for detailed study:
   (i) October
   (ii) Mooding Wall
   (iii) The Death of the Hired Man
   (iv) Home Burial
   (v) After Apple-Picking
   (vi) An Old Man's Winter Night
   (vii) The Oven Bird
   (viii) Birches
   (ix) Desert Places
   (x) West-running Brook
6. Wallace Stevens:- The following poems for detailed study:
   (i) The Snow Man
   (ii) The Emperor of Ice-Cream
   (iii) The Virgin Carrying a Lantern
   (iv) Anecdote of the Jar
   (v) The Man with the Blue Guitar
   (vi) Notes Toward a Supreme Fiction
7. Tennessee Williams : The Glass Menagerie
8. Arthur Miller : The Death of a Salesman
9. Eugene O'Neill : Long Day's Journey Into Night

Contd/.../-

5:2:2:(19)

LANGUAGE II(OPTION B)

1. Linguistics and Language Teaching

I. Psycholinguistic and Sociolinguistic aspects of language learning.

(a) Language acquisition

(b) Second/Foreign Language Learning

(c) Bilingualism, Multilingualism

(d) Errors

2. Contrastive Studies and their relevance for language teaching

(a) Origins, assumptions and orientation(Linguistics, psychological as well as pedagogical)

(b) CA: Claims and criticisms

(c) Theoretical Vs Applied CA

(d) CA and its areas of influence : Second Language Teaching, Translation, Language Typological Studies

3. Error Analysis and Interlanguage

(a) Origins, assumptions and orientation(linguistic, psychological as well as pedagogical)

(b) Mistakes, Errors and "strategies": their causes and kinds.

(c) Interlanguage and the focus on Language Learner's Language (errors as well as non-errors)

(d) Implications for language teaching.

4. Stylistics and the Teaching of Literature

i. A critical review of the various definitions of style

ii. The contextual determinants of style

iii. The Scope and function of Stylistics

(a) Stylistics and literary interpretation

(b) Linguistic analysis and Stylistic analysis

(c) Psychology and Stylistics

(d) Stylistics and value judgements

iv. Exercises in Stylistic Analysis.

Contd/.../-

5. Translation

(a) Is translation an Art or Science

(b) Fidelity Vs Purpose in Translation

(c) Principles of Translation/Translation Theory

(d) Translation and Cultural Factors.

6. Stylistics and Discourse Analysis and the Teaching of Literature

(a) Standard Language and Poetic Language and Style as deviation- Jan Mukarovsky.

(b) Style as convergence of Textual Pattern - Roman Jakobson

(c) Stylistic Analysis: a model - "Static focusing" in lyrical poetry discussed in HG Widdowson's "The Untrodden Ways".

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COURSE XVI

TRAGEDY (OPTION A)

1.	Aeschylus	: Agamemnon
2.	Sophocles	: Oedipus Tyrannus
3.	Euripides	: Modes
4.	Shakespeare	: Kiang Lear
5.	Milton	: Samson Agonistes
6.	Racine	: Phaedra
7.	Ibson	: Ghosts

OR

ESSAY (OPTION B)

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(iii) Revised syllabus for the 3rd and 4th Semester M.Lib.Science

The syllabus for the 3rd and 4th semester M.Lib.Science has been modified. The revised syllabus, duly approved by the School Board in its meeting on 22.5.90 is placed at Annexure-'A' for consideration of the Council.

ANNEXURE-'A'

Revised Syllabus for 3rd and 4th Semester M.Lib.Science Programme:-

A. Paper XIII to be merged with the Paper XIV and to be entitled INFORMATION RETRIEVAL TECHNIQUES

The contents of the course will be as follows :

1. Fundamental of information storage and retrieval systems;nature and characteristics;
2. General theory of classification and subject indexing;
3. History and development of subject indexing,principles of facet analysis and study of categories(Fundamental Categories)
4. Precoordinate indexing : Kaiser's systematics indexing, Chain Indexing, PRECIS,POPSI,
5. Post-coordinate indexing.Principles of searching.Boolean operators(AND,OR,NOT etc) in searching.
6. Other indexing systems : KWIC,KWOC,KWAC.
7. Principles of vocabulary control.Theasuri and their construction. Hierarchical and non-hierarchical display of terms and notation. Terminological control.
8. Classification schemes - UDC,CC,BC2.
9. Evaluation of indexing systems.
10. Abstracting :Author synopsis. Slant in abstracting. Principles and Canons of abstracting.

B. Paper XIII to be replaced by the paper entitled Information Users and their Needs

The contents of the paper INFORMATION USERS AND THEIR NEEDS will be as follows:-

Categories of information users: Identifying user groups; Planners, Policy Makers, Managers, R&D Personnel, Technologists, Engineers, Teachers and other Professionals, Communities at large,Special Ethnic Groups; Information-Seeking Patterns of different user groups.

Contd/..../-

Role of information:Role of information in management activities-Decision -making, Planning, Monitoring, Problem solving: Research and Development; Technology Innovation;Technology Transfer;and Role of Information in raising the standard and quality of life.

Methodology of user studies: Qualitative and quantitative paradigms;Population/sampling;Data Collection Methods - Questionnaire, Interview,Observation Case, study;Analysis and interpretation of results;Other specific techniques-Scenario Analysis, Interaction analysis, Repertory Grids, Delphi,Nominal Group Technique etc.

Evaluation of Select User Studies - their scope and content etc.

User Education Goals and objectives;Methods, Media and techniques; Staff;Content;Evaluation;Management;Case studies drawn from various countries.

C. Paper XVIII(B) READER INSTRUCTION to be replaced by the paper

MANAGEMENT OF INFORMATION SYSTEMS

The course content will be as follows:

Basic Concepts- Information systems, centres and services.

Organisation theory- Organisational structures ;group dynamics, behavioural approach;systems approach.

Fundamentals of management-Schools of management;classical, scientific,general systems,human behaviour, social systems decision theory, contingency theory; assessment of needs;formulating objectives;policy making;decision making ;conflict negotiation;risk analysis;trade-off analysis; feasibility analysis;

Communication:Communication theory,formal and informal channels of communication ,communication skills and techniques, the change process;effects of new technology;strategies for change;office authomation.

Personnel management- Theories;staffing requirements;manpower planning;job analysis;job description;staff recruitment;selection and development;staff training and development;supervision and control; leadership;motivation;industrial relations;performance evaluation;grievance procedures.

Contd/.../-

Stock Management- Stock policy;selection and acquisition; stock maintenance;editing;withdrawa, relegation and replacement;conservation.

Financial and resource management-Fundamentals of budgeting process; budgeting methods;line by line, performance, PPBS,Zero-based;cost effectiveness analysis;cost- benefit analysis;overhead value analysis;cost accounting techniques;pricing strategies;forecasting techniques.

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(iv) Revised Course structure and syllabus for the M.Sc (Chemistry) Programme.

The School Board of Physical Sciences in its meeting held on 19.3.90 considered the revised course structure and the syllabus for M.Sc(Chemistry) and noted that the total mark for the programme is 2000 while in other practical oriented Science Departments the total workload for M.Sc programme is equivalent to 1800 only. The Board therefore, referred that this point may be considered and decided by the Academic Council. Regarding the syllabus, the Board constituted a Committee to examine and modify course No.Chemistry-464 **an** Analytical Chemistry and Electronics and Computers. The Dean was authorised to incorporate the modifications before submitting the syllabus to the Academic Council.The modified course No. Chemistry-464 recommended by the Committee may be seen At Annexure "A" . The Course structure and the syllabus may be seen at Annexure . 'B'.

The matter is placed before the Council for consideration.

5:2:4(2)

ANNEXURE-'A'

CHEM - 464

ANALYTICAL CHEMISTRY AND COMPUTERS

PART-'A'

Unit - 1. Statistical Treatment of Experimental data.

Sampling techniques, Sources of errors in quantitative measurements, Precision and accuracy, significant figures and Computations, mean deviation and standard deviation, the methods of average and least squares.

Experimental Techniques of Purification and Seperation.

Ion exchange and solvent extractions, partition and Adsorption Chromatography, Gas chromatography and High Performance liquid chromatography (HPLC), Counter current chromatography.

(8 L)

Unit- 2: Electrochemical Methods

Polarography, Voltammetry, Cyclic Voltammetry, Coulometry and amperometry and their applications

Atomic Absorption Spectroscopy

(7 L)

Unit- 3. Thermal Methods of Analysis

Thermogravimetric Analysis (TGA), Differential Thermogravimetric analysis (DTA), and Differential scanning Calaorimetry (DSC).

Magnetic Susceptibility measurements

Gouy Method, Faraday Method and Vibrating sample Magnetometer

Nuclear Methods

Activation Analysis (NAA and XRF), Radioactive dating.

(7 L)

Recommended Books

1. G.W. Ewing. ' Instrumental Methods of Analysis'

2. H.H. Willard, L.L. Merrit and J.A. Dean, ' Instrumental Methods of Analysis.

CHEM - 464

ANALYTICAL CHEMISTRY
AND
COMPUTERS

PART- B: COMPUTERS (Introduction and applications in Chemistry)

Unit-1. General introduction of basic components and functions of computer; peripherial devices; Computer Organisation - (a) Hardwares: Aritmatic Logic Unit(ALU), Central Processing Unit (CPU), Memory Units, I/O units, Buses - (b) Softwares: Machine Language, Assembly Language, Assemblers and Combliers, High level Languages, Operating System Software - DOS;

Programming on Personal Computers - Algorithm design and Flow charts; Introduction to BASIC and FORTRAN Languages. Use of LOTUS 1-2-3.

(12L)

Unit-2: Development of Application Programmes for Chemical Problems.

Regression analysis involving linear and polynomial functions- methods of least squares. Curve fitting - some examples; Numerical Integration; Solving simple chemical problems -

(a) Self- Consistant Field (SCF) Calculations,

(b) Huckel- Molecular Orbital calculations.

(12 Lectures
including practicals)

.....2/-

Suggested Books :

1. V. Rajaraman -' Computer Programming in FORTRAN-77' Third Edition, Prentice Hall of India (1988).

2. S.C. Chapra and R.P. Canale - ' Numerical Methods for Engineers' International Student Edition, McGraw Hill Book Co (1985).

3. J.S. Mattson, H.B. Mark, H.C. MacDonald, Computer Fundamentals for Chemists, Vol. 1, Marcel Dekker (1973).

4. H.H. Willard, L.L. Merritt, Jr., J.A. Dean, and F.A. Settle Jr. - 'Instrumental Methods of Analysis, 6th Ed., Wads Worth Publ. Co. (1981).

5. J.A. Holt - Cases and Applications in LOTUS 1 - 2 - 3- with HAL, 2nd Ed., Galgotia Publ. Pvt. Ltd., (1989).

6. S. Lipschutz and A. Poe, ' Reory and Problems of Programming withFOR RAN', Schaum's outline Series , McGraw-Hill International Book Co., (1982).

7. Programming with BASIC, Schaum's Outline Series, McGraw Hill Int. Book Co.

8. P.R. Bevington - Data Reduction and Error Analysis for the Physical Sciences - McGraw Hill Book Co. (1969).

5:2:4(5)

Annexure - 'B'

M.Sc. (CHEMISTRY)

Proposed Course Structure

First Semester

Course Number	Name of Course	Marks
CHEM-401	Inorganic Chemistry-I	100
CHEM-421	Organic Chemistry - I	100
CHEM-441	Physical Chemistry - I	100
CHEM-461	Quantum Chemistry	100
CHEM-402	Laboratory Course (Inorganic)	150
	Total	550

Second Semester

CHEM -403	Inorganic Chemistry - II	100
CHEM - 422	Organic Chemistry - II	100
CHEM-442	Physical Chemistry - II	100
CHEM-462	Chemical Binding and Molecular Spectroscopy	100
CHEM-423	Laboratory Course (Organic)	150
	Total	550

Third Semester

CHEM-404	Inorganic Chemistry - III	100
CHEM-424	Organic Chemistry - III	100
CHEM-443	Physical Chemistry - III	100
CHEM-463	Applications of Spectroscopic Methods	100
CHEM-444	Laboratory Course (Physical)	150
	Total	550

Fourth Semester

CHEM-464	Analytical Chemistry and Electronics and Computers	100

Elective Course*

CHEM-501	Inorganic Chemistry - IV	100
CHEM-521	Organic Chemistry - IV	100
CHEM-541	Physical Chemistry - IV	100

Project Work**

CHEM-511	Project Work (Inorganic)	150
CHEM-531	Project Work (Organic)	150
CHEM-551	Project Work (Physical)	150
		350

Grand Total = 2000

*Students will be required to choose any ONE of the Elective Courses and the Project Work** in the corresponding branch of specialization.

5:2:4(6)

CHEM - 401

INORGANIC CHEMISTRY-I

Unit-1. Symmetry and Structure

Symmetry elements and symmetry operations, summetry groups with examples from inorhanic compounds, groups of very high symmetry molecular dissymetry and optical activity, molecular symmetry for compounds having coordination number 2 to 9.

...7L

Unit-2. Symmetry and Group Theory

Matrix representation of groups, reducible and irreducible representation, the Great - Orthogonality theorem, Character tables.

... 6L

Unit-3. Bonding

(Brief review of the following: ionic bonding, covalent character in predominantly ionic bonds, valence bond theory and LCAC-MO theory for homonuclear diatomic molecules). Orbital symmetry and overlap, LCAO-MO for heteronuclear diatomic molecules (eg. CO and HCl), delocalisation and aromaticity, Linnet double quartet theory, bond energy, covalent radii, Electronegativity (caculation using Pauling, Mulliken and Allred Rochow methods), Polarity of bonds.

... 7L

Unit- 4. Bonding (Contd.)

Metallic structures, metallic bonding, band theory, van-der Waal's forces, hydrogen bonding and clathrates, Brief review of VSEPR model, the use of outer d-orbitals,

Environmental Pollution

Air Pollution (So_2, O_3 and NO_x), water pollution (heavy metals and phosphates).

....8L

Contd...

Unit-5. Selected Topics on Non-Transition Elements

Inorganic ring, clain and cage compounds, synthesis, structure and properties of Boron/Phosphorus/Arsenic compounds. Non-stoichiometric oxides, silicones, zeolites, clays. Polymorphism of Carbon/Phosphorus/Sulphur, Inorganic Polumers.

... 7L

Recommended Books

1) F.A. Cotton, Chemical Applications of Group Theory, Wiley Eastern Ltd., New Delhi, 2nd Edition 1976.

2) J.E. Huheey, Inorganic Chemistry, Principles of Structure and Reactivity, Harper and Row, 3rd. Edition, 1983.

3) F.A. Cotton and G. Wilkinson, Advanced Inorganic Chemistry, John Wiley, 4th Edition, 1980.

) B.H. Mahan University Chemistry, Addison- Wesley/Narosa, 3rd edition, 1986.

CHEM - 402

LABORATORY COURSE IN INORGANIC CHEMISTRY

Semimicro qualitative analysis

Complete systematic analysis of inorganic mixtures containing six ions including two of the following elements, viz. W, Mo, Au, Pt, Pd, Se, Te, V, Ti, Zr, U, Th and Ce, and one interferring anion (arsanate/phosphate/ borate/fluoride).

Quantitative estimation involving volumetric (redox, and complexometry), gravimetric and spectrometric methods of constituents in three component mixtures, alloys, ores/ minerals and cement.

Preparation of the following compounds, related complementary work and physical studies*(at least 8 preparations are to be completed in turn).

(1) Reineck's salt.
(2) Tris (oxalate) maganese (III)
(3) Tetrapyridinesilver (II) peroxodisulphate
(4) Tris (accetylacetonate) iron (III)
(5) Sodium nitroprusside
(6) Bis (N,N-diethyldithiocarbamato) nitrosyliron.
(7) Optical isomers of tris (ethylenediamine) cobalt(III) chloride.
(8) Linkage isomers of dithiocayanatobis(Triphenylarsine) palladium(II) or Nitro and nitrito- pentamminecobalt (III) chloride.
(9) Forrocene or dibenzene chromium.
(10) Hydridochlorocarbonyltris (Triphenylphosphine) ruthenium(II)
(11) Tetrapyridinesilver (II) nitrate (by electrochemical method)
(12) Beryllium acetate, $Be_4O(OCOCH_3)_6$.
(13) $[PNCl_2]_3$
(14) Sulphur dioxide-quinol Clathrate.
(15) Dipyridineiodine(I) nitrate.

* Physical studies include magnetic susceptibility and conductance measurements, infrared, uv-visible spectroscopy and polargraphy.

Recommended Books

(1) A.I. Vogel, 'Macro and semicro qualitative Inorganic Analysis, Orient Longman, 1969,
(2) J. Basset,R.C.Denney, G.H. Jeffery and J.Mendham, 'Vogel's Text Book of quantitative Inorg, Analysis, ELBS, 4th Ed., 1978.
(3) H.H.Willard, L.L. Merrit and J.A. Dean, 'Instrumental Methods of Analysis', East-West Press, 4th Ed., 1974.
(4) G. Marr and B.W. Rockett, 'Practical Inorganic Chemistry', Van-Nostrand, 1972.
(5) G. Pass and H. Sutcliffe, 'Practical Inorganic Chemistry', Chapman and Hill, 2nd Ed., 1974.
(6) G.W. Parshall (Ed. in Chief), 'Inorganic Synthesis', Vol. 15, McGraw Hill, P. 48, 1974.

5:2:4(9)

CHEM -403

INORGANIC CHEMISTRY -II

Unit-1. Magnetic Properties of Transition Elements

Brief review of different types of magnetic behaviours, their origin, magnetic susceptibilities and magnetic moments.

Spin orbit coupling, first and second order Zeeman effect, quenching of orbital angular momenta, temperature independent paramagnetism, spin crossover.

Crystal field theory and its application to explain magentic properties of coordination compounds.

... 7L

Unit-2 Electronic Spectra of Transition Metal Complexes

Electronic spectra of octahedral and tetrahedral complexes, term symbols for metal ions, energy level digrams (Orgell and Tanabe-Sugano diagrams), Selection rules, band intensities and band wridths, spectra of high spin octahedral and tetrahedral complexes for various d^n configurations, spectra of low-spin octahedral and distorted octahedral complexes, spectrochemical series, Charge-transfer spectra.

... 8L

Unit-3. Electronic Structure of Transition Metal Complexes

Structural effects: ionic radii, Jahn - Teller effect. Thermodynamic effects: hydration, ligation and lattice energy, formation constants of complexes and their determinations by Job's and Bjerrum's methods, chelate effect, octahedral vs tetrahedral coordination.

Adjusted crystal field theory, Nephelauxetic series, molecular orbital theory of complexes (qualitative principles involved in complexes with no π - bonding and with π - bonding), angular overlap model.

Contd../-

Chemistry of Transition Elements

Elements of the first transition series and their comparison with the second and third series, general periodic trends, chemistry of the various oxidation states of first row transition metals and their comparison based on electronic configuration.

... 7L

Unit-4 Transition Metal π - Acid Complexes

Structure, bonding, synthesis and reactivity of complexes with CO, CS, N_2, NO, RNC, group V donor ligands and extended π - system ligands; metal carbonyl hydrides and metal carbonyl clusters.

... 7L

Unit-5. Lanthanides and Actinides

The splitting of f-orbitals in ligand fields, lanthanide contraction, oxidation states, complexes, magnetic and optical properties, lanthanide shift readents.

Kinetics and Mechanism of Inorganic Reactions

Mechanism for ligand replacement reactions, ligand displacement reactions in octahedral and square planar complexes, trans-effect, isomerisation and racemisation of tris-chelate complexes, electron transfer reactions, stereochemical non-rigidity.

... 8L

Recommended Books

1) F.A. Cotton and G. Wilkinson, Advanced Inorganic Chemistry, John Wiley, 4th edition, 1980.

2) B.N. Figgis, Introduction to Ligand Fields, Wiley Eastern, 1976.

3) Dutta and Shaymal, Elements of Magnetochemistry, S Chandra and Co., 1st Edn. 1982.

4) F. Busalo and R.G. Pearson, 'Mechanism of Inorganic Reactions', 2nd Edn. Wiley Eastern, 1967.

Contd.../-

CHEM - 404

INORGANIC CHEMISTRY - III

Unit-1. Bioinorganic Chemistry

Iron-Sulphur proteins-Rubredoxin and Ferredoxins; Macrocyclic ligands and their metal complexes, Metalloporphyrins, Heme proteins - Hemoglobin, Myoglobin, Cytochrome c, Peroxidase and Catalase; Non-heme proteins - Hemerythrin, Ferritin and Transferring; Nitrogen fixation and Nitrogenases.

... 7L

Unit-2. Bionorganic Chemistry (Continued)

Membrane structure, mechanism of ion transport across membrane, inophore, valinomycin, nigericin, crown ether complexes of Na and K.

Fundamentals of Organometallic Chemistry

Synthesis, Structure, bonding and reactivity of transition metal complexes with olefins, cyclopentadienyl, cyclopentadienide and benzeniod systems.

... 8L

Unit -3 Homogeneous Catalysis

Coordinative unsaturation, Oxidative addition reactions, insertion reactions, reactions of coordinated ligand and activation of small molecules by complexation, catalytic reactions of alkenes(isomerization, hydrogenation, hydroformylation and polymerization).

... 7L

Unit-4 Nuclear and Radiochemistry

Types of radioactive decay (α, β, γ, exotic decay), and growth of radioactive products, determination of half-life. Interaction of radiation with matter :

alpha and heavy ions, electrons, neutrons and electromagnetic radiation.

Contd../-

Unit-5. Detection and Measurement of Radiation

Ionization chamber, Geiger-Muller Counter, proportional counter, scintillation counter, solid state active and passive detectors, detection of neutrons:

Nuclear Reactions

Nuclear reactions, Q-value, cross-sections, types of nuclear reactions, nuclear fission and fusion, chain reactions, nuclear reactions on stars.

... SL

Recommended Books

1. F.A.Cotton and G. Wilkinsons, 'Advanced Inorganic Chemistry' John-Wiley, 5th Edn., 1988.

2. J.E. Huheey 'Inorganic Chemistry, Pronciples of structure and Reactivity Third Edition, 1982.

3. F.A. Cotton and G. Wilkinson, 'Advanced Inorganic Chemistry' Wiley Eastern 3rd Edition, 1976.

4. G. Friedlander, J.W. Kennedy and J.M. Miller, 'Nuclear and Radiochemistry' (2nd Edn) Wiley-International, 1964.

5. H.J. Arnikar, 'Essentials of Nuclear Chemistry' Wiley Eastern, 1983.

CHEM- 501

INORGANIC CHEMISTRY -IV

Unit-1. Transition Metal to carbon σ - bonds

Synthesis, Reactivity and Structural aspects of σ-alkyl and aryl compounds (per or homoleptic alkyls, mixed alyls, alkylate anions, chelate alkyls, compounds with CR_2 and CR bridges).

Decomposition of compounds with metal-carbon σ - bonds (intramolecular reductive eliminations and β - hydrogen transfer). Compound with transition metal-carbon multiple bonds (alkylidene- and alkylidyne complexes). Low-valent metal carbene complexes.

Contd.../-

Transition metal to carbon π - bonds

η - allyl and other enyl complexes, complexes containing three and four membered rings, metal compounds of beterocyles, multidecker sandwich compounds. Metallocarbaborance and metalloborance complexes.

.... 10L

Unit- 2. Photochemistry of metal complexes

Excited states and excited state processes : Lignad field states, charge transfer states; Thexi and dosenco states; Photophysical processes (Radiative and monradiative transitions).

Photochemical reractions : L -F excited states and Cr(III) complexes; L-M-C-T states and M-L-C-T- states. Survey of photoreactions of complexes of d-transition elements.

Applications of photochemical reactions of coordination compounds :

Synthesis and catalysis; chemical actenometry; photochromism.

Metal-To-Metal Multiple Bonds:

Major structural types, Quadruple bonds, Relation of clusters to Multiple bonds, One-dimensional solids.

.... 9L

Unit-3. Tracers in Chemical Analysis :

The tracer technique, isotopic exchange and other tracer reactions, analytical applications, Hot atom Chemistry.

Methods of Radiochemical Separation

Carriers precipitation, Ion-exchange, Solvent extraction, Electro-chemical method, Isotope dilution technique and its applications.

.... 9L

Contd../-

Unit-4. Bioinorganic Chemistry

Copper : Ceruloplasmin, Hemocyanin, Cytochrome oxidase and Superoxide dismutase,

Cobalt : Vitamin B_{12}, B_{12} coenzymes and cobalamines,
Zinc : Carbonic anhydrase, carboxy peptidase and metallothioneins, interchangeability of Zinc and Cobalt in enzymes.
Magnesium : Role in chlorophyll, complexes with ATP and ADP

.... 9L

Unit-5 Bioinorganic Chemistry (continued)

Active transport of ions across membranes - the sodium pump; Toxicity of mercury, cadmium, lead, beryllium, selenium and arsenic; biological defence mechanisms.

Application of Group theory

Applications of group theory to the construction of molecular orbitals and hybrid orbitals: Transformation properties of atomic orbitals and byderidization scheme for - and - bonding; bybrid orbitals as L.C.A.O., M.O. theory for AB_n-type molecules, the relationship of the M.O. and the hyberidization treatment, M.O. for regular octahedral and tetrahedral molecules.

.... 9L

References :

1. F.A. Cotton and G. Wilkinson, 'Advanced Inorganic Chemistry', John-Wiley, 4th Edition, 1980; 5th Edition, 1988.
2. C.Kutal and A.W. Adamson in 'Comprehensive Coordination Chemistry', Vol. 1, Editor-in-Chief, G. Wilkinson, pages 385-411, 1987.
3. E.I. Ochiai, 'Bioinorganic Chemistry- and introduction', Allyn & Bacon Inc., 1977.
4. M.N. Hughes 'The Inorganic Chemistry of Biological Processes', Wiley, 1981.
5. F.A. Cotton, 'Chemical Application of Group Theory', Wiley Eastern 2nd Edition, 1976.

Contd/-

5:2:4(15)

CHEM - 421

ORGANIC CHEMISTRY - I

Unit-1 BRIEF REVIEW ON BONDING AND STRUCTURE :

Covalent bonds, polar bonds, coordinate covalent bonds, molecular bonds, hydrogen bonds, and non bonding intermolecular forces, electronegativities, intermolecular forces and charge distribution and molecular properties. Dissociation of acids and bases. Scales of acidities of organic molecules and lewis acid base concepts. Concept of aromaticity, Huckel's (4n + 2) rule, homoaromaticity n-annulene hetero annulene.

ORGANIC REACTIONS :

Reaction rates, transition state theory and parameters influencing reaction rates. Nucleophilic substitution at saturated carbon, reaction mechanism, stereochemistry relative reactivity and cyclization reactions. Synthetic applications of nucleophilic substitution involving alcohols, thiols, amines, alkylhalides, hydrides, c-c and c-o bond, Gabriel synthesis of amines.

.... SL

UNIT -2 BASIC CONCEPTS OF STEREOCHEMISTRY :

Stereochemical features of the carbon atom, bond characteristics molecular models, conformations (Rotational isomerism), geometrical isomerism, optical isomerism, (Enantiomerism) projection formulas, recemates and diastereoisomerism, Asymmetry and chirality, enantiotopic and diastereo topic relationships of atoms and groups. The sign of rotation and the configuration, Nomenclature of optical isomers and the special structure of rings. Geometrical and optical isomerism in alicyclic system, types of optically active substances, stereochemical specificity of reactions.

.... 3L

Unit-3 CARBONYL AND RELATED GROUPS (NUCLEOPHILIC ADDITION):

Reactivity of carbonyl group. nucleophilic addition of hetero atoms (N,O,S,X), hydride donors, as nucleophiles, carbanion additions,

Contd.../-

organometal reagents, addition elimination and the aldol type of condensations, Vinylogous or conjugate addition carbon dioxide derivatives and other nucleophilic additions to related groups.

....3L

Unit - 4 CARBONYL AND RELATED GROUPS (NUCLEOPHILIC SUBSTITUTION) :

Introduction to carboxylic acid family, substitution by hydrides and organometallic carbanions. Acylation of carbon, carbonyl cyclization reactions and cleavage of carbonyl compounds. Carbonic acid derivatives and decarbozylation reactions. Nucleophilic substitution in related unsaturated groups and Vinylogous substitutions. Other aromatic nucleophilic substitutions, nucleophilic addition and substitution in synthesis. Summary of carnoby1 reactions.

.....8L

Unit - 5 ELIMINATION REACTIONS :

Introduction to elimination reactions, alkenes by eliminations with proton loss and alkenes by other eliminations. Other double bonds (C = N, C = O) by elimination and the triple bonds by eliminations.

ELECTROPHILIC ADDITIONS TO MULTIPLE BONDS:

Direction and stereochemistry of addition, alkylhalides from additions hydration to alcohols and related compounds. Other trans additions, CIS additions and the addition and elimination in organic compound synthesis.

ELECTROPHILIC SUBSTITUTION : AROMATIC COMPOUNDS:

The mechanism of Electrophilic substitution with reference to halogenation to aryl halides, nitration to aryl compounds and sulphonation to arylsulphonyl compounds. Protons as electrophiles, alkylation and acylation including the synthesis of aromatic compounds. Sandmeyer reaction, Gatterman reaction, Ullmann reaction.

....8L.

RECOMMENDED BOOKS :

1. The modern structural theory of organic Chemistry by Lloyd N. Ferguson. Prentice Hall India (1973).

2. The nature of Chemical bond by Linus Pauling, Cornell University press (1960)

3. Organic Chemistry by J.B. Hendrickson. D.J. Cram and George Hammonds, International student edition. Mcgraw Hill Book company, Kogakusha company Ltd. Third Edn.

4. Organic Chemistry, pine cram Hendrickson and Hammond Mcgraw Hill Book Company.

5. Stereochemistry, V.M. Potapov. Mir publishers Moscow (1979)

6. Stereochemistry of Carbon compunds, Eliel Mcgraw Hill Book Company Inc (1962)

ORGANIC CHEMISTRY - II

CHEM - 422

Reductive Reaction

(a) Catalytic Hydrogenation and Dehydrogenation

Introduction to catalytic hydrogenation dehydrogenation, reduction of functional groups, Raney Nickel desulphurization, homogenous catalytic hydrogenation.

(b) Dissolving metal Reduction :- Liquid Ammonia Reduction, Birch Reduction and Clemmensen Reduction.

(c) Metal bydride Reduction and Related Reduction

Reduction of carbonyl compounds with metal hydrides, stereochemistry, and mechanism of reduction, reduction of other functional group by metal bydribe, Meerwein-Pondorf- Varley Reduction, hydroboration and related Readtion including reaction of alkyl borane.

(d) Reduction with Hydrazine and its derivatives

The Wolf-Kishner reduction and related, Reduction of Tosylhydrazone, reduction with diimide, reduction employing hydrazine and hydrogenation catalyst.

Contd../-

Unit-2 Oxidation Reactions

(a) Oxidation with chromium and manganese compounds

Oxidation of alcohol, aldehydes, carbon - carbon double bond carbon hydrogen bonds in hydrocarbon, Pyridinium chlonochromate oxidation (PCC)

(b) Oxidation with peracids and other peroxides

Oxidation of carbon - carbon double bond, Sharpless asymmetric epoxidation, oxidation of carbonyl compaund, Baeyer Villegar oxidation.

(c) Other methods of oxidation

Oxidation with periodic acid, osmium trioxide, ozonization, Lead Tetraacetate, Mecuric acetate, selenium dioxide, oxidation of allylic C-H bond (NBS); singlet molecular oxygen.

UNIT - 3

Carbonium ion :- Sources of carbonium ion, formation of carbonium ion, Structure & stability of carbonium ion, classical and non-classical carbonium ion, budged carbonium ion, neighbouring group participation Rearrangement involving carbonium ion i.e. Wagner - Meerwein Rearrange-ment, Dienone Phenol Rearrangement, Reaction involving acyl cation, PPA cyclization & Fries Rearrangement.

Unit-4 Carbene - Divalent carbon compound, generation of carbene, reactivity stability and structure of carbenes, Singlet & trimplet carbene reactions. Rearrangement of carbene i.e. cyclopropanation C-H insertion, wolff Rearrangement, Arndt Eistert Synthesis.

Nitrene - Generation and structure of nitrene Reaction of nitrene i.e. aziridine formation, C-H insertion, Rearrangement of nitrene, Hoffmann, curtiuos and Schmidt Rearrangement.

Carbanions, Carbon acids, thermodynamic acidity scale, relation between thermodynamic and kinetic acidity and effect of medium in equilibrium carbanion structure and acidity; Reaction of Carbanion, C-C bondformation reaction, alkylation reaction, Stock enamene

Contd../-

reaction, Michael reaction Acylation of carbanion Claisen condensation; Aldol condensation and related reaction i.e. Perkin, Stobbe, Knoevenagel Darzen, Reformatsky, Mannich reaction, Dieckmann Cyclization, Stabilized carbanions i.e. sulphur and phosphorous ylids, Wittig reaction, 1,3-dithiane anion concept of Umpolung, Rearrangement involving carbanion, Favorskie, Nebel, Rambung - Bechlund rearrangement.

Benzyne, Structure of aryne, generation of benzyne, reaction, rearrangement of benzyne.

Free Radical Reactions - Generation of Free radical, Radical coupling Reaction, substitution at C-H bond, addition reaction of radical, radical substitution in aromatic compounds.

Unit-5 (a) Organic Photo Chemistry

Light absorption and electronic transition, Excited state of organic molecules, Jabelonski Diagram, quantum yields, Intersystem crossing Photosensiti zation and energy transfer reaction; Photochemistry of olefins and carbonyl compounds, Norish I and Norish II type reactions, Photooxygenation and Photofragmentation, Paterno-Buchi reaction di- methane di- methane rearrangement, Barton's reaction Photocycloaddition.

(b) Pericyclic Reactions- Orbital symmetry and pericyclic reactions, correlation diagram, Stereochemistry of electrocyclic and cyclo-addition reaction with enough examples, Sigmatropic reactions with examples of Somlett-Hauser rearrangement, Fischer Indole synthesis.

...8L

Recommended Books

1. Modern Synthetic Reactions, H.O. House, W.A. Benjamin, Inc., 1972.
2. Carbene, Nitrene and Aryne by T.L. GilChrist and C.W. Rees, Nelson, London (1969)
3. Nitrenes, W. Lwouski, Interscience New York (1969)
4. Highlights in Organic Chemistry by I. Noble.

Contd..../-

5. Molecular Reactions and Photochemistry by Charles Depue and O.L. Chapman, Prentice Hall India (1975).

6. Conservation of Orbital Symmetry, R.B. Woodward and R. Hoffmann, Verlag Chemie, Academic Press (1970).

7. Frontier Orbital and Organic Chemical Reactions, Ian Flemming, John Wiley and Sons, (1976).

8. Related latest reviews and monographs in every subject.

CHEM-424

ORGANIC CHEMISTRY-III

UNIT-1 (a) Newer Reagents in Organic Synthesis

Phase transfer catalysts (hexadecyl trimethylammonium bromide), dicyclohexyl carbodiimide, diazomethane, Merrifield Resin, organosilicon compound(Trimethyl silyl iodide), organolithium and organocopper reagents, Trinbutyl tin hydride, concept of Regio,Cheno-stereo selective reagents.

(b) Synthesis of 3 membered heterocycles like, aziridine, epoxide, thiirene their reactions and rearrangements.

(c) Synthesis and reactions of four membered heterocycles oxetance,azitidine, thiitane with emphasis on B. lactam ring, total synthesis of penicillin and cephalosporin.

UNIT-2 Synthesis of five membered heteroxycles, thiophene,furan and pyrroles, electrophilic and nucleophilic substitution, radical reaction, structure of porphyrin, chlorophyll, haemoglobin,

Synthesis and reactions of five membered heterocycles with two heteroatomes i.e. imidazole, isoxazole, oxazole,thiazole, isothiazole, pyrazole, structure of thiamine and its function.

.....8

UNIT-3 Synthesis and Reactions of Indoles,(Some concept of synthesis of Benzofuran and Benzothiophene also). Synthesis of Reserpene and lysergic acid diethylamide, structures of some representative indole alkaloids i.e. yohimbine & group of indole alkaloids.

Synthesis and Reactions of pyridines, nucleophilic and electrophilic substitution, structure and synthesis of nicotine and pyridoxal.

Contd/..../-

UNIT-4 Quinoline and Isoquinolene

General synthetic approaches and reactions, electrophilic and nucleophilic substitution, structure of few representative quinoline and Isoquinoline alkaloids i.e., morphine, apomorphine, thebaine papaverine, quinine and cinchonine etc.

Diazine ,pyridazine, pyrimidine and pyrazone, S-trizine their synthesis and reactions, examples of few biologically active pyrimidines.

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UNIT-5 (a) Structure of Nucleic acid, RNA,DNA, structure of various purine and pyrimidine bases, Nucleotides and nucleosides, their nomenclature structure of NADP,ATP and their function, base pacing and H-bonding in DNA type chain of RNA, Replication of DNA, mutation and chemical mutagenesis.

Proteins and aminoacids

Structure of essential aminoacids, their physical and chemical properties,isoelectric point, isolation of aminoacid paper chromatography and electrophotesis, naming of peptide chain, determination of sequene of amino acids in polypeptide chain (N-terminal and C-terminal) nerifield synthesis of polypeptides denaturation of protein, helical structure of protein, pleated structure of protein, Biosynthesis of protein, codon, anticodon, structure of t-RNA,genetic code, transcription etc.

Contd/..../-

Recommended Books

1. Modern Heterocyclic Chemistry, L. Paquette, W.A. Benjamin, Inc. (1968)

2. Ring transformation of heterocyclic Vol. I and II, Van Der Plas, Acad. Press 1976).

3. Comprehensive heterocyclic Chemistry Edition Katrit 3 Ky and Rees, Vol. 1,2,3,4,5,6,7, Pergamon Press (1984)

4. Organic Chemistry Vol. II, I.L. Finar, ELBS.

5. Qutlines of BioChemistry, Cohn and Slumpt, 3rd Edition, John Wiley.

6. Biological Chemistry, H.R. Mahler, Eugene H. Cordes, Harper International.

Contd/.../-

5:2:4(24)

CHEM-521

ORGANIC CHEMISTRY-IV

Biogenetic and synthetic studies of Natural Products

UNIT-1 Coenzyme and their role in biochemical transformations with reference to coenzyme A, Lipoic acid, pyridoxal phosphate, thiamine pyrophosphate tetrahydrofolic acid, pyridine Nucleotide, Flavin co-enzyme, Heme coenzyme, Biotin and Vitamin B_{12}

Classification of natural products based on chemisal physiological activity, taxanomy and biogenesis; Introduction to methods of isolation of natural products and structural determination by chemical degradation and spectroscopic data.

.....8 L

UNIT-2 Studies on Biosynthetic pathways of natural products using Co-enzymes and catalysts and synthesis of selected natural products based on biogenetic classification Fatty acid derivatives and related compounds; including general biogenesis of their class of compounds and the synthesis of cis-kJasmone methyl Insmonate, prostoglandins, exaltine and muscone.

.....8 L

UNIT-3 General biogenetic studies of mono and sequiterpenes and trans-chrysanthemic acid cyclopentano monoterpene lactones. Biosynthetic and synthetic studies of loganin and secologanin- synthesis of (a) cis-Juvenile hormone, transannular cyclization of caryophyllene and synthesis of caryophyllene and isocaryophyllene Rearrangement of santonic acid and bisabolene type of sesqueterpene. Rearrangement of longifolene and the synthesis of longifolene and isolengifolene.

UNIT-4 General biosynthesis of Diterpenes and the synthesis of podocarpic acid, abjectic acid; monosaccharide, Definition and classification; D-Glucose, Glucose anomers; Hemiacetals; Conformation of monosaccharide; Disaccharide, maltose,

Contd/...../-

cellulose, lactose polysaccharide starch, their structure; of amylose, amylopectin; structure of cellulose; maltose, Reactions of cellulose, Rayer and cellophene.

UNIT-5 Biosynthetic studies on higher terpenes and steriods; synthesis of squalene, lanosterol and caroteniods; nomenclature of steriods and synthesis of equilein, estrone and the total synthesis of non-aromatic steriods gastogens (progesterone). Degradation of diosgenin to progesterone and its synthesis; miscellaneous transformations in steriod molecules.

.....8 L

Recommended Books

1. Natural Product Chemistry Vol. I and II, Koji Nakanishi, T. Golo, S. Ito, S. Nalori and S. Zozee Kadansha Ltd./Academic Press, 1974.

2. Art in Biosynthesis, D. Rangnathan and S. Rangnathan, Vol. 1 Academic Press, New York.

3. Outlines of BioChemistry, E. E. Cohn and Stumpt, 3rd Ed., John Wiley.

4. The Biosynthesis of natural Products, J. D. Buloch, Ncgraw Hill.

5. Biological Chemistry, H. R. Mahlez and E-H. Cordes, Harper International Edition.

6. Aspects of Terpeniod Chemistry and Biochemistry, edited by T. W. Goodwin, Academic Press.

7. Chemistry and BioChemistry of Plant Pigments, 2nd ed. Vol. I edited by T. W. Goodwin, Academic Press.

Contd/...../-

5:2:4(26)

CHEM-423

ORGANIC PRACTICAL

1. Qualitative analysis of organic solid and liquid compounds. Separation of two organic compounds and their identifications.
2. Organic preparations. Atleast eight preparation(involving two or more than two steps) to be selected by the Department.
3. Quantitative analysis of the following:-
   1. Nitrogen; 2. Acetal; 3. Methoxy.
4. Demonstrative experimental involving the separation and purification of organic compounds from a mixture by chromatographic techniques.

Recommended Books

1. Experimental Organic Chemistry vol-II, P.R.Singh, D.S.Gupta, K.S.Bajpai
2. Unitized Experimental in Organic Chemistry East-West Press Pvt. Ltd. New Delhi, 1964; Brewster R.G., vanderwnf, C.A., Mcwen W.E.
3. Practical Organic Chemistry Vogel A. I (Confmans)
4. Practical Heterocyclic Chemistry, A.O.Fitton and R.K.Smallery.

CHEM-441

PHYSICAL CHEMISTRY-I

Unit-1 Thermodynamics

(a) A brief revision of: State functions and exact differentials, second law of thermodynamics, entropy, evaluation of entropy changes, master equation, Gibbs and Helmholtz functions, pressure and temperature dependence of Gibbs functions, Gibbs-Helmholtz equation, Maxwell relations. thermodynamic criteria for equilibrium.

(b) Third law of thermodynamics, entropy of mixing, approach to absolute zero; phase rule, derivation of phase rule; first order and second order phase transition, transition; Application of phase rule to three component systems; Distribution of solute between two mutually insoluble solvents.

,.....7 L

Contd/..../-

Unit-2 Applications of Thermodynamics

(a) Partial molar properties, determination of partial molar volume, Gibbs-Duhem equation, Chemical potential.

(b) Real solutions, Activity and activity coefficients, determination of activity and activity coefficients, mean ionic activity coefficient concept of fugaenty and standard state.

(c) Applications of thermodynamics to chemical reactions: Thermodynamic criteria for chemical equilibrium, equilibrium constants of chemical reactions, effect of temperature, pressure and catalysts on the chemical equilibrium constants, standard Gibbs free energy of formations; relationship among equilibrium constants.

.....7 L

Unit-3 Statistical Thermodynamj

(a) Ensembles-Postulates of ensemble averaging, canonical ensenable, grand canonical ensemble, microcanonical ensemble and their thermodynamics.

(b) Partition functions-- General relations for independent, distinguishable and indistinguishable molecules, Evaluation of translational partition function using particle in a boc model for ideal monatomic gas, Evaluation of rotational partition function for ideal diatomic and ployatomic gases.

.....7 L

Unit-4 Statistical Thermodynamics - II

Partition functions - Evaluation of vibrational partition function - for ideal diatomic gases using harmonic oscillator model, for monatomic crystal(Einstein model) and its heat capacity; evaluation of electronic partition function.
Chemical equilibria in ideal gases-- expression for equilibrium constant in terms of partition functions; application to some chemical equilibria.

.....7 L

Contd..../-

Unit-5. Kinetic Theory of Gases

(a) A brief review of Maxwell-- Boltzmann distribution law and its application to determine average energy and velocity of ideal gases.

(b) Molecular Collision-- frequency of molecular bombardment on a plane surface, molecular effusion, frequency of binarry collisions, mean free path.

(c) Transport phenomena in ideal gases - viscosity thermal conductivity, diffusion.

.....7 L

Recommended Books

1) P. W. Atkins - Physical Chemistry, Oxford (1985)

2) V. Fried, U. Blukis and H.F. Hameka - Physical Chemistry, Macmillan (1975)

3) Moelwyn- Hughes-Physical Chemistry, Pergamon Press, New York, 1961.

4) L.K. Nash - Elements of Classical and Statistical, Addision-Wesley Pub. Co., 1970.

5) Davidson - Statistical Mechanics, McGraw Hill, New York, 1962.

6) T.K. Hill-Statistical Thermodynamics, Addision-Wesley Pub. Co., 1960.

CHEM-442

PHYSICAL CHEMISTRY-II

Unit-1. Solid State Chemistry

A brief revision of : Growth and formation of cyrstal, chemical bonding in solids, purification methods-subilimation, zone refining, lattice energies of ionic crystals, crystal growths from solution and melt. Bravais lattices, miller indices and labelling of planes, determination of dimensions of a unit cubic cell and no. of atoms and molecules per unit cell.

(b) Chemical reactions of solids-tarnish reactions; growth kinetics, factors influencing reactions.

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Contd/..../-

Unit-2. Electronic Structure of Solids

(a) Types of solids:insulators, semiconductors, superconductors and metals, free electron approximation,bond theory,energy bands, energy gaps.

(b) electrons and holes atomic imperfections, point defects Frenkel and Schottky defects, F Centres,line defects,edge and screw dislocations.

(c) A brief mention of the concepts involved in electrical, optical,magnetic, thermal and mechanical properties of solids(derivations of quantitative expressions are required).

..... 7L

Unit-3. Surface Chemistry

(a) Surface tension and surface free energy, thermodynamics of surfaces, adsorption of gases on solids, adsorption isotherm, BET equation, estimation of surface areas of solids, catalytic activity at surfaces.

(b) An elementory idea about the methods used for the study to surfaces e.g., photoelectrospectroscopy.

Unit-4. Miscells

Critical micellor concention(CMC),methods used for determination of CMC,variation of cmc with chain length, temperature, and electrolytes;counter ion binding,hydrophobic interaction. A qualitative description of micelle structure;the association, micelle size and shape,internal structure of micelles, solubilizates.

.....7L

Unit-5 Liquid State

(a) Disorder in the liquid state;cohesion of liquids and internal pressure;intermolecular forces.

(b) Theory of liquids-Partion function for liquid systems; Free volume theory of liquids considering hard-sphere potential function, communal energy and entropy;Radial distribution function method-Clausius virial theoum, equation of s tate in terms of radial distribution function.

.....7L

Recommended Books

1. Moore-Basic Physical Chemistry, Printer's Hall(1936)

2. P. W. Atkins-Physical Chemistry, Oxford (1985)

3. H.B.Hanney-Solid State Chemistry, Pretice Hall(1967)

4. B.Lindman and H. Wennerstrnn-Micelles, Springer(1980)

5. J.A.Pryde - Liquid State, Hutchinson & Co, London(1966)

6. T.L.Hill-Statistical Thermodynamics, Addison-Wesley Pub. 6,(1960).

CHEM -443

PHYSICAL CHEMISTRY-III

Unit -1. Electrochemistry

Partial molar quantities-Partial molar free energy and chemical potential-Activity and activity coefficient-forms of activity coefficient-Activities of electrolytes-Mean actigity coefficient-Values of activity coefficient-Ionic strength-Application of Debye-Huckel theory to problems of activity coefficients-Activity coefficients from solubility measurements.

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Unit-2. Electrochemistry

Electrolytic Polarization-Dissolution and decomposition potentials-Determination of cathode and anode potentials-Concentration Polarization-Decomposition voltages of aqueous solutions-Hydrogen and oxygen overvoltages - Influence of current density, pH and temperature on overvoltage-Rate of growth of overvoltage-Theories of overvoltage.

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Contd/...../-

Unit - 3. Chemical Kinetics

Rates of chemical reactions;methods of determining the rate law;Arrhenius equation; Collision theory of reaction rates;steric factor;treatment of unimolecular reactions; activated complex theory; Eyring equation;ionic reactions-kinetic salt effects.

.....7L

Unit-4. Chemical Kinetics

Homogeneous Catalysis;acid-base catalysis;kinetics of enzyme reactions and enzyme inhibition;general features of fast reactions;study of fast reactions by relaxation methods, stopped-flow technique, flash photolysis, magnetic resonance methods.

.....7L

Unit-5. Magnetic Resonance

(i) Magnetic Resonance of Hydrogen atom:

The Magnetic Hamiltonian;the basic spin functions and zero order energies;the first order hyperfine interaction; the second order hyperfine interaction;The first order ESR Spectrum;the second order ESR Spectrum.

(ii) Nuclear Magnetic Resonance of Solids:

The Dipolar Coupling tensor;the NMR Spectrum of two coupled protons;The second moment of an NMR absorption line.

(iii) ESR Spectra Organic Radicals in Solution

Mechanism of the hyperfine coupling;the unpaired spin density;Indirect coupling through C-H bond;McConnell's Relation.

Recommended Books:

1. P. W. Atkins: Physical Chemistry,Oxford (1985)

2. A Carrington and a.D. McLachlan: Introduction to Magnetic Resonance,Harper International,(1967)

CHEM - 444

LABORATORY COURSE IN PHYSICAL CHEMISTRY

1. Determination of the equilibrium constant of the reaction KI + I_2 = KI_3.
2. Determination of the energy of activation for the hydrolysis of methyl acetate, using an acid catalyst.
3. Study of the reaction between acetone and iodine, in the presence of acid.
4. Determination of the order of the reaction between potassium bromate and potassium iodide.
5. Determination of the partial molal volume of a solute in solution.
6. Verffication of Beer-Lambert's law, and determination of pk_a of an indicator, spectrophotometrically.
7. Using the Abbe refractometer, determination of the following:-
   (a) radius of CCl_4 molecule.
   (b) composition of a mixture of acetone and methyl ethyl ketone from the study of the mixture law of refraction.
   (c) interaction between dioxan/acetone-water.
8. Determination of the specific rotation of sucrose, and its rate of hydrolysis, using the polarimeter.
9. Determination of the upper consolute solution temperature for the phenol-water system and to study the effect of sodium chloride on the system.
10. To obtain the phase diagram for a two-component system forming a congruent compound (Benzophenone-diphenylamine).
11. Determination of the transport number of Cu^{2+} ions by Hittorf's method .
12. Determination of the strengths of strong and weak acids, in a given mixture, using the pH meter.
13. Determination of (a) cell constant (b) strengths of strong and weak acids, in a given mixture, conductometrically.
14. Determination of the order of saponification of ethyl acetate with sodium hydroxide, conductometrically.

Contd/.../-

15. Determination of solubility and solubility product of Sparingly soluble salts ($PhSO_4$), conductometrically.

16. Determination of the strengths of halides in a mixture, potentiometrically.

17. Determination of the valency of mercurous ions, potentiometrically.

18. Determination of the hydrolysis constant of ammonium chloride, and the dissociation constant of ammonium hydroxide, potentiometrically.

19. Determination of the dipple moment of a polar molecule, using the dipole meter.

20. Experiment in differential thermal analysis.

21. Determination of glass transition temperature of a given salt, conductometrically.

22. Determination of pk_a of an indicator dye in micelle medium, spectrophotometrically.

Recommended Books

1. J.C.Ghosh: Experiments in Physical Chemistry, Bharati Bhavan, 1974.

2. J.N.Gurtu and R. Kapoor : Advanced Experimental Chemistry (Physical), S.Chand & Co., 1980.

3. A.Findlay's Practical Physical Chemistry (Revised by B.P.Levitt), Longman 1978.

4. W.J.Popiel : Laboratory Manual in Physical Chemistry, Oxford.

CHEM -541

PHYSICAL CHEMISTRY-IV

Unit-1. Application of Group theory to the treatment of large molecules by Huckel method.

Brief review of group theory; wave functions as bases for irreducible representations; projection operators; Symmetry-adapted linear combinations; Symmetry factoring of secular equations; a few illustrations using conjugated molecules; HMO method for heteroatomic compounds; the extended Huckel method.

.....9L

Contd/..../-

Unit-2. Statistical Mechanics

(a) Statistical mechanics of imperfect gases-the virial expansion for a one-component gas, virial coefficients.

(b) Quantum Statistics-Introduction to Firmi-Dirac and Bose-Einstein statistics, Ideal Fermi-Dirac and Bose-Einstein statistics, Ideal Fermi-Dirac gas-electrons in metals; ideal Bose-Einstein gas-helium.

.....9L

Unit-3 Chemical Dynamics

Kenetics of gas phase reactions-Hydrogen-bromine reaction; pyrolysis of hydrocarbons; pyrolysis of acetaldehyde; photolysis of acetone; decomposition of ozone; decomposition of nitrogen pentoxide.

Kinetics of unimolecular reactions; the Lindemann-Hinshelwood theory of unimolecular reactions; the Rice-Rampsberger-kassel-Marcus theory of unimolecular reactions.
Chemical reaction dynamics; steady state kinetics; kinetic and thermodynamic control of reactions.

.....9L

Unit-4. Photoacoustic Spectroscopy and Lasers

(a) Basic principles of photoacoustic spectroscopy; instrumentation and applications of photoacoustic spectroscopy.

(b) Basic principles of lasers: Population inversion, need for a resonator, qualitative description of He-Ne laser, characteristic laser radiation and a few applications.

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Unit-5 Electrochemistry

Electrokinetic effects; electrical double layer and its structure; Stern's theory of the double layer; streaming potential; electrophoresis; determination of zeta potential; influence of ions on electrokinetic phenomena.

Contd/.../-

Dissolution of an ionic crystal; quantitative treatment of ion-solvent interactions; the Born model; entropy and enthalpy of ion-solvent interactions; experimental evaluation of heat of interaction of a salt and solvent.

.....9L

Recommended Books:

1. Cotton: Chemical Application of Group Theory; Willey Eastern Ltd., New Delhi (1971)
2. Orchin and Jaffe: Symmetry, Orbitals and Spectra, Wiley Interscience, New York, (1971)
3. McGlynn et al.: Introduction to Applied quantum Chemistry, Holt, Rinehard & Winston Inc., New York, (1972).
4. T.L. Hill- Statistical Thermodynamics, Addition Wesley Pub. Co., (1960)
5. Davidson- Statistical Mechanics, McGraw Hill, New York, (1962)
6. A Rosencwait-Photoacounstics and Photoacoustic Spectroscopy, Wiley, (1980).
7. S. W. Benson: Foundations of Chemical Kinetics, McGraw Hill (1982).
8. P.J. Robinson and K.A. Holbrook, Unimolecular Reactions, Wiley Interscience (1983).

5:2:4(36)

CHEM - 461.

Quantum Chemistry

Unit-1; Quantum Mechanics with brief introduction to Classical Mechanics.

(i) Lagrangian and Hamilton's equation of motion. Examples-- Particle on a ring, harmonis exillator, two interacting particles.

(ii) Particles and Waves-- wave nature of matter, the de Broglie relation, Heisenberg's uncertainly relation, Schrodinger equation.

(iii) Operators--- Linear operators, commutation of operators, eigenvalues and eigenfunctions.

(iv) Postulates of Quantum Mechanics.

(v) Exact Solutions of the Schrodinger equation: Linear Motion -- Particle in a box; application to conjugated systems.

... 7L

Unit--2. Exact Solution of the Schrodinger equation.

(i) Linear Motion (continued)-- (a) Potential energy barriers and tunnel effect;

(b) One dimensional harmonic oscillator.

(ii) Rotational Motion-- (a) Particle on a ring.
(b) Particle on a sphere, Spherical harmonics, angular momentum angular momentum operators, shift operators, eignvalues and eigen functions of angular momentum.

(c) Rigid Rotator.

... 7L

Contd.....

Unit-3.A. Exact Solutions of Schroclinger equation.

Rotational motion (continued) -- Hydrogen atom, wave functions of hydrogen atoms, atomic orbitals, space quantization and Zeeman effect, electron spin.

B. Approximate Methods.

(i) Perturbation Theory for non-degenerate states, applications.

(ii) Variation Theory, variation treatment of the helium atom.

(iii) Qualitative treatment of Hartree-Fock SCF model for many electron atoms, Slater Orbitals.

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Unit-4. Moleculer Orbital theory of Diatomic Molecules.

Born-Oppenheimer approximation; LCAO approximation; Coulumb and bond integrals. Hydrogen molecule ion H_2^+; Hydrogen molecule, H_2; Homonuclear diatomics; Heteronuclear diatomics; Correlation diagrams; Types of molecular orbitals; Isoelectronic Principle.

Unit-5. A. Valence Bond Theory of Diatomic Molecules

The H_2 molecule; Homonuclear and heteronuclear diatomics; Quantum mechanical structures and the meaning of resonance; dipole moment; ionic- covalent resonance energy; Singlets and triplets.

B. Comparison of Molecular Orbital and Valence Bond Methods.

Charge densities and polarity; Equivalence of the MO and VB methods; Configuration interaction.

...7L

Recommended Books:

1) Pauling and Wilson, introduction to Quantum Mechanics, Mc Graw Hill, New York, (1935).
2) Strauss, Quantum Mechanics, Prentice Hall, (1972).
3. Atkins, Molecular Quantum Mechanics, Oxford Univ.Press,(1983)
4. Eyring, Walter and Kimball, Quantum Chemistry, John Wiley & Sons, Icn, (1944).
5. Coulson, Valence, Oxford Univ. Press, (1961).
6. Mc Weeny, Coulson's Valence, ELBS, (1979).

Contd.....

CHEM - 462.

Chemical Binding and Molecular Spectroscopy.

Unit-1. Chemical Binding- Polyatomic Molecules; Structure and Shape.

Localized bonds in polyyatomic molecules-bond properties; Non-localized orbitals with H_2O as example ; Equivalence of these two approaches; the perfect-pairing approximation; principal types of s-p hybriddization; Factors determining molecular shapes; Atomic radii; bond lengths and bond energies.

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Unit-2. Chemical Binding (Continued), conjegated and Aromatic Molecules: Simple Hückel Theory.

Effevtive one electron Hamiltomian for pi system; pi electron approximation; simple Huckel treatment and ethelene, allyl and butadiene systems; charge densities and bond orders; simple formula and diagrammatic methods for calculating the energies of linear and cyclic polyenes; Huckel rule for aromaticity and antiaromaticity; limitations of simple Huckel model.

....7L

Unit-3. Molecular Spectroscopy.

A. Interaction of electromagnetic radiation with matter; spectral transition; nature of spectral transitions; selection rules; line width and intensity of absorbtion.

B. Microwave spectra - Classsification of molecules; rigid and non-rigid rotator models; rotational energies of diatomic molecules; determination of moment of inertia and bond lengths of simple linear molecules from rotational spectra; relative intensities of apectral lines.

c. Electronic spectra - Electronic spectra of diatomic molecules; Frank- Condon principle; Electronic spectra of polatomic molecules; Electronic transitions with HCHO as example; Chromophore; auxochrome; solvent effects on electronic transitions.

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Unit-4. Molecular Spectroscopy (Continued).

A. Vibrational spectra - Deductions of molecular properties from vibrational spectra of diatomic molecules; overtones; Morse function; hot bands; vibrational energies of polyatomic molecules; normal modes of vibration; fermi resonance; characteristic stretching frequencies of certain main functional groups.

B. Raman spectra - classical and quantum theory of Raman effect; pure rotational and vibrational Raman spectra.

Unit-5. Magnetic Resonance Spectroscopy.

Interaction of magnetic moments with magnetic field; larmor equation. Condition for magnetic resonance absorption; Spin lattice and spin-spin relaxation ; Line widths and line shapes. Chemical shifts; and the various factors that contribute to chemical shifts; ring currents; diamagnetic amisotropy; Spin-spin splitings; mechanism of Spin-spin splitings in solution; high resolution NMR spectra of simple molecules involving spin-spin splitings. ESR spectra of simple free radicals in solution.

.....7L

Recommended Books:

1. Mc Weeny - Coulson's valence, ELBS, 1979.
2. Salem- M.O. Theory of Conjugated systems, W.A. Benjamin, Inc., New York, 1966.
3. Chandra- Introductory Quantum Chemistry, Mc Graw Hill, 1979.
4. Chang- Basic Principles of Spectroscopy, Mc Graw,Hill, 1971.
5. Barrow- Molecular Spectroscopy, Mc Graw Hill, (InternationalStudent Edition), 1985.
6. Banwell- Fundament of Molecular Spectroscopy, Tata McGraw Hill, 1975.
7. Carrington & Mclachlan, International Magnetic Resonance, Harper International Edition, 1967.
8. Mclachlan, Magnetic Resonance, Oxford Univ. Press.
9. Gunther, NMR- Basic Principles and applications.

5:2:4(40)

CHEM - 463

APPLICATION OF SPECTROSCOPIC METHODS

A. Application to Organic Chemistry.

UNIT-1. Ultraviolet and visible Spectroscopy - Various electronic transitions between ultraviolet and visible region (185-800m u); Beer Lambert law, ultraviolet bands for carbony 1 compounds, unsaturated carbony 1 compounds, dienes, conjegated polyenes, woodward rule for conjugated dienes and carbony 1 compounds, ultraviolet spectra of aromatic, heterocyclic compounds, steric effect in bi pheny 1.

Infrared spectroscopy - Characteristic vibrational frequencies of alkenes, alkanes, alkynes, aromatic compounds, alcohols, ehters, phenols, amines; Detailed study of vibrational frequencies of carbony 1 compounds, i.e. ketone, aldehyde, ester, amide, acid anhydride, lactome, lactam conjugated carbon 1 compound, effect of hydrogen bonding and solvent effect on vibrational frequencies, overtone, combination and fermi resonance bands; Extension of these studies to various organic molecules for structural assignments.

Optical rotatory dispersion and circular Dichroism (ORD and CD)

Defination, deduction of absolute configuration, octant rule for ketones.

.....6 L

UNIT-2. Nuclear magnetic Resonance Spectroscopy

General introduction, and defination, Chemical shift, spin-spin interaction, shielding mechanism, mechanism of measurement; Chemical exchange, approximate chemical shift values and correlations for protons bonded to carbon, i.e. aliphatic proton, olefenic proton aldehydic proton, aromatic proton, proton bonded to other nuclei, i.e. alcohols, phenols, enols, carbocylic acids, enols, amines, amides, SH, Chemical exchange, effect of duteration, proton attached to othernuclei complex spin-spin interaction two enteracting nuclei, three and four, five interacting nuclei (first order spectra), complex interaction, virtual coupling, stereochemistry, hindered ratation, Karplus curve, variation of coupling constant with dihedral angle, Nuclear magnetic double resonance simplification of complex spectra, shift reagent , spin tickling fourier transform technique , Nuclear overhauser (NOE) effect; resonance of other nuclei.

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UNIT-3. Carbon-13 NMR Spectroscopy

Chemical shift, aliphatic, olefinic, alkynes, aromatic, heteroaromatic carbony 1 carbon, 13c coupling constants, two dimensional NMR spectroscopy; NOISY, COSY, DEPT, INEPT terminology.

Mass spectroscopy : Mass spectral fragmentation of organic compounds, common functional groups, molecular ion peak, metastable peak, Mclafferty rearrangement , example of mass spectral fragmentation of organic compounds with respect to their structure determination.

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APPLICATION OF SPECTROSCOPIC METHODS

B. Applications to inorganic Chemistry.

Unit-1. Optical Spectroscopy

Infrared and Raman Spectroscopy

Structural Studies (involving IR and Raman Spectroscopy) of coordination compounds containing the following molecules-ions and ligands.

NH_3, H_2O, OH^-, NO_3^-, SO_4^{2-}, ClO_4^-, CN^-, SCN^-, N_3, H^-, O_2, PR_3, OPR_3, halides.

Electronic Spectroscopy

Application to coordination compounds for their structural characterization.

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Unit-2. Magnetic Resonance Spectroscopy

Electron spin resonance spectroscopy

Esr of d^1 and d^9 transition metal ions in cubic and tetragonal ligand fields, anisotropic nature of g values and metal hyperfine coupling constants.

Nuclear magnetic resonance spectroscopy

Applications of ^1H, ^{31}P, ^{19}F NMR spectroscopy in the structural assesment of inorganic compounds.

.....6L

Unit-3. Mass Spectrometry

Principles of Electron-impact induced mass spectrometry, qualitative and semiquantitative theories including QET, concept of metastable ions and transitions, stavensan's rule, basic difference in the fragmentation of and II- bonded metal compounds. Applications to metal compounds containing carbony 1 /nitrosyl/alkyl/II- cyclopentadienyl and acetylacetonate.

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Moessbauer Spectroscopy

Principle., Isomershift, Quadrupole effect, Effect of Magnetic field. Application to iron and tin compounds.

.....5L

Recommended Books:

1. K. Nakamoto, Infrared and Raman Spectra of Inorganic and Coordination Compounds', 4th Ed., John Willey, 1986.

2. A.B.P. Lever, 'Inorganic electronic Spectroscopy, 2nd Rev. Edn. Elsevier, 1984.

3. R.S. Drago, ' Physical Methods in Inorganic Chemistry'.

4. M.R. Litzow and T.R. Spelding, ' Mass Spectrometry of Inorganic and Organometallic compounds, Elsvier, 1973.

5:3:1:(1)

5:3 - Research -

(i) Recognition of Dr. H.S.Gupta, Scientist S-3 Head, Division of Plant Breeding, ICAR Research Complex, N.E. Region as Ph.D. Supervisor -

The 17th meeting of the Board of Research Studies in Sciences held on 1.3.1990 vide its resolution No.RSS:17:90:14 resolved to recommend to the Academic Council, the case of Dr. H.S.Gupta, Scientist S-3 Head, Division of Plant Breeding for recognition as research guide. The bio-data of Dr. H.S. Gupta is placed at Annexure - "A".

According to clause 4(1) and (2) of Ordinance OC-4 on the Doctor of Philosophy Programme, only a teacher of the University can be appointed as a Supervisor to guide and Supervise the research work of a candidate. A Joint Supervisor or Consultant need not, however, be a teacher of the University.

The matter is placed for consideration of the Council.

5:3:1:(2) ANNEXURE-'A'

CURRICULUM VITAE OF H.S.GUPTA

1. Name : HARI SHANKER GUPTA

2. Present Address : Dr. H.S.Gupta,
Scientist S-3 and Head Division of Plant Breeding, ICAR Research complex for NEH Region, LAHAN, Shillong- 793 004.
INDIA.

3. Date of Birth : 1st July, 1953.

4. Academic Qualifications :

	Name of University	Exam(S) passed	Year of passing	Division
(i)	UP Board Allahabad	High School	1967	I
(ii)	Univ. of Gorakhpur	B.Sc	1971	I
(iii)	G.B.Pant.University, Pant Nagar.	M.Sc(Genetics)	1974	I
(iv)	I.I.T. Kharagpur	Ph.D.(Applied Botany)	1982	-
(v)	UNIV.OF NOTTINGHAM (U.K)	Post-Doc-Res. (Plant Biotechnology)	1987-1988	

5. Present Research Interest :

(i) Induction and egaluation of gameto-and somaclonal variants in rice
(ii) Isolation, culture, fusion and regeneration of rice protoplasts
(iii) Molecular Biology of cytoplasmic male sterility in rice
(iv) Breeding of rice varieties suitable for North Eastern Hills of India.

6. Publications : Please see APPENDIX-I

APPENDIX-'I'

I. A.LIST OF REVIEWS PUBLISHED/ACCEPTED FOR PUBLICATION

1. Gupta, H.S. (1985) Plant Lysosomes : Aspects and Prospects Curr. Sci. 54. 554-559.

2. Thakur, D.N., Gupta, H.S. and Prasad, R.N. (1986). Problems and Prospects of increasing rice production in North Eastern States. J. North Eastern Council. 7:No 9: 1-18.

3. Srivastava, H.K. and Gupta, H.S. (1989) Mitochondrial genome with special reference to male sterility. In: Biochemical Aspects of Crop Improvement. In Press.

II. B.LIST OF RESEARCH PAPERS PUBLISHED/ACCEPTED FOR PUBLICATION IN VARIOUS NATIONAL AND INTERNATIONAL JOURNALS.

4. Gupta, H.S. Barua, B.L. and Dhiman, K.R. (1982) Neutral red as market for Lysosome-like particles in potato. Current Science. 51 :473-474.

5. Gupta, Hari.S. and De, Deepesh N. (1983) Photodynamic denaturation of chromosomal DNA in Situ by acridine orange. Indian J. Experimental Biology, 21: 533-535.

6. Gupta, H.S. and De Deepesh N. (1983) Uptake and accumulation of acridine orange by Plant cells. Proceedings of Indian National Science Academy. Part-B.49 :653-660.

7. Gupta, H.S. and De Deepesh N. (1983) Functional analogy of plant vacuoles with animal lysosomes. Current Science. 52 : 680-682

8. Gupta, H.S. (1985) Acridine orange-induced formation of myeline-like structures in plant cells. Indian J. Genet. 45:133-137.

9. Gupta, H.S. and De Deepesh N. (1985) Detoxification of acridine orange by plant cells as studied by fluorescence microscopy. J. Assam Sci. Soc. 28:1-9.

10. Sharma, B.D., Gupta, H.S. and Dhiman, K.R. (1985) Performance of advanced hybrids and released potato varieties in North-Eastern States. J. North-Eastern Council. 6:25-27.

11. Gupta, H.S. and De. Deepesh N. (1986) Acridine Orange- induced autophagy in plant cells. Indian J. Genet. 46:406-412.

Contd/.../-

12. Sharma, B.D. and Gupta, H.S.(1986) Constaints to improvement and production of potato in North-Eastern State.J. North-Eastern Council.7:33-37.

13. Barman, K.R., Barua, B.L.and Gupta, H.S.(1986) Phenotypic stability of tuber yield in potato hybrids. Crop Improvement. 13:226-227.

14. Gupta,H.S., Borthakur, D.N. and Bhuyan, R.N. (1987) A new feulgen staining schedule for staging of anthers in Oryza sativa L. J. Meghalaya Sci. Soc. 10:1-3.

15. Gupta, H.S.(1987).A rapid staining technique for staging of microspores in rice(Oryza sativa L.) and rice bean (Vigna umbellata),Curr.Sci.56 :1072-1073.

16. Gupta, H.S.,Cocking E.C. and Mulligan B.J.(1987).Studies on the transfer of the mitochondrial genome through protoplast fusion in rice: Proceedings of 7th International Protoplast Symposium held at International Agricultural Centre, Wageningen, The Netherlands from Dec.6th to 11th 1987

17. Gupta,H.S. and Borthakur, D.N.(1987).Improved rate of cellus induction from rice anther culture following microscopic staging of microspores in iron-alumhaematoxylin Theor.Appl.Genet.74:95-99.

18. Gupta, H.S. and De Deepesh N.(1988) Acridine orange-induced vacuolar uptake of cytoplasmic organelles in plant cells : An ultranstructural study.J.Plant Physiology. 132:254-256.

19. Gupta,H.S.(1988). Vacuolar autophagy: Apparent dilution and elimination of cytoplasmic organelle in acridine orange-treated plant cells: Caryologia(InPress).

20. Gupta, H.S., Rech E.L., Cocking E.C. and Davey M.R.(1988). Electroporation-and heat shock-enhanced division of protoplast-derived cells of Pennisetum scuamulatum J.Plant Physiol.132:457-459.

Contd/.../-

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22. Saleh, N.M., Mulligan, B.J., Cocking, E.C. and Gupta, H.S. (1989) Small mitochondrial DNA molecules of WA cytoplasm in rice are not necessarily associated with CMS. Theor. Appl. Genet. 77: In Press.

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2. Gupta, H.S., Bhuyan, R.N. and Kynta, A. (1986). Plant Lysosomes and their role in disease spread/control. Cell Biology New letter. 7: 15-18.

3. Gupta, H.S. and Bhuyan, R.N. (1986). Rice improvement through tissue culture. ICAR Research Complex's News Letter. 9: 1-2.

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(ii) Appointment of Supervisor to guide research of Shri D. Wanswett, Department of Zoology for Ph.D. -

Shri D. Wanswett was finally registered under (Late) Prof. M.K. Khare for Ph.D. After Prof. Khare expired in February, 1989, the candidate was left without the Supervisor. The Department could not recommend to the Board of Research Studies for appointment of a Supervisor as there is no teacher in the Department with specialisation on Developmental Biology in which the candidate is working. There is no provision in the Ordinance of the University for appointment of a Supervisor from other Universities. As per the Ordinance, a Supervisor is to be a teacher of the University. The Department proposes that a teacher from other University may be allowed to be appointed as the Supervisor as a special case. The letter of the Head, Department of Zoology may be seen at Annexure - A.

The matter is placed for consideration of the Council.

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5:3:2:(2)

ANNEXURE-'A'

No.F.1/Ph.D/PF/Wanswett/89-816 Dt.2nd June, 1990.

To

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

Sub: Ph.D.registration of Mr. Davodotto Wanswett-appointment of supervisor.

Re: My discussion with you on 15/5/90.

Sir,

Mr. D. Wanswett was finally registered under late Prof.M.K. Khare(registration No.351 of 16.2.89) for his Ph.D. degree on the topic "Study of Somite Formation in the tail bud region of chick embryo". It was unfortunate that Professor Khare expired in February, 1989 immediately after the final registration when the proposed work was in progress. Since then, Mr. Wanswett has been without a supervisor.He joined a college as a lecturer and continuing as a part-time research student. He has submitted an application indicating that in absence of his supervisor he could not complete all the works proposed in the synopsis, instead has done some other work besides the approved synopsis. In addition to, he now finds it difficult to compile the whole thing in the form of a thesis and also to apply for the revision of the synopsis. This department does not have any other faculty in the area of the specialisation i.e.Developmental Biology in which he is working. The post was advertised but no candidate applied for the same. It is the responsibility of the university in general and the department in particular to allot a supervisor to the student for completing his work. In the Ordinance there is no provision for a teacher from some other university to be a supervisor for such a candidate, As per my discussion with you, you had kindly agreed to place the matter before the Executive Council/Academic Council to get its approval for appointment of a teacher from another university as a special case for Mr. Wanswett to complete his Ph.D. thesis. Therefore, I now request you to get necessary approval at the earliest possible so that I could contact some teachers working in the same lines in other universities to come to our rescue. I shall proceed after getting the clearance from you on this matter which will help the student complete his work.

Thanking you and with regards.

Yours faithfully,

Sd/-B.K.Rata

5:5:1:(1)

5:5 - Examination Matters :

(i) Panel of examinars for M.Phil/Ph.D

The panel of examiners in respect of the following candidate has been approved by the School Board are now placed before the Academic Council for consideration .

The panels will be tabled by the Chair.

M.Phil

1. Sunil K.Pio(Geography)
2. D.Nengnong "
3. A.Saikia "
4. Imtitemsu Ao "
5. Wanri B.Rani "
6. Rajib Dutta "
7. Sonali Syam "
8. Munindra Borah "
9. Binod Muchahari"
10. Biren Swargiary"
11. Subrata Chakrabarty"
12. Nandini Chakravorty"
13. Susmita Biswas "
14. Osmond Kharmawphlang"

Ph.D

1. D.Ratno(Geography)
2. Lalrintluanga Pachuau(Geography)
3. S.N.Singh(Geography)

5:6:1:(1)

5.6: Establishment of new Depts/Centres/Courses:

(i) Introduction of Astrology in the curriculum of Indian Universities -

The University Grants Commission vide their letter No. F.1-96/89(CPP) dated the 13rd March, 1990 forwarded a copy of of the letter of the Government of India, Ministry of Human Resource Development (Department of Education) together with the letter of Shri A.K. Majumdar, S.D.O. (Structural),MECON, addressed to the former Prime-Minister of India for introduction of Astrology in the curriculum of Indian Universities. The letter of Shri Majumdar may be seen at Annexure - 'A'.

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5:6:1:(2)

ANNEXURE-'A'

From: A.K.Majumdar,
S.D.O.(Structural),MECON
Associate Member of Indian
Institute of Astrology(Cal)
F-57 HSL Colony,
Ranchi-834 002(Bihar)

To

Dated 15th August, 1989.

Shri Rajiv Gandhi,
Prime Minister of India,
1 Race Course Road,
New Delhi.

Subject: Need for including Astrology in the curriculum of Indian Universities.

Sir,

I am hereby submitting a petition for putting in a fervent plea to the highest executive authority of the Country for according an honourable status to the study of Astrology in the Country.

B A C K G R O U N D

We live in a world of uncertainties beset with diverse difficulties. The human heart when confronted with menacing imponderables, cries out in acute distress and perennially searches for a bed-rock of safety and security to which it can hold on, amidst the contending waves of probability. The nineteenth century science did give us some assurance of stability by formulating a mechanistic conception of the Universe. The consoling message of the Scientists was as follows :

"Analyse the objects of nature, break them up into their components and reassemble them conceptually, discovering the process the laws of nature in order to have control over the forces of nature".

Man and nature were considered to be two distinct entities, man being supposed to be free to exploit nature'adinfinitum', without running the risk of inflicting any damage on himself.

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OUTLOOK OF THE TWENTIETH CENTUARY

The onset of the twentieth centuary, however, has brought about a sea-change in the Scientific outlook. The self-assurance generated by the "MECHANISTIC CONCEPTION" of the Universe is fast disappearing. Scientists are no longer talking in terms of certainties. Currently the favourite subject of the Scientists is 'QUANTUM CHAOS' and they have to deal with "WAVES OF PROBABILITY". Man and nature are no longer deemed to be seperate. Man is now considered to be very much a part of nature and consequently man can not afford to exploit nature relentlessly and indiscriminately without exploiting himself in the process. The nineteenth century approach highlighting the duality between Man and Nature has now been replaced by a "HOLISTIC" approach which looks upon the Universe and Man to be "INTER-CONNECTED". This has led to the emergence of the environmental sciences. Ardent champions and Votaries of 'ECOLOGICAL BALANCE' are being listened to with increasing attention and seriousness, the world over.

INDIA'S SCIENTIFIC TRADITION

Set against the above back-drop of the developing situation in the world of science, the study of skies and the steller bodies and its relevance to human affairs, acquires a new significance. It is wellknown that India achieved great heights in many disciplines in ancient times but due to aquirks of history, continuity in the cultivation of many of these disciplines has been disrupted. The skeletal remains of some of the near-extinct disciplines, however, subsist even today.

Jyotish Shastra is one of such disciplines which has list its pristime glory but is still vibrant with a hidden flow of vitality. Distinguished foreigners who happened to have had encounters with specimens of 'JYOTISH SHASTRA' especially the predective charts of the celebrated 'PHRIGU' were amazed at the accuracy of the observations. A reference may be made in this connection to Mr.Slocum, the U.S. expert of world renown, specilising in the construction of

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dams, who came all the way from the States to India to oversee the erection of Bhakra Nangal Dam. Mr. Slocum was dun-founded by [illegible] Chart about himself which he came across in the collection of charts preserved at Hoshiarpur. A top technologist like Mr. Slocum was at a loss to account for the eerie accuracy of the observations made about him in the Bhrigu Chart. This is but one of many such episodes which constitute the basis of the credibility of 'JYOTISH SHASTRA' encompassing both Astronomy and Astrology.

UNIVERSAL APPEAL OF JYOTISH SHASTRA :

Whatever the pseudo-progressives may say in public about Hyotish Shastra for playing to the gallery, its universal appeal is be yond dispute. Those who rail at it in public have been found to be its secret votaries. Only the other day the Illustrated weekly of India, the leading periodical of this Country, came out with a front-page write-up on the subject , detailing the astrological predictions concerning the top political personalities of the Country, as made by their accredited astrological advisers. The periodical also flaunted the portraits of the leaders and their astrological advisers.

GENESIS OF JYOTISH SHASTRA AND ITS GRADUAL EVOLUTION

It will not be out of place at this stage, to give an outline of this discipline that effloresced in India ancient times and fascinated the rest of the world by its glorious achievements.

'JYOTISH SHASTRA' is an ancient 'SHASTRA' or discipline which is deemed to be part of the Vedas - the perennial fount of cosmic knowledge. That is why this 'SHASTRA' is called 'VEDANGA' i.e. a derivative part of the Vedas. 'JYOTISH' literally means the 'SHIRSHA' or 'JYOTI' or the crest of the light(of knowledge).

It comprises two wings-the Pure(Suddha) and the Applied (Phalita). The 'APPLIED' wing deals with the reality-oriented and need-based application of the principles enunciated in the 'PURE'

Contd ...../-

wing of 'JYOTISH SHASTRA'. The 'PURE' science may be compared to the roots of a tree while the 'APPLIED' science is analogous to the fruits thereof. A tree reaches its fulfilment in its fruits, so also science becomes meaningful by virtue of its diverse applications throught its 'APPLIED' branch. Pure knowledge is turned inward while the Applied knowledge is turned outward towards the society and it aimed at bringing about the welfare of the entire mankind.

According to Indian tradition, Bhrigu the great Seer took up the great cause of reaching succour to mankind and was immersed in deep meditation which, in due course, yielded the great science of 'JYOTISH'. This initial discovery which has a great import for mankind, was followed up by continuous research and investigation by many a hermit, Seer, Muni, Rishi and Tapaswi which resulted in the enlargement and embellishment of the formidable "JYOTISH SHASTRA". Wise men all over the world, were amazed at the marvels of 'JYOTISH SHASTRA'. Hundreds of students from remote corners of the world started pouring into this country, in quest of knowledge of 'JYOTHIS SHASTRA', and India ungrudgingly disseminated the knowledge acquired through regorous research and deep meditation - to the rest of the world.

ONSET OF THE DARG AGE

Then came the vandals who tried their best to extenguish the lamps of knowledge which were glowing in different seats of learning scattered throughout the length and breadth of this Country. Many "JNAN PEETHAS" or centres of knowledge were razed to the ground or burnt down completely- their inmates were decapitated in throusands. The ruins of Taxila, Nalanda and other such seats of learning, bear eloquent testimony to that tragedy. The onward march of science in this country received a severe jolt and was halted all on a sudden. An era of darkness descended on the country. India has however just emerged from that thousand-year-long period of somnolence and Shaken herself free from bondage. She is now free to work out her own destiny.

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JYOTISH SHASTRA AND FREE INDIA

Free India is now forging ahead in diverse directions. Science has regained its positions of eminence; thanks to the untiring efforts of patriotic pioneers in the field of science. New vistas have opened up in the world of Indian Science. But it is regretted that 'JYOTISH SHASTRA' is yet to gain recognition in the corridors of academic institutions, due to lack of patronage from powers that be. It is somehow surviving thanks to the dedicated efforts of some stray individuals who are doing research in this field unaided by authorities. India which played the role of the world teacher in regard to 'JYOTISH SHASTRA' has now to turn to other countries (which learnt this discipline at the feet of Indian teachers centuries ago) for acquiring knowledge about the latest research in the field.

Under the circumstances, I, as a lover of 'JYOTISH SHASTRA', would appeal to you to provide the much needed leadership in the matter so that this science may get a fillip and fresh lease of life, in order to be restored to its pristine glory. Let our society as also the rest of the world be benefited by the wide application of this science.

THE PRESENT STATUS OF JYOTISH SHASTRA IN THE COUNTRY AND THE NEED FOR ITS INCLUSION IN UNIVERSITY CURRICULA

Let this discipline of Jyotish be resuscitated and given a sound scientific basis through official patronage and as a first step towards that end, it is humbly suggested that the study of the discipline of Jyotish be included in the curricula of Schools and Colleges. It is high time that this centuries old discipline was liberated from the clutches of quacks and charlatans and made the subject of deep study and research by competent scholars and scientists. This discipline may be taught in the first instance at the Indira Gandhi National Open University and later its teaching may be extended to 'TOLS' Schools and Colleges under the jurisdiction of various Universities.

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ENCOURAGEMENT BY HONOURING RESEARCHERS AND COMPETENT PRACTIONERS OF 'JYOTISH'

Many genuine scholars and researchers are working in this field, unaided by authorities, in Southern India, Orisse, Bihar, West Bengal and especially at Varanasi, with a great deal of devotion and dedication. Many are eking out a living from the practice of Jyotish. It will be in the fitness of things if the Government steps in to encourage the dedicated researchers in this field by conferring state honours on them on occasions like the Republic Day. This will pave the way for the rehabilitation of Jyotish and make for the dissemination of the rare wisdom enshrined in JYOTISH SHASTRA'

Expecting a sympathetic response,

Yours faithfully,

Sd/-A.K.MAJUMDAR

(ii) Permission to appear in M.A. examinations as private candidates -

There have been demands, off and on, for allowing the graduates of the North-Eastern Hill University to appear in the M.A. examinations as private candidates. This facility was available with the Gauhati University before NEHU took over the colleges affiliated to the Gauhati University situated in the States of Meghalaya, Nagaland and Mizoram. The facility helped the poor and financially handicapped graduates of the region in the past. The graduates of the North-Eastern Hill University, who cannot afford to prosecute Post-Graduate studies as full-time students, have now been deprived of this opportunity. A recent news item, which was published as a "letter to the editor" may be seen at Annexure - A.

According to the preamble to the NEHU Act, 1973, the North-Eastern Hill University has been established for the benefit of the people of the hill areas of the north-eastern region and to develop the intellectual, academic and cultural background of the people.

The University has decided to start correspondence course leading to the B.A. degree. The Dean, School of Social Sciences expressed the view that correspondence course may be introduced at the M.A. level for subjects for which there is no practical. The fees that may be collected from the candidates may be sufficient for managing the course. The syllabi approved by the Academic Council for courses may be followed for the purpose.

The matter is placed for consideration of the Council whether the University may introduce correspondence course leading to MA degree or the graduates of the University may be allowed to appear in M.A. examinations as private candidates.

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ANNEXURE-'A'

Copy of the "Letter to the Editor" published in the Shillong Times dt.24.5.90

[illegible] Poor Studetns

Sir,

Seventeen winters have come and gone by and much water has flown under the bridge since (NEHU North-Eastern Hill University) was gifted to us the people of the hill states by the then late Prime Minister, Mrs Indira Gandhi. Much faith and expectations had been pinned by us on this institution of learning and knowledge, especially by us the tribals. At last, we thought that unlike the Gauhati University which is seperated by more than a hundred kilometres, NEHU which is located at our own place, will henceforth cater to the aspirations of the poor students who were keen to appear as private candidates for further study at the post graduate level.

Formerly in the seventies students of colleges affiliated to Gauhati University were provided the opportunity to sit as private candidates in the post graduate level examinations in Arts subjects, provided they obtained a minimum 45% marks in the concerned subjects, and, certainly this practice should have been prevalent even now.

Sadly, however, when we come back to our central Hill University, we discover that even after nearly two decades of its existence, the needly students have hitherto been cruelly deprived of this special opportunity which was enjoyed by their former counterparts of Meghalaya State when they were under the jurisdiction of Gauhati University. NEHU was not created then. There are, of course hundreds of students who had completed their graduation long time before but they are left to waste away their hard-earned degrees through callousness and sheer neglect of the authorities concerned for their failure to fulfill the aspirations of the poor graduate students who are been on pursuing post graduate level studies, I think this is not what we had bargained for!

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I have, from time to time, read many ills based on factual findings attributed to NEHU in these columns of your esteemed daily but this glaring fact of pure deprivation of the less fortunate students has, oddly, never been focussed, till date.

It is very disheartening again to note this vital issue has neither evoked the interest of our leaders, welfare bodies, the powerful ministers, the important personalities at the helm of affairs nor has it moved the student community at large.

In the light of the aforesaid points, we can undoubtedly say that NEHU has utterly belied "the great expectations" we had nursed within all along these past years and can finally conclude that, indeed higher education in this central University has become nothing but a special privilege of the rich only.

Yours etc.,

Sd/-J.K.Diengdoh,
Shillong-2.

(iii) Introduction of a course leading to the Degree of Master of Information Technology/Information Management.

The School Board of Library and Information Science, in its meeting held on 22nd May, 1990 felt that there is a need for a course on Information Science to cater to the needs of various information Sectors, such a course will go a long way in producing man-power, who could handle any type of information system whether government/business/ banking etc. The present course meets only the man-power needs of bibliographical services.

The Board recommended that the nomenclature of the course may be either "Master of Information Technology" or "Master of Information Management".

The matter is placed before the Council for consideration.

(iv) Introduction of a Course on Numerical Method as applied to Computers to provide computational skill to Post-Graduate students and Research Scholars- Report of the Committee.

The Committee constituted in pursuance of resolution No:AC:37:89:5:06:(i) adopted at the 37th meeting of the Academic Council, has submitted its report . The report is placed at Annexure-'A' for consideration of the Council.

Annexure-'A'

Meeting of the Committee appointed as per A.C resolution No.37:89:5:06(i) adopted at the 37th meeting of A.C held on 5th and 6th Sept.1989 took place on 9.4.90 at 3 p.m. in the office on the undersigned to discuss the matters related to the M.Phil/Ph.D. level course:Numerical Methods as Applied to Computers:

The Following members were present:-

1. Prof. A.L.Verma
2. Prof. P.Shukla
3. Dr. D.T.Khathing

The following points emerged after discussion:-

1. Regarding the course contents in item No.(4); one or more may be replaced by one only to avoid ambiguity.

2. The Course is useful to the M.Phil/Ph.D. students and a competent faculty member is there in the computer centre to conduct this course. Moreover, there are three technical persons in the Computer centre who can assist practical training on Computers.

3. The course can be conducted on the main-frame computer which has eight terminals. This is sufficient to provide training in this course for about ten students at a time.

4. The course contents are suitable for M.Phil/Ph.D. students of the School of Physical Sciences, particularly the students of Physics and Mathematics Departments.

5. In case such a course is to be offered by students from Life Sciences and other departments, then a more general and broad based course need to be designed and to be offered separately.

6. At present , Computer Centre has three technical staff members, one lecturer and a Head of Computer Centre who is holding an additional charge. The centre has a main-frame computer with eight user terminals and two personal computers,with these resources,the computer centre can conduct one course at a time for about ten students. However, if other departments desire to have another general level computer course, then the faculty members from the Mathematics Economics departments may be requested to help in conducting this course and utilize the main-frame computer facilities of the computer centre.

7. In general, there is a problem of class room for different departments in the Bijni Complex and infrastructure faculties should be strengthened. For the time being the class rooms in the Mathematics and ISOS & B may be utilized by mutual agreement for conducting these courses.

Sd/- Prof. A.L. Verma

(v) Opening of new Departments and a Centre under the School of Environmental Sciences -

The School Board of Environmental Sciences, which met on the 8th June, 1990 resolved to recommend opening of the following new Departments, a Centre and a course under the School :-

1. Department of Geology with special emphasis on petroleum geology, exploration and techtonics and geo-physics components. This may be taken up on a priority basis.

2. Department of Architecture. The Ordinance OA-2 provides for establishment of a Department of Architecture but no effort has so far been made to start the Department. The Department of Architecture may, therefore, be opened as no such facility is available throughout the region.

3. Centre to study disasters (earthquake and floods) and atmospheric and meteorological sciences, which have a direct relevance to the region may be established by the University.

4. The programme leading to the degree of Master of Planning is proposed to be started from the academic year of 1991-92.

The School Board also recommended that a national Seminar may be organised by NEHU to focus attention on the disaster management in the region.

The matter is placed for consideration of the Council.

5:8 - Others :

(i) Nomination of a member on the Board of Under-Graduate Studies in Nepali -

Prof. I.Simon was earlier nominated by the Academic Council as one of the members of the Board of Under-Graduate Studies in Nepali in accordance with Proviso (i) to Clause 2 of Ordinance OA-9. Since, he is no longer in the service of this University, it is proposed that Dr. H.W. Sten may be nominated in place of Prof. Simon.

The matter is placed before the Council for consideration.

(ii) Nomination of members of the Board of Under-Graduate Studies in Garo -

Three persons not below the rank of Readers are to be nominated by the Academic Council as members of the Board of Under-Graduate Studies for subjects in which there is no teaching at the University Department.

The following names are proposed for nomination as members of the Board of Under-Graduate Studies in Garo:

1. Dr. H. W. Sten,
   Head, Department of Khasi,
   North-Eastern Hill University,
   Shillong.

2. Dr. Milton Sangma,
   Reader,
   Department of History,
   North-Eastern Hill University,
   Shillong.

3. Dr(Mrs) M. Momin,
   Reader,
   Department of History,
   North-Eastern Hill University,
   Shillong.

The matter is placed before the Council for consideration.

(iii) Report of the Committee on Membership of Heads of Campus Departments in the Academic Council.

The Committee constituted by the Academic Council vide resolution No. AC:37:89:5:08:(ix)(a) adopted in the 37th meeting on 5th and 6th September, 1989, to examine the issue of membership of the Heads of Campus Departments in the Academic Council, has submitted its report.

The report is placed at Annexure-'A' for consideration of the Council.

5:8:3:(2)

ANNEXURE-'A'

The Report of the Committee constituted by the Academic Council.

The Committee constituted by the Academic Council vide resolution No:AC:37:89:5:08(ix)(a) consisting of the three Pro Vice-Chancellors of the University considered the question of membership of the Heads of Campus Departments in the Academic Council. The findings of the Committee are indicated below :-

The Heads of the Departments of Public Administration and Psychology established at Aizawl and Heads of the Departments of Geology and Commerce located at Kohima are ex-officio members of the Academic Council and other bodies as these Departments are University Departments. The Heads of Departments of English and Education in the two Campuses and the Head of the Department of Economics at Aizawl are not, however, members of the Academic Council as these Departments are regarded as subsidiary departments of the main Department at the Headquarters.

The proviso to Statute 17(5)(c) speaks of the University Department and a Campus Department, where a subject is being taught at more than one Campus. The issue was actually already considered by the Academic Council in its 15th meeting held on the 26th and 27th November, 1982 under the heading "Head of the Department in multi-campus Department." The decision of the Academic Council under resolution No.AC:15:82:06:9 runs as ffollows — "The Statutes provide for one Department in the University and one Head of the Department, not withstanding the fact that some courses are being taught in more than one Campus."

If Heads of Departments of English and Education at Shillong, Aizawl and Kohima are made members of the Academic Council, there will be three members each from the Departments of English and Education. Similarly, if Heads of the Department of Economics at Shillong and Aizawl are members of the Academic Council, there will be two members from this Department in the Council, unlike other Departments of the University from which only one Head of the Department is an ex-officio member . If the Heads of Campus Departments are members of the Council, the Deptts. of English, Economics and Education could be over-represented.

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There is, however, a fear that the Heads of Departments at Shillong may not be fully aware of the problems of the Departments in the Campuses. Subsidiary departments of English, Education & Economics in the Campuses are not, however completely un-represented. Though the Heads of these subsidiary departments are not members, Professors of these Departments are ex-officio members of the Council and they will be in a position to place the problems of these Departments in the Council. In fact the problems of the Campus Departments can be considered in the Board of Post-Graduate Studies as well as the School Boards and they need not come directly to the Academic Council.

The Committee is of the view that the Heads of Campus Departments of English, Economics and Education may be allowed to attend the Academic Council as invitees, if the Academic Council feels it necessary, until these subsidiary departments develop into a full-fledged University Department.

Sd/- Kiremwati Ao,
Pro Vice-Chancellor,
N.E.H.U.,
Nagaland Campus,
Kohima.

Sd/-R.G.Michael,
Pro Vice-Chancellor,
N.E.H.U,,Shillong.
Convener.

Sd/- R. Lalthantluanga,
Pro Vice-Chancellor,
N.E.H.U.
Mizoram Campus,
Aizawl.

(iv) Proposal for establishment of the "Prof. M.K.Khare Memorial Prize"

The son,daughter and wife of Late M.K. Khare has donated a sum of Rs. 5000/- to the University with an intention to open a fixed deposit account in the name of Prof. M.K.Khare Memorial Prize fund and to give cash award to the highest scorer in the final exam of Zoology from out of the interest accrues thereon.

The Head, Department of Zoology has informed that the faculty discussed the proposal and took the following decisions:-

1. The proposal of Mrs. Khare and family for establishing the "Prof. M.K.Khare Memorial Prize" is most welcome and accepted.

2. The faculty felt that the prize be presented to the students with a citation during the convocation along with the University gold medal.

3. The faculty requests the Vice-Chancellor to add Rs.5000/- to this fund from his discretionary fund as a token of appreciation of services of Late Prof. Khare to this University.

4. The faculty further requests that the University shall also allow them to add their collections for the purpose to that fund after sometime.

A set of rules for the fund drafted by the faculty is placed at Annexure - 'A' perusal of the Council.

The above proposal is placed to Academic Council for approval.

ANNEXURE-'A'

PROF.M.K.KHARE MEMORIAL PRIZE
(Sec 5 (23) of the NEHU Act,1973)

Short Title :- The Fund shall be known as "Prof. M.K.Khare Memorial Prize Fund".

Amount of the Fund :- Rs. 5,000,00 (Rupees five thousand) only.

Manner in which to be invested :- The amount of Rs. 5,000 /-(Rupees five thousand) should be invested in a long term fixed deposit Account with a nationalised Bank or any other Government financial institution in any suitable scheme so that atleast 12% interest is accrued per annum. Simultaneously with the Fixed Deposit Account, a Saving Bank Account of Rs. 100.00 (Rupees one hundred) only, pledged in favour of the University alongwith the amount of Rs.5,000/- so that accrued interest of the Fixed Deposit Account may be credited in the S.B. Account.

Purpose of the Fund :- The accrued interest of the Fixed Deposit Account for each year should be drawn rounded to nearest hundred rupees(from the S.B.Account where the interest has been credited) and should be paid in cash to the student securing highest percentage of marks in M.Sc(Zoology) final examination. In case, more than one student secures the highest percentage of marks, the amount should be distributed equally.

Period from which the fund will operate :- The first payment of Prize money should start from the M.Sc Exam. results to be announced in the year 1991 so that the Fixed Account opened in 1990 with the amount pledged in favour of the University completes one year. The fund will continue to exist so long as M.Sc. Examination in Zoology is conducted by North-Eastern Hill University.

(v) Nomination of a member in the Board of Institute of Self Organising Systems and Bio-Physics -

The 37th meeting of the Academic Council vide its resolution No:AC:37:89:5:08:(vii) nominated five external experts to the Board of the Institute of Self Organising Systems and Bio-Physics. One of the expert viz. Dr. G.S.Agarwal has informed his inability to continue as member of the Board. The following name is proposed for nomination in his place.

1. Dr. K.Sundaram,
   Director, Computer Centre
   and Bio-Physics,
   Madras University, Madras.

The matter is placed before the Council for consideration.

(vi) Revival of the one year M.Ed Course -

The School Board of Education in its meeting held on the 6th December, 1989 resolved that the one-year M.Ed Course may be revived. The reasons for starting the M.Ed Course are given below:

1. The present M.A(Education course) pursued over a duration of two years seems to suit the needs of a B.A(Honours) Education student rather than graduates emerging from B.Ed Programmes. The latter category may tend to avoid a course which requires a further year study to obtain a master degree. While Honours students acquire such a degree in two years after their Honours courses, B.Ed students would necessarily have to pursue three years of study after their three years B.A/B.Sc courses in order to complete their masters degree in education in the present circumstances.

2. Research and dissertation work in schools may be more amenable and better oriented to the interests and capacities of B.Ed graduates of Education Honours courses. The latter invariably lack such experiences. Hence research and investigations pursued by M.Ed students may have a more meaningful relevance to school conditions and result in a greater involvement of interaction of the Department with schools in this region. This interaction seems to be of a seme-what minimal nature.

3. Education Departments in all the three ccampuses are at present offering the two year M.A Programme with the teaching staff sanctioned and available.

4. The School Board also took into account the decision of the University to switch over to 3-year Degree Course.

The matter is placed before the Council for consideration.

(vii) Correspondence Course leading to B.A. Degree -

The Centre for Distance Education, N.E.H.U., Shillong released the announcement for conducting correspondence course leading to B.A. Degree. The correspondence course will follow the same syllabus of the University as approved by the Academic Council.

Quite a good response has been received after the release of the announcement . A large number of letters from Assam have also been received. But NEHU has jurisdiction over Meghalaya, Nagaland, Mizoram and Arunachal Pradesh only and its jurisdiction does not extend to the State of Assam. Since no University in the North-East region has Distance Education Programme, it is proposed to extend the jurisdiction of the University for this course over Assam and other States of the North-East as well.

The matter is placed for consideration of the Council.

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Item No. 6 ADMINISTRATIVE MATTERS :

6:1 - Selection Committee

(i) Relaxation in Qualification/Specialisation pertaining to recruitment of teaching positions in Anthropology Department, N.E.H.U. Shillong.

During the month of November , 1989, this University had advertised 1 post of Professor and 2 posts of Readers in Anthropology Deptt., alongwith other Teaching and Non-teaching posts. The required specialisations, approved by the UGC and Academic Council, were also indicated against these posts, and the specialisations indicated in the advertisement were (i) Cultural Analysis/Bio-Cultural Anthropology(for the post of Professor), (ii) Quantitative Anthropology/Anthropology of Literature/Anthropology of Development (for the post of Reader).

After completion of pre-selection procedures i.e. screening of applications etc. the date of interview for the Deptt., of Anthropology was fixed on 24th April'1990 . But on the eve of the selection, the Research Scholars of NEHU had raised some doubts/apprehensions relating to specialisations against these posts as indicated in the advertisement. In the opinion of the Research students the specialisations mentioned were " incorrect" as specialisations of these type were not found in any other University Department of Anthropology in India.

To sort out the differences , a meeting was [illegible] the V.C in his Chamber on 20th April'90, which was attended by the representatives of Research Scholars, Faculty members of the Anthropology Deptt, the Dean of School of Social Sciences, and the O.S.D . The matter was discussed at length and the decision taken in the meeting was thus:

(i) The Interview scheduled on the 24th of April'90 stands postponed.

(ii) The opinion of experts coming for the meeting of the Selection Committee will be sought on the "correctness of the specialisations and this will be placed before the Academic Council for its consideration and decision.

Accordingly, the interview for the said Deptt., was postponed and the opinion of the experts , who had come for the meeting of the Selection Committee was sought.

(CONTD) ...

The experts have opined that the Advertisement was in order, but however, if any elaboration is necessary the following addendum may be issued.

" The candidates having basic wualifications in Anthropology with other specialisations will also be elegible".

The copy of the minutes of the meeting of experts is placed in Annexure-I.

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

6:1:1:(3)

Annexure-I

Proceedings of the meeting of the experts in Anthropology held on 24.4.90 at 10.30 a.m. in the Administrative Building on the advice of the Vice-Chancellor to examine the qualifications advertised vide Advertisement No.F.1-54/Estt-II/89-546, dated, 20th Nov'90 for the post of Professor and Readers in Anthropology.

Following were present:

Members present.

1. Prof.S.N.Rath.
2. Prof.J.C. Sharma .
3. Dr.A.K. Danda.
4. Prof.L.S. Sidhu
5. Prof.A.P.Sinha.
6. Prof.P.K. Mishra.

The members unanimiously elected Prof.A.P.Sinha to Chair the meeting.

Chairman briefed the Committee about the background of the postponement of the Selection Committee meeting .

The members are of the unanimious view that the advertisement is in order. However, if any elaboration is necessary the following addendum may be issued.

" The candidates having basic qualifications in Anthropology with other specialisations will also be considered eligible".

1. Sd/- 24.4.90
Prof.S.N.Rath.

2. Sd/- 24.4.90
Prof. J.C. Sharma.

3. Sd/-24.4.90
Dr.A.K. Danda

4. Sd/-24.4.90
Prof.L.S. Sidhu

5. Sd/- 24.4.90
Prof. A.P.Sinha.

6. Sd/- 24.4.90
Prof. P.K. Mishra.

6:3 - Leave/Deputation -

(i) Grant of leave with full pay and allowances to Scholars receiving Fulbright Grant -

The Director, United States Educational Foundation in India suggested that Indian Scholars receiving Fulbright Grant may be granted leave of absence with full pay and allowances by Indian Universities in order to avoid financial hardship to them, since the Grant covers only the cost of living expenses in United States. The suggestion was considered by the Standing Committee of the Association of Indian Universities at its 223rd meeting held at Gauhati University and it resolved that - - "since the situation differs from University to University, the matter be referred to the Universities for favourable consideration."

The letter of the Secretary, Association of Indian Universities and the letter of the Director, United States Educational Foundation in India may be seen at Annexures 'A' and 'B' respectively.

The matter is placed for consideration of the Council.

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6:3:1(2) Annexure - 'A'

ASSOCIATION OF INDIAN UNIVERSITIES AIU
HOUSE, 16 KOTLA MARG, NEW DELHI - 110002.

Prof. S.K. Agrawala
Secretary

Meet/SC/223/90/

May 25, 1990.

Dear Vice-Chancellor/Director,

The Standing Committee of the Association of Indian Universities at its 223rd meeting held at Gauhati University recently, considered a proposal received from the Director, United States Educational Foundation in India, which suggests that Indian scholars who receive Fulbright Grant should be granted leave of absence with full pay and allowances by Indian Universities in order to avoid financial hardship to them, since the Grant only covers the cost of living expenses in U.S.A. (Copy of the letter is enclosed).

It was resolved that :

"Since the situation differs from University to University, the matter be referred to the Universities for favourable consideration."

I shall be grateful if you could kindly consider the issue favourably in your University in view of the above resolution of the Standing Committee to mitigate the financial hardships caused to scholars receiving Fulbright grants.

With kind regards,

Yours sincerely,

Sd/-

S.K. Agrawala

Encl : As above.

Vice-Chancellors/Directors
of member universities/Institutes.

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6:3:1:(3)

Annexure - B

Appendix XXXVI
SC dt 26.4.1990

THE UNITED STATES EDUCATIONAL FOUNDATION IN INDIA
Fulbright House, 12 Hailey Road, New Delhi - 110 001.

F: 1716 April 12, 1990.

Prof. S.K. Agarsala
Secretary
Association of Indian Universities
16 Kotla Marg
New Delhi - 110 002.

Dear Prof. Agarwala :

I am writing to seek your assistance in a problem which is faced by most Indian scholars who receive Fulbright post-doctoral visiting lecturer/research scholar grants from us. The Fulbright grant normally provides a per diem of $65 to $ 75 (2000 to $2300 per month), which is subject to U.S. income tax. This amount is based on the actual cost of living expenses on U.S. campuses.

It seems that there is a rule laid either by the UGC or framed by some Indian Universities themselves that any Indian scholar who receives a renumeration of more than $10,000 per annum will not be granted leave of absence with pay. I am not sure on what basis the figure os $10,000 has been arrived at. Most Indian scholars find the Fulbright stipend just sufficient for their basic needs whereas they have to continue supporting their families in India out of the salaries they receive from their institutions.

I would appreciate it very much if you could kindly enlighten me in the matter and let me know whether the information received by us is, in fact, correct and if so, what can be done to hel the Indian scholars who receive Fulbright Grants, sot that they do not suffer financial hardships.

I would be grateful for an early response.

sincerely yours,
Sd/-
Mrs Sharada Nayak
Director.

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