

AGENDA PAPERS (PART-II) FOR THE FORTYFOURTH MEETING OF THE  
ACADEMIC COUNCIL

Contents	Page No.
5:2- Syllabus	
(v) Case of the University Level French Course	5:2:5: (1)
5:5- Examination Matters :	
(iv) Recommendation of the Pre-University Board	5:5:4: (1)
(v) Introduction of Diploma in Computer Science for candidates with Bachelor Degree.	5:5:5: (1)
5:6- Establishment of New Departments Centres/Courses	
(v) Proposal of Computer Centre for a University level Course on Computer	5:6:5: (1)
5:7- Affiliation etc.	
(ii) Recommendation of the Affiliation Committee for inspection of Certain Colleges.	5:7:2: (1)
(iii) Recommendation of the affiliation Committee for up-gradation of certain Colleges to B.Sc. level/extension of provisional affiliation	5:7:3: (1)
5:8- Others -	
(x) Proposal for organising joint test (NLT)	5:8:10: (1)
(xi) Admission of NEHU Non Teaching Staff to Post- graduate Courses as private candidates.	5:8:11: (1)
6:1- Selection Committee	
(i) Panel of names for Selection Committee for faculty selection in various deptts./centres of NEHU.	6:1:1: (1)
6:6- Service conditions etc.	
(i) Qualification for the post of Principal, - Fachhunga University College.	6:6:1: (1)
(ii) Required specialisation for the post of Professor of Mathematics, Shillong.	6:6:2: (1)
(iii) Promotional Avenues for University Teachers	6:6:3: (1)
Item No. 7 - FINANCIAL MATTERS :	
7:2 - BUSGET ESTIMATES ETC.	
(i) The present Financial position of NEHU	7:2:1: (1)

## (v) Case of the University Level French Course.

In its 19th meeting held on 24/26.11.83 while considering guidelines for introduction of M.Phil course, the Academic Council had resolved that in Physical Sciences, proficiency in one foreign language other than English, may be made compulsory. The relevant portion of the resolution is reproduced below for reference of the Council:-

"AC:19:83:04(1): The Chairman informed the Council that the University Ordinance on the subject have recently been finalised. He further requested the Council to consider the contents of the revised guidelines on M.Phil Courses circulated by the UGC and to suggest if any points in these guidelines could be incorporated in the University Ordinance. After considering the guidelines, the Council suggested that:

(a) The question of language study as a part of Ph.D/M.Phil programme was considered in detail. The need of different disciplines is different. It may not be necessary to make study of a language compulsory for all social sciences. But there are certain subjects and topics for which knowledge of some languages, particularly of the languages of the area may be necessary. This should be considered at the time of registration of Ph.D/M.Phil is to start a course for insisting a language course. The Council **RESOLVED** that in the form of Ph.D registration a clause may be made about the language requirements. The Council further **RESOLVED** that in Physical Science proficiency in one foreign language other than English may be made compulsory. Suitable changes may be made in the Ordinance accordingly."

This seems to have subsequently led to the commencement of the University Level French Language Course which was started since April, 1987. As per records in the Conference Section, the proposal, course contents and syllabus for this Language course was never placed before the appropriate bodies i.e. the School Board(Languages), the Board of Research Studies nor the Academic Council. The Course was designed by Mr. P. Jhingan, Centre for Literary and Cultural Studies following the decision of the Deans' Committee which met on 23rd, April, 1987. The Deans' Committee decision reads as follows:-

" 17. ITEM FROM THE CHAIR

Teaching in foreign languages, (German, French and Russian), and teaching for computer system.

Contd/.../-

The Vice-Chancellor and the Deans feel the need for a regular course in the various foreign languages and desire that a course be designed by experts in the field as per names given below and the Dean School of Languages may coordinate in the matter :

- (i) Mrs. Subramanian for German .
- (ii) Shri P.Jhingan for French.
- (iii) Mrs. Solanki for Russian.

It was also resolved that Dr. Vijay Kumar of Mathematics Department be requested to conduct a course on computer system and be asked to submit a detailed syllabus to the Dean School of Physical Sciences for further necessary action."

Later the School Board of Languages in its meeting held on 12th October, 1991 passed the following resolution relating to the conduct of the course :

" The Board gave careful thought to the question of the periodic conduct of French and German Courses for M.Phil/Ph.D students. It took note of the fact that when some years ago these courses somehow became the responsibility of the School of Languages, there was no proper authorisation, nor were the programme, unlike any legitimate Post-Graduate academic programmes, ever considered and approved by the Board and Academic Council. They were certainly not comparable to the M.Phil Courses offered by any of the department concerned.

The Board therefore resolved that this school henceforth cease to have any responsibility with regard to the courses in question. Should any department still find them useful, it could possibly make its own internal teaching arrangement."

With this decision of the School Board of Languages, teaching of the course was discontinued. All the facts of the case were examined but the Vice-Chancellor felt that sudden discontinuation of teaching the course would place the present batch of students to undue difficulties. In the interest of all the students, the Vice-Chancellor therefore issued orders that the teaching of the course will continue on the course contents & syllabus hitherto followed, till the Academic Council decides on the continuation of the Course or otherwise.

Meanwhile, information on the course was sought from other Central Universities. Only Pondicherry University has responded informing that provision for such courses does not exist.

A note of Mr.P.Jhingan alongwith the course contents and syllabus of the University Level French Language course hitherto taught, are placed at Annexure A and B respectively.

The matter is placed before the Academic Council for :

1. Granting ex post facto approval to the Course contents and syllabus of the University Level French Course taught since April, 1987.
2. Considering further continuation of the course or otherwise the future course of action in the matter.

University level course for M.Phil/Pre-Ph.D  
Students

Title : French Language

The French language course is essentially given as a Foreign language course for M.Phil/Pre-Ph.D students. Such a course has become a part of Research Degree Programmes in many Indian and Foreign Universities.

This course is supposed to teach the students so that they may have competence to consult essentials of Technical literature published in that foreign language. For quite sometime in NEHU the French language course has been offered as a University level language course for the Research Degree students. Prior to my giving this course (w.e.f. 30th April, 1987-Ref. 12th Dean's Committee meeting on 23.4.87) it was being regularly offered by Prof. K.K. Gupta, Department of Physics to the Physical Science Research degree students. During 1987 Foreign language courses were given in three languages - Russian (Mrs. Rita Solanki), German (Dr. Dvidy) and French (P. Jhingan).

In the absence of the implementation of the new M.Phil/Ph.D Ordinance it may probably be necessary to operate this course regularly every year to fulfill the course requirement of the Research students as per the existing Ordinance.

During the period I was giving this course (1987 to 1991) it was coordinated by the Dean School of Languages on the request of Deans of other Schools of Studies.

Sd/-P. Jhingan,  
Course Incharge  
French Language.

UNIVERSITY LEVEL COURSE FOR M.PHIL/PRE-PH.D.  
STUDENTS

Title of the Course : French Language

Marks : 100

Duration : 1 Semester

Objectives of the Course:

1. A progressive acquisition of linguistic elements and language structures in French Language.
2. To get acquainted with spoken French.
3. Analysis of authentic French documents for comprehension of Scientific and Technical literature.

Course Content:

A brief introduction to French language, culture and civilization.

Use of graded lessons of the course text book to cover the linguistic elements like: Nouns, adjectives, prepositions, regular verb forms, tense formation, identification of tense of verbs, use of partitive articles, adverbs, negative expressions, pronouns.

Introduction of spoken French with the help of language drills using various audio visual techniques.

Writing of simple sentences in French.

French to English translation of a full length article from a technical journal.

Course Text BOOK :

Mauger, G. & Bruezière, M. Le français et la vie I.  
New Delhi: French Book Centre, 1980.

Other suggested materials :

Books

Carriere, J.C. Le mahabharata I, II & III. Paris: Centre International de créations théatrales, 1985

- Mauger, G. Cours de langue et de civilisation  
français I, II & III. Paris : Librairie  
Hachette, 1967.
- Mauger, G. & Bruezière, M. Le français et la vie I, II & III. Paris:  
Hachette, 1980.
- Mauger, G. & Bruezière, M. Le français et la vie I, II & III --  
Guide pédagogique. Paris:Hachette
- Mauger, G. & Bruezière, M. Le français et la vie I, II & III --  
livre de l'élève (2 cassettes). Paris:  
Hachette.
- Mauger, G. & Bruezière, M. Le français et la vie I, II & III --  
Cahier d'exercices. Paris : Hachette.
- Mehta, A. Functional French for Scientist &  
Technologist. Vol. 1 & 2. New Delhi  
Vignette Arts.
- Verdelhan, M., Verdelhan, V., & Dominique, P. Sans Frontiers - method de français 1.  
Paris: C.I.F. International, 1982.
- Sastry, V.S.P. & Belaud, C. Guide - Manuel de français 1  
Hyderabad : C.I.E.F.L., 1984.
- Dictionnaires:
- Atkins, B.T., Duval, A., Dictionnaire français - Anglais  
Milne, R.C., Cousin, P.H., anglais - français. London:  
Lewis, H.M.A., Snelair, L.A. Collins, 1982.
- Rudler, G. & Anderson, N.C. Collins French Gen. Dictionary.  
London: Collins, 1969.

.....

(iv) Recommendation of the Pre-University Board

The Pre-University Board met on 5.8.92 to consider the following matters:

1. Introduction of Computer Applications as a subject in Pre-University Course.
2. Rationalisation of subject combination for the Pre-University Arts, Science, Commerce and Vocational Streams.
3. Introduction of a Course on Environmental Science as a compulsory subject at Pre-University level.
4. Introduction of Public Administration as a subject at the Pre-University Arts level and the adoption of the draft syllabus.
5. Annual examination for Pre-University Courses.
6. External examinations for Pre-University examinations.
7. Syllabus for Pre-University.

The minutes of the meeting are placed in the Annexure for perusal and consideration of the Council.

MINUTES OF THE MEETING OF THE PRE-UNIVERSITY  
BOARD OF EDUCATION HELD ON 5TH AUGUST 1992  
IN THE VICE-CHANCELLOR'S CONFERENCE HALL

The list of the members who had attended the meeting is enclosed at Annexure 'A'.

The items placed on the agenda were discussed by the members present and the decisions as under were taken :

1. Introduction of Computer Applications as a subject in Pre-University Course

The syllabus (Annexure F) placed before the Board was accepted. The Board further recommended that the Committee appointed for the purpose by the Vice-Chancellor may lay down the guidelines for other requirements such as equipments, teachers qualifications, evaluation pattern etc.

2. Rationalisation of subject combination for the Pre-University Arts, Science, Commerce and Vocational streams.

The subject combinations to be offered for the Pre-University Arts, Science, Commerce and Vocational Streams as recommended are appended at Annexure B, C, D & E..

The Board recommends that a student may be permitted to opt for an elective at Degree Course although he might not offer the same at Pre-University level.

The Board also recommends that a student may be permitted to opt for a major which is not taught at P.U. level.

3. Introduction of a Course on Environmental Science as a compulsory subject at Pre-University level.

The Board approved in principle the introduction of Environmental Science at Pre-University level. However, it was of the opinion that the syllabus and other details would be framed after the same is introduced at the School Board level and receipt of guidelines on the matter from the University Grants Commission.

4. Introduction of Public Administration as a subject at the Pre-University Arts level and the adoption of the draft syllabus.

The Board discussed this item in detail and was of the opinion that the proposal may be considered after it is introduced at the degree level.

5. Annual Examination for Pre-University Courses

As proposed in the agenda, the University Examinations at the end of the first year and the second year at Pre-University level was accepted. The Examination Department may work out the details for spreading over the syllabus to the first and second year in the proportion of 40 : 60 ratio.

6. External examiners for P.U. Examination

The Board resolved that the existing system of sending external examiners for practical examination should continue. However the University may consider the remedies towards the problems faced by the examiners in this respect.

7. Syllabus for Pre-University

The need to revise the Pre-University syllabus as proposed by Dr. S.K. Das, Lecturer, Department of Chemistry, Science College Kohima was taken note of and the Board recommended that action for updating the syllabus for all subjects may be taken up at the earliest. The Board also recommends that while doing so the syllabus of Central Board of School Education, other Boards/Universities should be consulted.

The meeting ended with a vote of thanks to the Chair and the members present.

(N.R. Chakraborty)  
Secretary  
Pre-University Board of Edn.

*R. Lalthantluanga*  
(R. Lalthantluanga)  
Chairman  
Pre-University Board of Edn

Pre-University Arts :

1. Compulsory Papers

- a) English - 2 Papers
- b) MIL Alternative - 1 Paper  
English

2. A student may offer any three subjects from any one of the following core groups of subject combinations as Elective subjects :

- (a) History, Political Science, Education, Logic / Home Science

OR

- (b) History, Political Science, Economics, IInd Language/ Psychology

OR

- (c) History, Education, Economics, IInd Language/Psychology

OR

- (d) Economics, Geography, Mathematics, Statistics

3. A student may offer any one of the following subjects as fourth subject :

Logic, Economics, Education, Pol. Science, IInd Language and Computer Applications, Psychology.

OR

A student may offer any one of the following subjects as a fourth subject with restrictions as given below :-

- a) History may not be combined with Mathematics,
- b) Geography/Anthropology/Home Science may not be combined.
- c) Classic and Statistics may not be combined.

Pre-University Science

1. Compulsory Papers

- a) English - 2 Papers
- b) MIL/Alternative English-1 Paper

2. A student may offer any one of the following core groups of subject combinations as Elective subjects :

- a) Mathematics, Physics, Chemistry

OR

- b) Physics, Chemistry, Biology

OR

- c) Geography, Geology, Chemistry

3. a) A student may offer any one of the following subjects as fourth subject :

Mathematics, Geography, Geology, Physics, Anthropology, Home Science, Computer Applications, Biology/Advance Mathematics, Statistics, Psychology.

Pre-University Commerce

1. Compulsory papers

- a) English - 2 papers
- b) MIL/Alternative English- 1 paper
- c) (i) Economics Paper I  
(ii) Economics Paper II
- d) (i) Book Keeping  
(ii) Business Method
- e) (i) Commercial Arithmetic  
(ii) Commercial Geography  
OR
- f) (i) Computer Applications - Paper I  
(ii) Computer Applications - Paper II

2. A student may offer one of the following groups as fourth, subject(s).

- a) (i) Secretarial Practice  
(ii) Shorthand and Typewriting/Salesmanship and Publicity.
- b) (i) Insurance/Commercial Mathematics  
(ii) Commercial Arithmetic/Commercial Geography
- c) Computer Applications

Vocational Stream of Pre-University (Arts)

Elective Subjects

A candidate who wishes to pursue a Vocational Stream of study may offer two subjects from a particular group of Arts or Science or Commerce Courses and one of the following subjects :-

- a) Horticulture
- b) Forestry
- c) Animal Production with specialisation in Poultry
- d) Piggery
- e) Meat Cattle Production
- f) Fisheries
- g) Agriculture
- h) Motor Mechanics
- i) Electrical Technology and Practice
- j) Printing Technology
- k) Secretarial Practice
- l) Sericulture
- m) Electronics
- n) Music

Fourth Subjects :

A candidate will be allowed to offer as a fourth subject from any of the remaining subjects from the groups from where the candidate has chosen the other two elective subjects.

A student choosing electives from Commerce Stream can offer as a fourth subject either 2(a) or 2(b) of Annexure D.

A student opting k) Secretarial Practice of the Vocational stream can choose only 2(b) of Annexure D. as a fourth subject.

## COMPUTER APPLICATIONS

(An Elective Subject at the Pre-University Level)

1. Objective

This course of study in Computer Applications for P.U. students is meant to be one of the compulsory subjects or an optional fourth subject in their P.U. curriculum. The course is employment-oriented : a student on completion of this course could be in a position to execute DOS commands and to carry out any task in word processing, using Word Star, without any further external guidance. However, sufficient theoretical aspects have been added to give the student an insight into the fundamental workings of a computer as well as a good knowledge of BASIC language programming.

2. Eligibility

The course is open to P.U. students of Arts, Science and Commerce streams. It is recommended that the students be familiar with the use of a typewriter.

3. Duration

The course is to be completed in two academic years like all the other subjects of the Pre-University Course.

4. Course Structure

Paper I : Part I : Digital Computer Fundamentals(50%)  
           : Part II : BASIC Language Programming (50%)  
 Paper II : Part I : System Commands : DOS (50%)  
           : Part II : Word Processing : Word Star (50%)

5. Detailed Syllabus

PAPER I : PART I ::: DIGITAL COMPUTER FUNDAMENTALS

- Unit 1 : Introduction to Computers : Definition, characteristics, Capabilities, Classification of Computers, Programme/Hardware/Software, Basic Components of a digital computer, Stored Program Concept, RAM, ROM, REGISTERS
- Unit 2 : Introduction to Machine instructions, Assembly Languages and high level languages, Interpreters, Compilers
- Unit 3 : Number systems (Binary, Octal, Decimal and Mhexa decimal systems), Inter-conversion of Number systems.

- Unit 4 : Coding of Non-numeric data : ASCII and EBCDIC Codes, Introduction to computer keyboards and format of stored information, intergers, fractions, strings, Binary Representation, Bits, Bytes, Words
- Unit 5 : Boolean Algebra : Boolean Theorems, Truth Tables, logic functions, Canonical terms

BOOKS :

1. For Unit 1 and 2 : Thomas C. Bartree, Digital Computer Fundamentals, 6th Edition, McGraw Hill International Editions
2. For Unit 3 and 5 : V. Rajaraman and T. Radhakrishnan, An Introduction to Digital Computer Design, 3rd Edition Prentice Hall of India Pvt. Ltd., New Delhi

QUESTION PAPER PATTERN ;

Each Unit shall carry 10 marks. There shall be two questions from each unit and one from each unit had to be answered.

PAPER I : PART II :: BASIC PROGRAMMING

- Unit 1 : History of BASIC, Data Types, Data Representation, Constants, Variables, Arithmetic Operators and expressions, Hierarchy of Arithmetic operations, Structure of a BASIC program
- Unit 2 : Simple Commands : LET, INPUT, PRINT, END, REM, GOTO, RUN, LIST
- Unit 3 : Branching and Looping : Relational Operators, IF-THEN, ON-GO-TO, STOP, FOR-TO, NEXT Statements, Nested Loops
- Unit 4 : Library Functions, Lists and Tables (Arrays), Subscripted variables, DIM, READ, DATA, RESTORE Statements
- Unit 5 : Functions and Subroutines : Defining and referencing functions, multiline functions, CHANGE statement, ASC, CHR\$ and RND functions, Defining and referencing, Subroutines, GOSUB Statement.

BOOK :

1. Byron S. Gottfried : Programming with BASIC, Schaum's Outline Series, 3rd Edition, McGraw Hill International Editions

QUESTION PAPER PATTERN :

Each unit shall carry 10 marks. There shall be two questions from each unit, and one from each unit has to be answered.

PAPER II : PART I :: SYSTEM COMMANDS : DOS  
(Practical)

The student should be conversant with the features of MS-DOS listed below.

1. Terms to know : Program, File, Filename, Directory and Directory Structure, Volume Label, Disk Drives, Drive Name, Prompt, Path, Pathnames, Wildcard, Boot, Diskette, Track, Head, Cylinder, Sector, Partition
2. Commands : append, assign, attrib, backup, break, chcp, chdir, chkdsk, **cls**, command, comp, copy, ctty, date, del, dir, diskcomp, diskcopy exe2bin, exit, fastopen, fc, find, format, graftl, graphics, join, keyb, label, mem, mkdir, mode, more, nlsfunc, path, print, prompt, recover, ren, replace, restore, rmdir, set, share, sort, subst, sys, time, tree, ~~tape~~, ver, verify, vol, xcopy
3. Installation of MS-DOS, using FDISK program, using FDISK program, Using EDLIN command, Batch Processing, Purpose and use of Autoexec, bat and config. sys files, Use of DOSHELL Program, configuring the System using SELECT program, Installation of Device Drivers

BOOKS :

1. Microsoft MS-DOS User's Guide and User's Reference (Version 4.01)
2. Alan R. Miller, The ABC's of DOS 4

EVALUATION PATTERN :

1. Written : 15%
2. Viva : 5%
3. Practical : 15%
4. Internal Assessment : 15%

PART II : PART II :: WORD PROCESSING  
( Practical )

Word processing basics, economics of word processing. Using word processing in the business world, Features of the word processing systems.

The student should be conversant with the use of WordStar 5.0 with regard to the following :

Cursor Controls, Deletion, Insertion, Wordwrap, Justification  
Page formatting, Search and replace, Text rearrangement and boilerplating, Block Operations

Spelling Check, Thesaurus, Footnotes, endnotes

Printer Controls; bold, double printing, underline, line spacing, Page breaks, hyphenation, superscript, subscript, font selection, printer selection, Printing.

Mailmerge, Use of Dot commands, Use of Macros

Books :

1. WordStar 5.0. Manual
2. WordStar 5.0. Professional Handbook, by :

EVALUATION PATTERN

1. Internal Assessment : 15%
2. Practical : 35%

5:5:5:(1)

- (v) Introduction of Diploma in Computer Science for candidates with Bachelor Degree

The Committee appointed by the Vice-Chancellor to look into the technical aspects for introduction of Diploma Programme (DCA) for the Graduates met in the Office of the Controller of Examinations on 19th May 1992. The Committee recommended the introduction of the programme as at Annexure - I. The matter is placed before the Council for consideration.

**DCA : DIPLOMA IN COMPUTER APPLICATIONS**  
(SEMESTER SYSTEM : 1 YEAR)

**1. OBJECTIVE :**

This course of study is open to graduates of Arts, Science and Commerce streams, who are new to the field of Computer Applications. It is meant to prepare candidates for immediate employment in Offices or in Business where Computer Applications are required.

**2. DURATION :**

The duration of the course is one academic year consisting of two semesters of 14 to 16 weeks each. Each semester should have a minimum of 70 working days for the purposes of classroom teaching and excludes the days of examination and other works.

**3. Scheme of Examination :**

The Scheme of Examination shall be as follows :

FIRST SEMESTER

Paper	Title	Hours	Maximum Marks	
			Internal	External
DCA 101	Computer Fundamentals	3	50	50
DCA 102	Programming in BASIC	3	50	50
DCA 103	Programming in COBOL	3	50	50
DCA 104	System Commands (DOS) Word Processing (Wordstar)	3	50	50
DCA 105	Accounting and Financial Management	3	50	50
DCA 106	Practical I (Topics covered in I Semester)	4	50	50

SECOND SEMESTER

Paper	Title	Hours	Maximum Marks	
			Internal	External
DCA 207	DBase III Plus	3	50	50
DCA 208	Lotus 1-2-3	3	50	50
DCA 209	System Analysis and Design	3	50	50
DCA 210	Practical II (Topics covered in II Semester)	4	50	50
DCA 211	Project Work		100	100

4. Passing Requirements :

For all subject the passing requirement shall be that the candidate simultaneously secure not less than 40% of the marks in the terminal examination and not less than 50% of the total marks (i.e., internal assessment marks plus terminal examination marks) in any particular subject.

5. Classification of successful candidates :

A candidate who qualifies for the Diploma as per the regulations for passing requirements and secure not less than 60% shall be declared to have passed the examination in First Class.

All other successful candidates shall be declared to have passed in Second Class.

Candidates shall have to pass all the Examinations within a period of 3 years from the date of admission to the I Semester to qualify for the award of the Diploma.

6. Work Load .:

The work load of the above course shall be as follows :

First Semester

Sl.No.	Course Title	Lecture Hours	Tutorial Hours	Practical Hours	Total Contact Hours
1.	Computer Fundamentals	5	1	4	8
2.	Programming in BASIC	5	1	4	8
3.	Programming in Cobol	5	1	4	8
4.	System Commands (DOS)				
	Word Processing (Word Star)	3	1	4	8
5.	Accounting and Financial Management	5	1	4	8

Total contact hours per week - 36 hours.

Second Semester

Sl.No.	Course Title	Lecture Hours	Tutorial Hours	Practical Hours	Total Contact Hours
1.	PC Based DBMC	5	1	4	8
2.	Electronics Spread Sheet	5	1	4	8
3.	System Analysis and Design	5	1	4	8
4.	Project		4	12	16

Total Contact Hours per week - 36 hours.

## DCA 101 : COMPUTER FUNDAMENTALS

1. Introduction to Computers : Definition, characteristics, Capabilities, Classification of Computers, Program, Hardware/software, Basic Components of a digital computer, Stored Program Concept, RAM, ROM, REGISTERS
2. Introduction to machine instructions, Assembly Languages and high level languages, Interpreters, Compilers.
3. Number Systems (Binary, Octal, Decimal and Hexa decimal systems), Inter-conversion of Number systems,
4. Coding of Non-numeric data : ASCII and EBCDIC Codes, Introduction to Computer keyboards and format of stored information, integers, fractions, strings, Binary Representation, Bits, Bytes, Words.
5. Boolean Algebra : Boolean Theorems, Truth tables, logic functions, Canonical terms

## BOOKS :

1. Thomas C. Bartree, Digital Computer Fundamentals, 6th Edition McGraw Hill International Editions
2. V. Rajaraman and T. Radhakrishnan, An Introduction to Digital Computer Design, 3rd Edition, Prentice Hall of India Pvt. Ltd., New Delhi

## DCA 102 : PROGRAMMING IN BASIC

1. History of BASIC, Data Types, Data Representation, Constants, Variables, Arithmetic operators and expressions, Hierarchy of arithmetic operations, Structure of a BASIC program, Simple Commands : LET, INPUT, PRINT, END, REM, GOTO, RUN LIST
2. Branching and Looping : Relational operators, IF-THEN, ON-GO TO, STOP, FOR-TO, NEXT Statements, Nested Loops.
3. Library Functions, Lists and Tables (Arrays), Subscripted variables, DIM, READ, DATA, RESTORE Statements
4. Functions and Subroutines : Defining and referencing functions, multiline functions, CHANGE Statement, ASC, CHR\$ and END Functions. Defining and referencing subroutines, GOSUB statement.
5. Data Files, Sequential Data Files, Random Data Files, Run Time File Specifications.

## BOOKS :

1. Byron S. Gottfried : Programming with BASIC , Schaum's outline Series, 3rd Edition, McGraw Hill International Editions
2. Subramaniam N, Programming in Basic
3. Jayaram C. Hirsch, BASIC Programming self-taught

: 4 :  
5:0:5:(5)  
DCA 103 : PROGRAMMING IN COBOL

1. Introduction, Cobol Divisions, Coding forms, Character Set, Data names, literals : punctuations
2. Data Division : Input files, output files, working storage section, Move, Read, Goto, Write, Close, Stop, Run, Accept, Display, Add, Subtract, Multiply, Divide, Mod
3. Relational Condition : If sentence with non-numeric data, editing, control structure, Perform Logical operations, GOTO Depending on Statement, Perform with varying clause, Redefines and Renames clause, compute
4. Sequential File organisation, sorting, merging, indexed sequential file, report generator

BOOKS :

1. V.Rajaraman & H.V.Sahasrabudde, Computer Programming in Cobol, Prentice Hall of India, New Delhi.
2. N.L. Sarda, Cobol Programming with Business Applications, 3rd Edition, Pitamber Publishing Co., New Delhi
3. A.S.Philippakis and L.J.Kazmier, Information System through Cobol, McGraw Hill Book Co., International Student Edition, Delhi.
4. Worth T., Cobol Programming, John Wiley & Sons, New York.

DCA 104 : SYSTEM COMMANDS (DOS), WORD PROCESSING (WORD STAR)  
SYSTEM COMMANDS : DOS

1. Terms to know : Program, File, Filename, Directory and Directory Structure, Volume Label, Disk Drives, Drive Name, Prompt, Path, Pathnames, Wildcard, Boot, Diskette, Track, Head, Cylinder, sector, partition.
2. Commands : append, assign, attrib, backup, break, chcp, chdir, chkdsk, cls, command, comp, copy, cty, date, del, dir, diskcomp, diskcopy, exe2bin, exit, fastopen, fc, find, format, graftabl, graphics, join, keyb, label, mem, mkdir, mode, more, nlsfunc, path, print, prompt, recover, ren, replace, restore, rmdir, set, share, sort, subst, sys, time, tree, type, ver, verify, vol, xcopy.
3. Installation of MS-DOS, Using FDISK program, Using EDLIN command, Batch Processing, Purpose and use of Autoexec, bat and config. sys, files, Use of DOS SHELL Program, Configuring the System using SELECT Program, Installation of Device Drivers

BOOKS :

1. Microsoft MS-DOS User's Guide and User's Reference (Version 4.01 )
2. Alan R. Ellien, The ABC's of DOS 4

: 5 :  
5:5:5:(6)  
WORD PROCESSING ( WORD STAR 5.0 )

1. Word Processing basics, economics of word processing , Using word processing in the business world, Features of the word processing systems,
2. Cursor Controls, Deletion, Insertion, Wordwrap, Justification, Page formatting, Search and replace, Text rearrangement and boilerplating, Block Operations.
3. Spelling Check, Thesaurus, Footnotes, endnotes
4. Printer Controls; bold, double printing, underline, line spacing, Page nreaks, hyphenation, superscript, subscript, font selection, printer selection, Printing
5. Mailmerge, Use of Dot commands, Use of Macros

BOOKS :

1. WordStar 5.0 Manual
2. Walton Beacham, Beacham's WordStar Professional 5.0 Handbook, Bantam Books

DCS 105 - ACCOUNTING AND FINANCIAL MANAGEMENT

1. Accounting : Principles, concepts and conventions, double entry system of accounting, Introduction of basic nooks of accounts of sole property concern, control accounts for preparation of trial balance.
2. Final Accounts, : Trading, Profits and loss Accounts and balance sheet of scale proprietary concern with normal closing entries, Introduction to manufacturing account, final accounts of partnership firms, limited company.
3. Financial Management : Meaning and role, Ratio Analysis, : Meaning, advantages, limitations, types of ratios and their usefulness,
4. Fund flow statement : Meaning of the terms - Fund, flow and fund, working capital cycle, preparation and interpretation of the fund flow statement.
5. Budget and Budgetary control : Nature and scope, Importance, method of finalisation of master budget and functional budgets.
6. Costing : Nature, importance and basic principles, Marginal costing , Nature, Scope, and importance, Break-even analysis, its uses and limitations, construction of break even chart, practical applications of marginal costing. Standard costing : Nature, Scope, Computation and analysis of variances with reference to material cost, layout cost and overhead cost, interpretation of the variances.

7. Introduction to Computerised accounting system : Coding logic and codes required, master files, transaction files, introduction to documents used for data collection, processing of different files and outputs obtained.

BOOKS :

1. Kellock, J, Elements of Accounting, Heinemann, 1978.
2. Rockely, L.E. Finance for the Non-accountant, 2nd Edition, Basic Books, 1976
3. Levy and Sarnat, Principles of Financial Management, Prentice-Hall International
4. Arnold, Financial Accounting, Prentice Hall International (Paperback Edition)
5. Horngren, and Sundem, Introduction to Financial Accounting Prentice Hall International (Paperback Edition)
6. Murthy, U S, Management Finance, 2nd Edn. Vakils Fefers and Simons, Ltd, 1978
7. Van Home, James, C. Financial Management and Policy, Prentice Inc.
8. Pandey, I M, Financial Management, Vikas Publications, 1979.

DC/ 207 : DBASE III PLUS

1. Understanding databases ; building, searching, sorting, editing and modifying databases
2. Creating and printing formatted reports, Designing custom screen displays, Managing numbers and dates, Managing multiple data files, File maintenance and performance
3. Understanding memory variables, Creating command files, Making commands user-friendly, Executing conditional commands, Designing Programmes, Debugging Techniques, Use of Applications Generator, Custom Configurations, Interfacing with other software programmes, Networking.

BOOKS :

1. DBase III Plus Manual
2. Alan Simpson, Understanding DBase III Plus, BPB Publications, New Delhi.
3. Alan Simpson, Advanced Techniques in DBase III Plus.

1. **BASIC SKILLS:** The worksheet screen, Moving around in the worksheet, Data entry and editing, Types of data, Numbers, Labels, Formulas, Ranges, Entering Formulas, Order of operations, Relative, absolute and mixed cell addresses, @Functions, Indicators, 1-2-3 keys, Help facility.
2. **1-2-3 COMMANDS:** Worksheet, Range, Copy, Move, File, Print System, Quit
3. **1-2-3 ADVANCED COMMANDS:** Data, Graph, Print Graph, Macros Functions (@ Function, Logical, Mathematical, Special, Data,

**BOOKS:**

1. Lotus 1-2-3 Tutor and Reference Manual
2. Thomas H. Berliner & Reeves, Lotus 1-2-3
3. Carolyn Jorgensen, Mastering 1-2-3

**DCA 209 : SYSTEM ANALYSIS AND DESIGN**

1. Overview of system analysis and design, Business Systems concepts, systems development life cycle, project selection, feasibility analysis, design, implementation, testing and evaluation.
2. **Project Selection:** Sources of project requests, managing Project review and selection, preliminary investigation.
3. **Feasibility Study -** Technical and economical feasibility, cost and benefit analysis.
4. **System requirement specification and analysis :** Fact finding techniques, Data flow diagrams, data dictionaries, process organisation and interactions, Decision analysis decision trees and tables.
5. **Detailed design -** Modularisation, module specification, file design, systems development involving data base.
6. **System Control and Quality Assurance -** Design objectives, reliability and maintenance, software design and documentation tools, topdown, bottom up and variants, Units and Integration testing practices and plans. System Controls, Audit trials.
7. **System Administration and Training,** conversion and operation plans.
8. **Hardware and Software Selection,** Hardware acquisition, memory processors, peripherals, benchworking, vendor, selection, software selection - Operating systems languages, performance and acceptance criteria.

BOOKS :

1. James, A.S. Analysis and des
1. James, A.S. Analysis and design of information Systems, McGraw Hill, 1980
2. Ludeberg, M. Glkuhl, G. and Hilson A.: Information Systems Development A Systematic Approach, Prentice Hall International, 1981
3. Leeson, M, Systems Analysis and Design, Science Research Association, 1985
4. Semprive, P.C. Systems Analysis - Definition, Process and Design, 1982
5. Richard, D. System Analysis Design, Irwin Inc, 1979
6. Award, E Homewood, System Analysis and Design, Award, Irwin 1979
7. Lee, B.S, Introducing System Analysis and Design, 2 vol. Manchester, United Kingdom, National Computer Centre, 1978
8. Learn Yousef, Systems Analysis and Design, Reston Publishing Company, 1975.
9. Daniels, Practical System Design, Galgotia Publications Pvt., Ltd.
10. Davis, W.S. Systems Analysis and Design, Addison-Wesley, 1983.

5:0.5:(1)

(v) Proposal of Computer Centre for a  
University level Course on Computer.

The Head, Computer Centre has submitted a proposal for a University level Course on Computer for consideration of the Academic Council.

The proposal along with the syllabus for the course are placed at Annexure-'A' for consideration of the Council.

5:6:5.(2)

ANNEXURE-'A'

To  
Chairman,  
Academic Council,  
NEHU, Shillong-793 001

From: Dr. S. N. Rai,  
Head, Computer Centre,  
NEHU, Shillong-793003

4.8.1992.

Subject: Proposal for a University level  
M.Phil/Ph.D.Course on Computer

Sir,

I am enclosing herewith a copy of the syllabus of the course entitled "Computer Today" framed by our Centre. This course gives adequate exposure on Computer and their use to students who had not any earlier exposure to Computers. We strongly feel that if this course is accepted as a University level M.Phil/Ph.D course by the Academic Council it will serve useful purpose to train our M.Phil/Ph.D students who are not yet exposed to computers. This proposal is also in line with the increasing use of computers by research students in various disciplines including science and humanities. Therefore, request you to kindly place this item for the consideration of the Academic Council in its forthcoming meeting.

Thank you,

Yours sincerely,

Sd/-S. N. Rai

I feel this a useful proposal and suggest that Academic Council should consider it for approval as a University level M.Phil/Ph.D course.

Sd/-Dean, School of Physical Science,  
NEHU, Shillong.

Draft Syllabus for a University Level Course on Computer.

Name of the Course : Computer Today.

Unit 1. Basics of Computer :  
History, Hardware & Software, Simple model of a  
Computer, Data representation, Integer, Real,  
Binary, Octal, Hexadecimal.

5 Lectures.

Unit 2. System Commands (DOS) and Word Processing:  
Internal & External Commands, General Editing  
Commands, Dot Commands, Mail Merge.

10 Lectures.

Unit 3. Introduction to Electronic Spread Sheet:  
General Commands, Range Definition, Range  
Manipulation Graphs, Macros.

10 Lectures.

Unit 4. Programming in Basic:  
Constants and Variables, Assignment Statements,  
Logical Constants, Control Structures, Arrays,  
Subroutines.

10 Lectures.

Unit 5. Practicals.

10 Hours.

Reference Books:

1. Computer Organisation - Hamacher, Vranesic & Zaky.
2. Problem Solving & Computer Programming- Grogous & Nelson.
3. Introduction to Computer Fundamentals - Chu.Y.
4. Basic Programming - Gottfried.
5. Programming Basic for Business - Bosworth & Nagell.
6. Basic Programming and Application- Joseph.
7. Wordstar 5.0 Manual.
8. Cases and Application in Loups 1-2-3 - Jack. A. Holt.

- (ii) Recommendation of the Affiliation Committee for inspection of Certain Colleges.

In its 10th meeting held on 30th, June, 1992, the Affiliation Committee recommended sending of Inspection teams to the following colleges. The recommendation of the Affiliation Committee is re-produced below for consideration of the Council :

1. Opening of new colleges

Salt Christian College, Dimapur - The Committee went through the application of Salt Christian College. The Nagaland Government has also given the permission to the College. The Committee recommended that an inspection team may be sent to inspect the college for initial affiliation.

2. Upgradation to Degree level.

(a) Ri-Bhoi College : Ri-Bhoi College applied for upgradation to degree level and the Committee recommended that an inspection team be sent to the college for inspection.

(b) Mikrikilla College : The College applied for upgradation to degree level. The Committee recommended that an inspection team may be sent to inspect the college.

(c) Don Bosco College : Don Bosco College applied for upgradation to B.Sc. level. The Committee recommended that an inspection team may be sent to inspect the college for upgradation.

(d) Sohra College : The College applied for upgradation to degree level (Arts). The Committee recommended for an inspection team to inspect the college.

3. Introduction of New Subjects/Courses.

(a) Synd College : The college applied for the introduction of Sociology at degree level w.e.f. from the academic year 1992-92. The Committee went through the application and recommended that an inspection team may be sent to inspect the college for the introduction of Sociology at degree level.

(b) Para Govt. College : The College applied for the introduction of Commerce at P.U. level and B.Sc Honours in Zoology and Mathematics. The Committee recommended that inspection team may be sent to inspect the College for the introduction of Commerce at P.U. level and B.Sc Honours in Zoology and Mathematics. >>

- (iii) Recommendation of the Affiliation Committee for upgradation of certain Colleges to B.Sc level/extension of provisional affiliation etc.

Item 4 of the minutes of the Affiliation Committee which met on 30th June'1992 is re-produced below for consideration of the Council :-

" Item No. 4: College Inspected and Inspection

Reports received in respect of the following Colleges :-

(a) Sohra College : Extension of Provisional Affiliation at P.U. level. The College has been inspected and the extension of provisional affiliation is recommended by the Committee for a period of two years.

(b) Synod College : The college applied for upgradation to B.Sc level (Pass) in Geography, Botany, Zoology, Physics, Chemistry, Mathematics and English. The Committee considered the inspection report of Synod College and recommended provisional affiliation for two years subject to the fulfillment of all the conditions pointed out by the Inspection Team.

(c) Sankerdev College : The College has been inspected for upgradation to B.Sc. level (Pass) in Physics, Chemistry, Botany, Zoology, English and Foundation course. The Committee recommended Provisional Affiliation for two years and that the college should fulfill all the conditions as pointed out by the Inspection Team.

(d) St. Edmunds College : The College applied for B.Sc. (Hons) in Electronics. The college has been inspected and the Committee recommended provisional affiliation for a period of two years to start Honours in Electronics.

(e) Acheng Renganna College : The College has been inspected for upgradation to degree level and the Committee recommended for provisional affiliation for a period of two years with conditions that the college should appoint the required number of teaching staff and purchase the required number of books on relevant subjects.

(f) Union Christian College :- The College has been inspected for upgradation to B.Sc. level and the introduction of Education at P.U. level. The Committee recommended provisional affiliation for two years with the conditions that the college should appoint the required number of qualified teachers and procure the laboratory equipments for B.Sc and some more text books".

The Inspection Reports in respect of the above Colleges will be tabled by the Chair.

5:8:10(1)

x) Proposal for organising joint test (NET).

In connection with the award of fellowship for the students of N.E. Region, the U.G.C., in its meeting with the AIU Standing Committee held on 9.10.91 at Trivandrum has credited the proposal and authorize the AIU to help and organize such joint test.

Vice-Chancellor on the Body of the AIU letter 1.7.92 has ordered that the NEC as suggested by UGC will be conducting the joint test for the Central Universities of this region.

The above mentioned letters are therefore enclosed at Annexure- A for decision of the Council.

5:8:40(2) C O P Y

ANNEXURE - A

Prof. S.K. Agrawala  
Secretary

Association of Indian Universities  
AIU House, 16 Kotla Marg, N.D.- 2

Meet/SC/231/92 Dt. July 1, 1992

Dear Vice-Chancellor/Director,

I am glad to inform you that the matter regarding role of the UGC in carrying our plans of development of higher education in the North-East was considered at the joint meeting of AIU Standing Committee and UGC at Trivandrum in 1991. The UGC suggested that it could consider proposals for accreditation of some joint tests for JRFs, organised by a group of universities of the region. AIU could help the Universities to come together for organising joint tests.

I am enclosing herewith a copy of UGC letter No. F.4-12/86(NET) dt. January 8, 1992 on the above subject for your kind information and necessary action.

You may kindly take suitable action in cooperation with sister universities in your state for organising such joint tests, in consultation with the University Grants Commission.

With kind regards.

Encl. as above

All Vice Chancellor/Directors of  
Member Universities/Institutions.

Yours sincerely,  
Sd/- S.K. Agrawala

C O P Y

Dr. N.K. Jain  
Deputy Secretary

University Grants Commission  
National Educational Testing  
F-48 South Extension Part I,  
New Delhi - 110 049.

D.O. No. F.4-12/86(NET)

8th January, 1992.

Dear Professor Agrawala,

Kindly refer to the discussions held at the joint meeting of the UGC and the AIU Standing Committee on 3th October, 1991 at Trivandrum where it was noted that there was regional imbalance in the number of candidates qualifying NET for JRF. The UGC could consider proposals for accreditation of some joint tests organised by a group of universities of the region. AIU could help the universities to come together to organize joint test.

I request you to send your suggestions in the matter referred above to the undersigned so that further necessary action may be taken at this end.

With personal regards.

Prof. S.K. Agrawala,  
Secretary, Association of  
Indian Universities,  
AIU House, 16 Kotla Marg,  
New Delhi-110 002.

Yours sincerely,

Sd/- (N.K. Jain)

.....

- (xi) Admission of NEHU Non teaching staff to post-graduate courses as private candidates.

In a memorandum dated 3.8.92, the General Secretary, North Eastern Hill University Non-Teaching Staff Association, Shillong has requested to place the paper appended at Annexure - A for consideration of the Academic Council.

In the memorandum, a request has been made to allow the Administrative Staff admission into Post-Graduate Courses as private candidates where practical works is not involved.

The matter is placed before the Academic Council for necessary consideration.

NON-TEACHING STAFF ASSOCIATION (H.C.)  
NEHU, SHILLONG

7-8-92

Subject:- Admission to Post Graduate Courses in respect of Non-Teaching Staff as Private candidates

The North-Eastern Hill University has for many years maintained a commitment to fulfill its objects through the overlapping responsibilities and interaction between the individual and constituent bodies which resembles a community and co-operative endeavour.

The business of the University is handled in two broad based inter-related streams, one dealing with the academic studies, the other with the facilities to implement the educational and research programmes and behind both these streams is the support service which is monitored by the General Administrative staff.

The Universities are often accused of being incapable to adopt their academic and administrative activities in the light of various changing circumstances. The reasons being that this era of modern scientific and high technology has no place for an out-dated administrative system which should go with the changing system.

In order to bring both the academic and administrative streams run a parallel force, it is of utmost importance that serious thought need to be given to improve the administrative qualities of administrative staff by allowing them admission into Post-Graduate Courses as private candidates where practical is not involved.

In this regard the J.G.C. has also emphasised that the University should encourage the staff in acquiring higher education from time to time.

The said facility will also act as a career planning since the existing UGC guidelines for appointment to various administrative posts at Group 'A' level provides Post-Graduate as an essential qualification.

It is sincerely anticipated that the Academic Council will explore the possibility in delivering the said facility to the Administrative staff in the interest of the University.

6:1 - Selection Committee :

- (1) Panel of names for Selection Committee for faculty selection in various depts./centres of NEHU.

Clause (2) of Statute 20 provides for panel of experts for constitution of Selection Committee for recruitment to the post of Professors, Readers and Lecturers. The experts are to be nominated by the E.C. out of the panel of names recommended by the A.C. for their special knowledge of or interest in the subject with which a Professors, Readers and Lecturers is concerned. The Council is required to recommend a panel of names for the following departments.

1. Deptt. of Animal Science.
2. Deptt. of Agri. Chemistry and Soil Science.
3. Deptt. of Horticulture.
4. Deptt. of Agronomy.
5. Deptt. of Botany and Plant Breeding.
6. Deptt. of Soil Conservation.
7. Deptt. of Rural Development and Planning.
8. Deptt. of Agri. Engg. including Maths. and Physics.
9. Deptt. of Entomology.
10. Deptt. of Plant Pathology.
11. Deptt. of Agri. Extension.
12. Deptt. of Agri. Economics.
13. Deptt. of Agri. Statistics.

The panel of experts submitted by the Head of Deptts. concerned are placed before the Council for consideration

6:6:1(1)

6:6- Service Conditions etc:

(i) QUALIFICATION FOR THE POST OF PRINCIPAL  
PACHWALGA UNIVERSITY COLLEGE

The 74th E.C. vide its resolution No.EC:74:92:06:6(v) resolved to advertise the post of Principal, P.U.C. consequent upon the voluntary retirement of Sri.Saingenga.

In accordance with the decision of the Council, the University in the recent past wanted to advertise the post of Principal P.U.C.. But for want of prescribed qualification from the University Grants Commission, the vacant post of Principal could not be advertised.

In order to frame a suitable qualification, the University of Delhi, which has constituent Colleges like NEHU, was requested to favour us with the requisite qualification for the post of Principal in the constituent colleges of University of Delhi.

Accordingly, the University of Delhi has furnished a copy of the Ordinance containing the qualification attached to the post of Principal and it is placed at Annexure "A".

The matter is placed before the Council for consideration.

C O P Y

Ordinance XXIV of the <sup>Delhi</sup> University Calendar-Volume I states as follows in respect of qualifications attached to the post of Principal:-

Essential:

(i) Good academic record with at least second class (c in the seven point scale) Master's degree in a relevant subject from an Indian University or an equivalent degree from a foreign University with doctor's degree or equivalent published work and teaching experience of degree classes of not less than 10 years

OR

(ii) Good academic record with at least second class (c in the seven point scale) Master's Degree in a relevant subject from an Indian University or an equivalent degree from a foreign University with teaching experience of degree classes of not less than 15 years.

Desirable:

Administrative experience in a recognised institution teaching degree classes or above,

Explanation:

1. For determining 'good academic record' the following criteria shall be adopted:-
  - (i) A candidate holding a Ph.D/M.Phil Degree should possess at least a second class Master's degree; Or
  - (ii) A candidate without a Ph.D/M.Phil degree should possess a High Second Class Master's degree and second class in the Bachelor's degree; Or
  - (iii) A candidate not possessing Ph.D/M.Phil degree but possessing second class Master's degree should have obtained first class in the Bachelor's degree.
  - (iv) In the case of post of Principal, Physical Education teaching experience will include teaching or practical experience in field of Physical Education of not less than 15 years,
2. Persons having secured at least 50% or more marks shall be deemed to have passed the examination in the high second class.

Note:- Relaxation of any of the qualifications may be made in exceptional cases in respect of all posts on the recommendation of the Selection Committee.

(ii) Required Specialisation for the post of Professor of Mathematics, Shillong.

The University, vide advertisement No.1-2/Estt-II(B)/91-148 dt. 10.4.92, had among others, advertised a post of Professor of Mathematics with specialisation in Algebra/Algebraic and Differential Topology/Smooth Dynamical Systems/Cosmology/Number Theory/Applied Maths/Numerical Analysis/Computer Science.

Subsequently, the Head, Computer Centre by his letter dated 23rd April, '92 pointed out that the specialisations indicated for the post of Professor of Mathematics should have been limited to only Computer Science/Numerical Analysis in view of the fact that the UGC sanctioned the post of Professor during the Sixth plan with the said specialisation and it has not been filled till date.

The matter was examined by the concerned section and it transpired that the UGC during the Sixth Plan sanctioned a post of Professor of Computer Science/Numerical Analysis for the Department of Mathematics with the stipulation that the Department should play an important role of training, scientific personnel in Computer programmings and related fields. It is also a fact that the post of Professor sanctioned by UGC could not as yet be filled.

To sort out the differences, the Vice-Chancellor has convened a meeting of the Department of Mathematics and Computer Centre. The matter was discussed at length and it was resolved that the respective departments may give their views for submission to the UGC for consideration.

It was also decided that the post of Professor of Mathematics advertised might be withdrawn. Accordingly the post of Professor of Mathematics had been withdrawn from the advertisement vide No.1-2/Estt-II(B)/91-1480 dated 12.5.92.

Before the University moves UGC, it is felt necessary that the matter may be brought to the notice of the Council.

Thus, the views of the Department of Mathematics and Computer Centre are placed at Annexure 'A' and 'B' respectively for deliberation of the Council.

View of Mathematics DepartmentOnInclusion of more specializations for a post  
of Professor in Mathematics Department  
sanctioned in the Sixth Plan.

A post of Professor was sanctioned for the Department of Mathematics (NEHU, Shillong Campus) in the sixth plan. The specializations recommended for the post were Computer Science/Numerical Analysis.

This post had been advertised many times since its creation, but it could not be filled due to non-availability of requisite number of applications from candidates having basic degrees (M.Sc. & Ph.D.) in Mathematics with specialization in Computer Science and Numerical Analysis. Every time, we got only one application for these specialization, that too of an internal candidate who has already been promoted to Professor's grade under Merit Promotion Scheme.

As far as the U.G.C.'s recommendations for specializations of this post are concerned, we would like that the commission should consider the following points.

1. As envisaged in the sixth plan, at present the Mathematics Department has a Professor with specialization in Computer Science.
2. The Department of Mathematics has already taken lead in organizing various academic programmes on Computer Science and Numerical Analysis. Two one-semester courses on computer science and one course on Numerical Analysis are being given at the post-graduate level. Even M.Phil. courses also have been given by the Department. The Department has organized training programmes in Computer Science for College teachers and has been helping other departments and Centres for the same.

Thus, the sixth plan recommendations of the U.G.C. have been respected by the Department of Mathematics to the maximum possible extent. Non-availability of suitable applications in the field of Computer Science in the past many years, has convinced the department that this pattern is not likely to change in the near future for obvious reasons (most of the good mathematicians specialized

in Computer Science leave the country), still we are trying to get some good person in this discipline. At the same time, the following genuine facts are worth considering.

During the last 18 years, the Department has developed the fields of Algebra, Algebraic & Differential Topology, Cosmology, Number Theory, Computer Programming and Oceanography both at post-graduate as well as research level. Our library also has grown in tune with this development.

In these days of resource crunch when even our library is bearing the brunt of grand cut in its budget by more than 50% we feel very strongly that the first priority for the department is to consolidate the existing research fields and facilities which will strengthen the specializations already pursued.

Under these circumstances, the department feels perfectly justified in proposing that the specializations of the post in question be broadened to include Algebraic Topology/Cosmology/Number Theory in addition to Computer Science & Numerical Analysis. Without broadening the scope of specializations, the University will have only two alternatives-- either to keep the post vacant for a long time or to try to fill it, somehow, by reducing the standards and bypassing the usual norms expected for this post. The Department is sure that neither the University nor the U.G.C. (or any other academic agency) will like to go for any of these options.

Therefore, the department has the opinion that broadening the scope of specializations as mentioned above for the post of Professor in question is in the best interests of the department for its academic health.

C C F YAnnexure 'B'IC.261

Dated 23rd April, 92.

From:

Dr. S.N. Rai,  
Head,  
Computer Centre,  
NEHU, Shillong.

To

The Registrar,  
NEHU,  
Shillong 793 001.

Sub: Advertised specialisation for the posts of Professor  
and Reader in the deptt. of Mathematics.

Sir,

This is to bring to your kind notice that there is an error in the advertisement No.1-2/Estt-II(B)/91-148 dated 10th April 92. It is in the item no 1(c) pertaining to the specialisation mentioned for the post of Professor and Reader. The UGC sanctioned in the sixth plan a post of Professor in Computer Science/Numerical Analysis and a post of Reader in Applied Mathematics/Numerical Analysis/Computer Science in the Department of Mathematics with the stipulation that the department should play an important role of training, Scientific personnel in computer programming and related fields. The UGC recommendations further mentions that the role of the computer Centre essentially would be managerial in the sense that it would be called upon to the run the computer where as academic programmes should be organised in the Department of Mathematics. When I visited UGC on the 9th April, 1992 in connection for approval to start M.C.A. course at NEHU, I was specifically told that a few posts were sanctioned in the Sixth Plan to start Computer Course. These should be filled immediately by academic personnel in this field.

I therefore, request to issue a corrigendum to the above advertisement mentioning clearly that these positions are meant only for Computer Science/Numerical Analysis.

Thanking you,

Yours sincerely,

Sd/-

( S.N. Rai ).

(iii) Promotional Avenues for University Teachers

The Govt. of India have, after taking into consideration the recommendations of the University Grants Commission, decided to revise the pay scale of teachers in the Central Universities w.e.f. 1.1.86.

At the time of introduction of new pay scales for University and College Teachers, it was emphasised that the number of positions of Professors and Readers in the Universities and Colleges will be revised from time to time, by the agencies who sanction their maintenance expenditure, in order to provide an incentive for high quality and original work by teachers.

Meanwhile, the University has received a number of proposals from the teaching community suggesting to create sufficient promotional avenues for the teachers.

The proposals are placed at Annexure-"A" "B" and "C".

In connection with promotional avenues for teachers in University and Colleges the Govt. of India/UGC formulated the Scheme of Career Advancement Scheme for placement of Lecturers in the senior scale, selection grade and as Reader. As such Lecturers have the promotional avenues to senior scale, selection grade and Reader. There does not therefore need to have further up-gradation of Lecturers posts as desired by the teachers. As posts held by individuals Lecturer are to be upgraded for promotion and these posts will continue to be held by the incumbents for a long time, new intake of Lecturers will be very few. Only in those cases where Lecturers are able to secure appointment to the post of Reader through open selection, new recruitment of Lecturers can take place against the posts vacated by Lecturers on joining as Reader. Further proposal for up-gradation of the posts of Lecturer will block future recruitment. There should be no grievances on the part of the Lecturers for promotional avenues as they have been provided under the Career Advancement Scheme.

If the posts of Readers are up-gradaded, the number of posts in the Reader's grade will stand reduced and the Lecturers will have less scope to try for recruitment through open selection to the grade of Reader and they will have to wait for their eligibility only under Career Advancement Scheme, for which a Lecturer will have to wait for 8 years or 16 years. Chances of Lecturers

to get appointment to the post of Reader through open selection will stand reduced if the posts of Reader are up-graded, since up-graded posts will continue to be held by the incumbent for long years. No doubt there is no Scheme for promotion of Readers to the post of Professor. Probably the Govt. of India/UGC did not contemplate such a scheme as post of Professors are senior posts and the posts of Professor are expected to be held by senior and experienced teachers.

It is doubtful that the Scheme of up-gradation formulated by AC and EC of the University can be implemented. Such schemes will have to be approved by the UGC or the Govt. of India. If a University can formulate its own schemes to provide promotional avenues to teachers, every University would have liked to go for it. But the funding Agency will be put to difficulty as they will have to bear the increased expenditure. Thus, if any proposal formulated by the University authorities in this regard, it has to be submitted to the UGC for approval.

The matter is placed before the Council for consideration.

February 24th, 1992.

The Vice-Chancellor  
North Eastern Hill University  
Shillong.

Subject: Promotional avenues for University Teachers.

Sir,

You may recall in February - March 1991 there was some apprehension among the teachers regarding the faculty positions, including about twenty posts of Professors, advertised by the University and the mode of distribution of these posts among various departments as well as the specializations of these post etc. At that time it was given to understand that these posts belong to residual period of 7th plan. But now we find that the expenditure involved in creating these posts has to be adjusted against the 8th plan grants with the result that we have only six positions of Professors for the entire University during the 8th plan. This has created an abnormal situation in the University where highly qualified and experienced faculty members have to wait for many more years to get an opportunity to be assessed for appointment to a higher position. This situation has to be viewed against the backdrop of the fact that when new UGC grades were introduced in 1986 a specific promise was made to create more posts at the higher level so as to provide promotional avenues for teachers. Contrary to this, because of delays in taking decisions by the University and UGC and official bottlenecks in general, the University has been denied any new teaching positions during the entire 7th plan thereby creating the present situation. In this connection it is pertinent to mention that a committee was set up to go into the question of utilising the grants in a manner so as to create maximum number of higher posts and Prof. H. Junjappa wrote a letter to the various Heads of the Departments to collect information concerning the so called upgradation and/or redesignation scheme but nothing is heard of it now.

We request you to take up this matter with the appropriate bodies (Academic Council and the Executive Council) of the University so as to create sufficient promotional avenues for the teachers. Specifically we request you to consider the following:

- (i) Funds for the already filled/created posts under the residual period of 7th plan should not be adjusted against the 8th plan grant.

6:6:3(4)

- (ii) The University should create new teaching posts with the full 8th plan grant.
- (iii) The University should introduce appropriate upgradation and/or redesignation scheme to end the stagnation and to create better working conditions. It may be pointed out that very little expenditure is involved for the implementation of such a scheme.

Thanking you,

Yours faithfully,

- |                           |                        |
|---------------------------|------------------------|
| 1. R.K.Poddar - Sd/-      | 27. H. Jungappa - Sd/- |
| 2. K. Ismail - Sd/-       | 28. H. Ila - Sd/-      |
| 3. Y.S. Jain - Sd/-       | 29. K.P. Sinha - Sd/-  |
| 4. Satish Kumar - Sd/-    | 30. R.P. Bajpai - Sd/- |
| 5. S.N. Bhat - Sd/-       | 31. Vinod Singh - Sd/- |
| 6. S. Goswami - Sd/-      |                        |
| 7. S. Aravamushan - Sd/-  |                        |
| 8. S.S. Khare - Sd/-      |                        |
| 9. S.K. Srivastava - Sd/- |                        |
| 10. M.B. Roge - Sd/-      |                        |
| 11. S.C. Daniel - Sd/-    |                        |
| 12. Mathew George - Sd/-  |                        |
| 13. H. Kalla - Sd/-       |                        |
| 14. Jagatpal - Sd/-       |                        |
| 15. S.B. Prasad - Sd/-    |                        |
| 16. G.D. Sharma - Sd/-    |                        |
| 17. A.K. Ghosh - Sd/-     |                        |
| 18. Surendra Singh - Sd/- |                        |
| 19. Dr. P.M. Chakr - Sd/- |                        |
| 20. R.K. Pathak - Sd/-    |                        |
| 21. B.B.P. Gupta - Sd/-   |                        |
| 22. B.K. Sharma - Sd/-    |                        |
| 23. A.C. Misra - Sd/-     |                        |
| 24. B.K. Tiwari - Sd/-    |                        |
| 25. R. Sharma - Sd/-      |                        |
| 26. R.S. Tripathi - Sd/-  |                        |

Copy to:

President EHTA with request for necessary action.

6:6:3(5)

ANNEXURE- 'B'

C C P Y

DEPARTMENT OF CHEMISTRY  
North-Eastern Hill University, Shillong.

From:  
Prof. H. Junjappa

22nd July, 1992.

To  
The Vice-Chancellor  
Chairman  
Academic Council  
North-Eastern Hill University  
Shillong.

Subject: Agenda paper for Academic Council -

UPGRADATION OF FACULTY MEMBERS IN THE P.G.  
DEPARTMENTS AND CENTRES IN THE UNIVERSITY.

Sir,

I am submitting the agenda paper on the above subject for consideration by the Council.

Thanking you,

Yours sincerely,

S/-  
( H. Junjappa )

UPGRADATION OF FACULTY MEMBERS IN THE P.G. DEPARTMENTS AND CENTRES IN THE UNIVERSITY

After the introduction of new pay scale in 1986, the merit promotion scheme was withdrawn for those who opted for the new scale. The UGC assured the Universities the liberal sanction of the new posts so that the deserving faculty members will not suffer academic stagnation. However, nothing of that kind has happened and in reality the teaching community is suffering unprecedented academic stagnation.

The teachers working as Lecturers and Readers will draw salary at some stage of their careers overlapping with that of Readers and Professors respectively. For example Readers whose basic salary is Rs.4500/- will draw the same total gross salary as that of a Professor who is drawing Rs.4500/-. Similarly the Lecturers whose basic pay reaches Rs.3700/- will be drawing the salary in the overlapping phase of the Readers.

Those teachers who have reached the salary block of their next higher designation, if promoted either as Readers or as Professors, will not burden the university with additional financial requirements until they reach their maximum in their previous post. This normally takes around 5-8 years and only after that period, the university may require additional grants which is marginal. Such grants which are sanctioned for new positions can be utilised to meet this expenditure.

It is therefore suggested that the faculty members who have reached the salary phase of their next designation, may be considered for evaluation for promotion to their next higher post.

The Academic Council therefore may discuss this problem and advise our administration to enable them to implement this promotional scheme. The Council may advise ways and means on the following points:

1. The Academic Council may approve the position required to be upgraded both at Professors and Readers level.
2. All the Readers who have completed six years of service and nearing the basic salary of Rs. 4500/- may be asked to submit their bio-data to be processed for selection following university selection procedure.

3. Similarly the Gr. Lecturers who have completed 10 years of teaching A.O. service be asked to submit their bio-data for their promotion to Readers post following university selection procedure.

4. The candidates rejected in the first selection committee may take their second chance after one year.

5. The scheme will be continued for every batch who attained the required basic pay and experience.

There are approximately 53 Readers of whom nearly 50% of them have already reached the proposed length of service. The number of Lecturers crossing Rs.3200/- may not exceed 10.

Apparently the financial liability on each cadre will be minimal which may fall far below the amount needed to support few new positions.

32/-

( H. Junappa )  
Professor  
Department of Chemistry  
NEHU, Shillong.

G:6:3(2)

ANNEXURE- 'C'

C O P Y

NORTH-EASTERN HILL UNIVERSITY TEACHERS ASSOCIATION

NEHU, Shillong (Meghalaya)

Date. 27.7.92.

President

Dr. S.N. Rai  
Deptt. of Chemistry,  
NEHU, Shillong.

To:  
The Vice-Chancellor,  
NEHU, Shillong- 793001.

Sir,

Enclosed please find herewith a proposal for promotional avenues for NEHU teachers. The proposal has been approved by NEHUTA in its GBM held on 23.7.91. I should appreciate if you would kindly place it before the Academic Council on 7.8.92 for necessary action.

With regards,

Yours sincerely,

Sd -

( S.N. Rai )

Encl: a.a.

PROPOSAL OF THE NEHOTA GENERAL BODY  
ON PROMOTIONAL AVENUES FOR UNIVERSITY TEACHERS

The need for such a change

At the time of introduction of new pay scales from January 1, 1986, it was explicitly stated and accepted by the University that those faculty members who opted for the new scales would be provided with adequate promotional avenues in order to provide an incentive for high quality and original work.

It is important to recall here that during the entire VIIth plan no new faculty positions were sanctioned, and that the possibility of creating promotional avenues since January 1986 has been nonexistent. This has led to the prevailing situation in this University whereby highly qualified and experienced teachers have been denied avenues for promotion.

In view of the facts stated above, the committee makes the following recommendations for creating promotional avenues for the teachers of this University. For this purpose the Committee considered two categories of teachers, namely (a) those teachers who are at present serving as Readers, and (b) those who hold the position of a Lecturer.

(a) Promotional avenues for Readers:

All teachers of the University who have been serving as Readers for at least five years without break should be considered for placement as Professors provided they fulfill the following eligibility criteria:

- (i) A Ph.D in the concerned subject.
- (ii) At least 10 years of Post Graduate Teaching and/or Research experience after obtaining Ph.D, including experience of guiding research at doctoral/M.Phil levels and/or equivalent published work.

or

At least 15 years teaching/research experience after Ph.D., including experience of guiding research at doctoral/M.Phil. levels and/or equivalent published work, out of which at least five years should be at the Post Graduate level,

or

At least 18 years Post Graduate Teaching/Research experience, including experience of guiding research at doctoral/M.Phil. levels and/or equivalent published work, which will include upto three years for obtaining

the Ph.D. degree, for those who obtained their research degree after joining their teaching job.

- (iii) They must have published work of high quality and should be actively engaged in research.
- (iv) They must have served this University for at least 3 years as a Reader.

The candidates who wish to be considered under this scheme should apply formally at least six months prior to the date of eligibility. The selections must be made through a properly constituted selection committee by the University. The selected persons would be redesignated against the positions which they hold at present. The scheme must be implemented annually on a continuous basis. Persons who are not selected will be eligible for reconsideration only after one year from the date of the meeting of the selection committee.

(b) Promotional avenues for Lecturers:

All teachers of the University who are at present serving as Lecturers with at least 8 years teaching/research experience should be considered for placement as Readers provided they fulfill the following eligibility criteria:

- (i) A Ph.D. in the concerned subject.
- (ii) 8 years of teaching and/or research experience which will include upto three years for the Ph.D. degree.
- (iii) Evidence of good published research work.
- (iv) Should have served this University for a period of at least 3 years as a Lecturer.

The selection procedure and other details for this category are same as for the category (a). Those selected would be redesignated as Readers against their own positions.

In addition, the committee considered the question of creation of new posts under the VIII plan period, since this will also provide a promotional avenue, albeit limited, for the teachers of the University. The committee recommends that all the funds received by the University for creation of new posts under the VIII plan period should be exclusively utilized for such purpose.

## (i) The Present Financial Position of WNU -

On April 2, 1992, the Chairman of the University Grants Commission informed WNU that the maintenance grant for 1992-93 will be the same as disbursed in 1991-92. All the Central Universities including WNU have been greatly affected by this financial freeze.

This freezing of our maintenance grants by UGC and the Union Ministry of Human Resource Development (MHRD) had really affected our academic life very greatly due to drastic cuts in expenditure relating to Library requirements. We could not readily fill-up even the sanctioned teaching posts which had further aggravated the situation. On the pretext of meeting the financial crunch facing the country directions had been issued by the UGC, MHRD and the Union Ministry of Finance to cause further cuts in the other sectors of expenditure like telephones, ~~over-time~~ <sup>allowance</sup> and travelling expenses. As if conservation of scarce resources is not enough, we have also been directed to mobilise our own internal resources. Since we have to operate financially at the level of actual expenditure of 1991-92 for 1992-93 and without any grant for meeting the cost of Dearness Allowances and periodical increments we have, perforce, initially started with the enhancement of fees, the introduction of bus fare at nominal rates, the enhancement of electricity charges for Campus residents and withdrawal of transport facilities hitherto enjoyed by our Deputy and Assistant Registrars. The other sources of revenue are still being examined by the Advisory Committee to the Vice-Chancellor which is expected to submit its report very soon.

The Vice-Chancellors of all Central Universities are having monthly meetings with the UGC to sort-out the financial impasse. In almost all these meetings and in meetings with the Planning Commission and the Union Minister of H.R.D. the V.C. had always been pleading for special status for WNU, perhaps much to the annoyance of the authorities in New Delhi. It was only in the meeting with the Union Minister of H.R.D. on July 7, 1992 that he declared the decision of the Union Government to defreeze the freezing of maintenance grants.

Naturally, we all have a sigh of relief. But since the details are yet to be worked out by the UGC, we are not so complacent about the unsettled financial condition facing us right now and we do not know what further problems will be in store for us in a couple of years' time.

The present financial crisis and grant freeze cannot be taken to be a passing phase or interim phenomenon. It would continue certainly during the 8th Plan period, and most probably, even beyond.

The cuts in grants to universities are being effected during the past few years; it is not a phenomenon associated only with the new economic policy, the last budget and the grant freeze. It has to be basically recognised that education is a social responsibility in which the costs have not to be looked at merely as expenditure but as a social investment. From this axiom necessarily follows the responsibility of the Government to assure the flow of funds to the universities at a certain minimum well-defined level, at any time.

Perhaps nowhere in the world has education a self-generating financial potential. A commercial model of education in a capitalist social structure, permitting entry to a small fraction of the disadvantaged group in our poverty-stricken society, is a highly debatable issue. Besides, privatising higher education even partially has its own hazards. Such a shift in policy requires to be widely debated and its implications and possible effects assessed, before it is adopted and put into effect.

Less financial dependence on the government and movement towards self-reliance, an insistence on the universities in the present economic scenario, to achieve targets with less financial outlays through improved efficiency and productivity, optimizing the institutions' resources and encouraging greater involvement of the private sector, may sound as radical and even desirable, but it does not appear to have been provisioned for, assessed by our planners that in the climate that exists in the country, how much of it can really be achieved? Do the pre-requisites for pursuing such an approach exist in our country? Can the co-operation of all the elements inside the university and outside be assured to effectuate this policy? For if implemented, how much would it really utilise the university's resources in financial terms?

On the whole an impression is being created that Universities are being proparitized into models whose practicability and implications have not been adequately discussed and measured. To ensure that the new policies do not lead us two steps backward while we take one step forward, we consider it necessary that the question of university funding is viewed from a holistic and long term perspective, with appropriate and well defined Government policy support. This exercise needs to be taken up in right earnest, on a priority basis.

Amongst other autonomous organisations, the North-Eastern Hill University (NEHU) too has been suffering considerably because of the grant cuts during previous years the present freezing of grant as well as the Government notification for payment of increased DA and the rise in the cost of services and other items generally. NEHU is not in a position to fill up even its sanctioned posts and finds it difficult to maintain its services to the university at the present level.

If the Government does not increase the maintenance grant to NEHU even to absorb the DA, annual increments and increased cost over items like communications, travel, printing, stationery, etc., it is natural for the University to find itself in a helpless situation. (These items will now be funded by the Government in the contents of the UGC Chairman's letter dated 3.7.92 to the V.C. are not retracted).

In the model proposal above, or under any other model, the maintenance grants to the university should at all times be the responsibility of the Central Government.

It would necessarily include salaries, dearness allowance, increments, grant to neutralise inflation, grant for the maintenance of buildings, library, laboratories and other equipment. It implies that the sanctioned posts shall be protected and the vacancies shall be filled up, to enable the university to maintain and continue their teaching and research programmes at a certain level of efficiency.

In addition to the above, what other items should form part of the basic maintenance grant to an institution, should be decided by the Central Government after consultation with

the universities. These items of expenditure certainly cannot attract funds from the industry or donors, except to give a few prestigious Chairs. Adequate assured minimum inputs should, therefore, remain the social responsibility of the Government.

As distinguished from the above, the items of expenditures for which the universities should be free to generate their own funds need to be enumerated. They should have full control over such expenditure. These resources raised by the universities themselves should really be invested for new thrusts and frontier line developmental areas.

The resources so generated by the universities should not be taken into account in calculating the minimum maintenance grants. This needs to be declared as Government policy immediately.

The erosion of the rupee through devaluation and its being floated partially has further increased costs on books, journals and imported equipment. While making grants to the university, this factor needs to be properly reflected. (It would appear that the Government of India are alive to this problem if the advice of the Joint Secretary and Financial Adviser (FA) to MHRD in his letter No.G.21015/2/92.IF.2 dated 26.5.92 to place the matter before the P.C. is any indication. This being the advice of the FA, it is expected that the FC may not be averse to provide funds to offset the increase in expenditure on this account).

Raising additional resources :

(a) Raising fees to off-set the cost partially, is highly desirable. But raising of fees again is not feasible.

Moreover, the amount of money collected from tuition fee constitutes a small share (less than 3 per cent) of the total costs of university education. Even if the fee rate is revised manifold, it would not be possible to raise adequate funds because a significant proportion of students belonging to educationally backward groups would qualify for exemption of fees.

(b) The oft-repeated suggestion for interface between the universities and the market forces needs to be thoroughly examined.

The above would indicate that hardly a university/institution could be able to mobilise funds to even absorb above 12 per cent annual inflation; much less could it compensate for the loss of income due to cuts.

All successful institutions must distance from the university/institution and must primarily must conduct themselves with the sense of social responsibility. Modernization of the methods of management, strict financial discipline and enforceable modalities of accountability must be built-in, in the university system. Appropriate linkage between optimal utilization of existing funds and resources as determined according to publicly proclaimed norms, and performance of the institutions on the one side and Government funding on the other needs to be established.

The question of funding of university, this we feel needs to be thoroughly studied from a much wider perspective and a long term point of view. Whatever be the model that is ultimately adopted, the Central Government cannot, at any time, possibly give up their minimum obligations to the University except at the peril of university decadence and the violent crumbling of the system.

The Academic community of NCHU had already experienced the hardship of lack of funding of the maintenance grants during the last seven months. They had given their views on how to meet the challenge. The views of NCHUEA and TBA(NCHU) are enclosed at Annexure - A and B respectively.

While the matter may become more clear after the next Finance Committee meeting it is imperative that the Academic Council be apprised of the matter relating to the present financial position of the University. In case the national norms are adopted for funding the Central Universities.

The Council may, therefore, like to consider :-

1. Raising additional sources (which sources should not be accounted by UGC) and
2. Providing a special category status for NCHU for some more years to come.

Reasons for allocating more funds to NEHU

The North-Eastern Hill University is a multicampus and land locked University. None of the campus is connected with a railway line. The terrain is hilly and full of forests. As a result the communication between different campus become a problem specially during rainy seasons. Effective control and administration of the approved schemes require much higher expenditure on establishment.

The University caters to the educational needs of a predominantly tribal population. In fact, it was established by the Centre to fulfill its constitutional obligation of uplifting the social and educational status of the north-east region. Unfortunately, at the time of the start of the University, no provision in the form of adequate endowment or property was made by the Centre. As a result the University cannot hope to generate any revenue by efficiently managing endowment fund or renting property. All these factors combined together put NEHU in a precarious financial situation and requires special assistance in the allotment of funds by the Government of India. The principle of self financing of the higher education cannot be applied to NEHU. All the funds has to come from the Centre and any cut will irreparably damage the fragile fabric of higher education conceived by NEHU.

NEHU needs substantial funding for strenghtening infrastructural facilities of existing academic programmes, for creating promotional avenues, and for the development of self contained functional campus.

The funds for improving the laboratory and library facilities were not granted in the VII plan. The equipments purchased have become outdated and are in need of replacement. The consumables and accessories cannot be purchased because of the unfavourable rupee convertibility. The decrease in the purchasing power of the rupee has effectively reduced the maintenance grant to one-third level. The less said the better for the library. NEHU is not able to subscribe even the most effective research journals. The only library in this part of the country cannot provide even the rudimentary information on the latest academic pursuits of the world community.

The Government of India at the time of implementation of the 4th Pay Commission Report, promised to create new posts at higher level. Unfortunately, the promise was forgotten in the VII plan and as it was not taken up in the VIII plan as well. It resulted in a strong sense of frustration among teachers which may hamper their productivity.

The campus development has never taken off due to various difficulties and bottlenecks. The University campus at Shillong is scattered throughout the town. The faculty members are living in miserable conditions paying exorbitant rent. It is imperative that all the components of the university be put at one place at the permanent site. Any delay in the release of fund will further escalate the cost of construction.

#### Restructuring of NNU expenditure

Any restructuring and readjustment will create heart burning and problems, but in the present condition, when the survival of the University as a centre of excellence is at stake, there is no alternative. To increase the vigil and participation of everyone, it is suggested that central pool allocation on telephone, petrol, stationery, furniture, travel and visitors should be split to various departments and sections. It should be reallocated to all sections and departments. It will improve the functioning and will also reduce expenditure. Besides it is possible to economise on the following fronts :

1. NNU has a large number of telephones and the telephone bill is too high. The number of telephones should be reduced to one-third. There should be a ceiling on the telephone bills. Actual expenditure incurred by each section/department should be explicitly mentioned in the budget.
2. The University fleet of light vehicles is too large and expenditure on petrol is heavy. The number of vehicles must be reduced at least by 50%. Per month ceiling on the expenditure on petrol must be enforced. There is a need to decrease the fuel consumption rate.

3. The expenditure on stationery, furniture, travel and visitors should be explicit and should be charged from the respective sections/departments.
4. No university accommodation should remain vacant and it should be effectively used to accommodate departments/sections/health centre etc. which are presently placed in rented houses.
5. The overhead expenditure in establishment and administration should be minimised.
6. The printing work of the university should be done by the university press.
7. Efforts should be made to reduce the expenditure incurred by the university on colleges (inspection, examination etc).
8. Actions taken and progress made on these fronts should be made visible to the university community.

3d/-  
S.N. Rai  
President,  
NEHUJA.

TRIBAL TEACHERS' ASSOCIATION  
Of North-Eastern Hill University (NEHU)

Date 27th July, 1992.

AN APPEAL TO THE MINISTER OF HUMAN RESOURCE  
DEVELOPMENT, GOVERNMENT OF INDIA

Sir,

The Tribal Teachers' Association, having assessed the financial constraints which have affected Universities and higher institutions of learning, have, therefore, resolved that the Ministry of Human Resource Development and the University Grants Commission, be apprised with regard to the problems which the North-Eastern Hill University has been facing with special reference to the conditions, peculiar to the region as a whole. We, therefore, beg before your honour and kind consideration, to apprise the problems as follows :-

1) This University with the very inadequate infrastructure was started in 1973. The University comprises three States with its head-quarter located in Shillong, the University is exercising jurisdiction over the far-flung Frontier States of Nagaland and Mizoram. Experience has shown that the University's day-to-day functioning is rendered difficult, due to the topographical hazards with the very difficult network of transport and the great distance over which its jurisdiction spreads.

Since the University is catering to the needs of the three far-flung states at a time, after the procedures set down and which we are now continually, following the situation has therefore, impelled that a great deal of expenditures, is entailed. It is unlike the small city campuses where expenditures if efficaciously planned and implemented, can be suitably reduced. The fact that NEHU is still lodged in temporary complexes, after almost 20 years of existence, shows that the situation is different and peculiar.

The Tribal Teachers' Association, therefore, draws the special attention of the Government to these basic and inherent problems. Not in spite of these hazards, the University has exerted pressure considerably well to provide such institutions of learning for the benefit of the tribes located in the far-flung region. The previous personnel and administrators especially, had adopted schemes and implemented them to share the campuses in the three States - scattered

and cut off by the difficulty terrain with the view to benefit students with the higher education. These factors have, therefore, hindered the growth of the integrated campus for maintaining the continuity of communication and affecting administration and dissemination of learning in the most viable and economical manner.

2) The Tribal Teachers' Association from the earlier years, desires to have a larger number of students in the University classes. The Tribal Teachers' Association regrets to note that with all the heavy rush for admission, the seats, however, are more limited due to want of accommodation, for which the infrastructure, in this respect is still very inadequate. The Tribal Teachers' Association is aware that the situation will improve until we fix a permanent campus with the adequate facilities. It is still a matter of time to develop the infrastructure and, therefore, the University Grants Commission may kindly review the situation in the North-East as altogether different from the other States and Territories where the Universities had already been established over the period of years, equipped with better resources as should be viable for their maintenance and functioning.

3) We beg, Sir, to draw your kind attention to the fact that the region (with reference to VHU campuses) has not adequately developed in education and has not yet, inspite of its smaller population, developed its roots sufficiently. In other words, the resources for economic viability have not yet been sufficiently tapped and conserved so that things here are very different from the rest of the country. Moreover, the cost of living here is very high and prices of things especially the essential commodities, are soaring up day by day.

Inspite of the facts stated we assure you Sir, that VHU has always been and is still one of the institutions which preserves the rich All India outlook and heritage. We have students reading in P.G. classes and colleges assembling here from the different parts of the country including those of the North-East. These factors, therefore, are very helpful to foster the cause of integration and solidarity inspite of the fact that the quota set down for the intake of ST and SC students at the University level is more limited. Students from all parts of the country in fact have come here for study, training and specialisation.

Page(11)

We, therefore, request the Government fervently to assess the situation for the North-East Universities already established over the several years of their existence. Therefore, steps may be taken to provide liberal assistance of the Centre and without any interruption will continue for the years ahead.

The Tribal Teachers' Association assures to assist and co-operate fully with the University for conserving few resources although little and less adequate they may be, - to cope with these constraints and at the same time, to run all activities, courses and undertakings on the most economical lines. The copy of the resolutions adopted by the Executive Committee Extra-ordinary Meeting held on the 25th July, 1992 may kindly be found enclosed herewith.

The Tribal Teachers' Association in reviewing the situation in the North-East fervently appeals to the Ministry of Education and the University Grants Commission as well, kindly to give special consideration to continue assistance in the same tempo. We are aware that the region is still very backward and hence, our infrastructure remains still to be considerably strengthened. Our resources here are very little compared with the other richer and advanced States. We cannot at present accommodate the large number of students as our quota of seats is very limited. Any drastic cuts in budget allocation will certainly deteriorate the situation. Consequently, we will have to face the very adverse result very soon.

We therefore pray the Ministers of Education kindly to assess the situation in the North-East in analogy of the very difficult circumstances, we have to tackle with.

An act of kindness for which we shall remain ever grateful to you.

Yours faithfully,

3d/-  
Dr. Hanlet Barak,  
President  
TEA, Shillong.

3d/-  
Dr. Kynsei M. Marjri  
Secretary,  
TEA, Shillong.

The Extra-ordinary Executive Committee meeting of Tribal Teachers' Association held on the 25th July, 1992, takes note of the financial constraints this University is now facing and, therefore, resolved as follows :-

(a) That the memorandum or appeal immediately be sent to the Hon'ble Union Resource Development Minister and Chairman, University Grants Commission to apprise of the peculiar problem that this University is catering to the needs of the three far-flung States at a time, and having taken regard also of other problems peculiar to the region. (Copy of the same is enclosed herewith).

(b) Fruitful and healthy exchanges of views were held. They also centre on the constraints which we seek to tackle with. The Executive Committee hence adopts the following resolutions and urges upon taking suitable measures for their speedy implementation.

1) Bus fare - In view of these constraints, the Executive Council of the University is urged upon not to withdraw or cancel rules recently imposed regarding payment of bus fare by staff and students. The Executive Committee feels that the rates are very minimal based on the concessional norms for the benefit of bus passengers. Payment of bus fares as such will continue till the situation slightly improves.

2) FOL expenditure - To curtail FOL expenditures which bring about the heavy day-to-day strains, it is extremely necessary that the departmental use of vehicles has to be more and more restricted. Departmental vehicles should strictly cater to the official exigencies. The UEA re-iterates its view that Departmental or staff vehicles (as in analogy of procedures followed in several Universities), should be allotted to the Vice-Chancellor and in special consideration of the situation here, to the Registrar, Controller of Examination and the Finance Officer. Resolved that the Executive Council be moved to strictly implement these decisions for affecting stringent economy and curtailing unnecessary expenses.

3) Telephone communication - The Tribal Teacher's Association recommends to cut down heavy expenditures on telephone connections and installations with exception that residential connections be allowed only to the Vice-Chancellor, Registrar and Controller of Examinations.

7:2:1:13)

The TTA, however, opines that telephone booths are highly necessary at the Perambur Campus and hence, their installation at the Government Campus buildings, will greatly benefit the staff and students who will be entitled, on payment, to use them.

4) Student intake - The TTA is aware of the very limited intake capacity at several PG Departments. Shortages of accommodation are pressing hard and entail larger investments on expenditure side. These complaints have also been heard at the higher level. The TTA feels that :-

a) the present seat arrangement with chair system is unsuitable to the intake capacity, it does not provide sufficient rooms for accommodation.

b) there is also no uniform pattern of admission as should have been consistently devised and enforced.

The P.C.A. therefore, recommends that -

a) Bench system would be more helpful to increase intake capacity in each class.

b) the norms of admission in all cases should be suitably devised by taking into consideration the intake capacity of each lecture hall; that admissions are preferred to students of NCHU in the first instance with special reference to those students belonging to the three NCHU campuses.

c) some departments which have not fulfilled with maximum capacity should take effective steps to fill up the maximum capacity.

The P.C.A. insists on the economical measures to be strictly observed and advises the Executive Council to implement important measures for - (a) continuing the bus fare system; (b) allotment of departmental vehicles only to officers who are rightly to be entitled; (c) eliminating the present telephone expenditures which cause heavy strains; and (d) find out ways and means to enlarge the present intake capacity (with preference to the students of NCHU belonging to the three campuses).

The TTA regrets that till late, bulk of PG classes are held at temporary complexes, this factor also hinders measures to secure economical transaction on several affairs.

sd/-  
Dr. Hamlet Datta  
President

sd/-  
K.N. Varjari  
Secretary

DEPARTMENT OF SOCIAL WORK  
NORTH EASTERN HILL UNIVERSITY  
MIZORAM CAMPUS : AIZAWI.

(For Academic Council meeting, Aug., the 7th, 1992)

Excerpts from REVIEW OF SOCIAL WORK EDUCATION IN INDIA - Retrospect and Prospect; Report of the Second Review Committee appointed by University Grants Commission.

I. In regard to Integrated or Ladder Approach

Page 18

"If social work is to be effective from the grass-roots onwards, it is necessary to develop programmes which have both a conceptual, and a practice base, and provide a ladder approach education (emphasis added). This issue needs to be closely studied in relation to the provision of social work education in India from the para-professional to the post-graduate levels".

I. In regard to Terminal Course:

Page 21.

"The following pattern of social work education, based on the present academic terminal points, is recommended. Chapters 3, 4 and 5 give the job opportunities related to each terminal stage with reference to the academic levels, and the objectives and content of training.

10 + 2

= HSC level for para-professional training  
The two years may provide for such capsule courses that termination is possible at the end of each year of the two-year course.

Bachelor's

3 years, (Could be made into 1 + 2 years providing a point of termination at the end of the first year.)

Master's

= 2 years. (Could be 1 + 1 with a diploma at the end first year for those with a bachelor's degree in social work).

M.Phil. Post-master's certificate

= 1 year

Ph.D.

= To be completed within a maximum period of 5 years.

III. In regard to emphasis on Lower Level Training :

Page 21

" The Committee finds the growth of social work education top-sided- there is a push for growth at higher levels, but very little development of the front-line worker at the bachelor's and lower levels where the bulk of workers are required. There should be a greater emphasis in these institution to develop the lower levels of training. Unless this is done, social work education will remain outside the mainstream of national development and welfare activity, and will make little contribution or impact".

IV. Three major requirements observed by the Review Committee in its report:

Pp. 21-22 (Summary)

1. The need to develop full-time para-professional and bachelor's programmes, each linked to the next level, and to be treated as pre-requisites for the master's programme.
2. The need to have a more emphatic developmental thrust.
3. The need to locate the institutions in those regions which have the least number of such institutions.

MINUTES OF THE MEETING OF THE PRE-UNIVERSITY  
BOARD OF EDUCATION HELD ON 5TH AUGUST 1992  
IN THE VICE-CHANCELLOR'S CONFERENCE HALL

The list of the members who had attended the meeting is enclosed at Annexure 'A'.

The items placed on the agenda were discussed by the members present and the decisions as under were taken :

1. Introduction of Computer Applications as a subject in Pre-University Course

The syllabus (Annexure F) placed before the Board was accepted. The Board further recommended that the Committee appointed for the purpose by the Vice-Chancellor may lay down the guidelines for other requirements such as equipments, teachers qualifications, evaluation pattern etc.

2. Rationalisation of subject combination for the Pre-University Arts, Science, Commerce and Vocational streams.

The subject combinations to be offered for the Pre-University Arts, Science, Commerce and Vocational Streams as recommended are appended at Annexure B, C, D & E..

The Board recommends that a student may be permitted to opt for an elective at Degree Course although he might not offer the same at Pre-University level.

The Board also recommends that a student may be permitted to opt for a major which is not taught at P.U. level.

3. Introduction of a Course on Environmental Science as a compulsory subject at Pre-University level.

The Board approved in principle the introduction of Environmental Science at Pre-University level. However, it was of the opinion that the syllabus and other details would be framed after the same is introduced at the School Board level and receipt of guidelines on the matter from the University Grants Commission.

4. Introduction of Public Administration as a subject at the Pre-University Arts level and the adoption of the draft syllabus.

The Board discussed this item in detail and was of the opinion that the proposal may be considered after it is introduced at the degree level.

5. Annual Examination for Pre-University Courses

As proposed in the agenda, the University Examinations at the end of the first year and the second year at Pre-University level was accepted. The Examination Department may work out the details for spreading over the syllabus to the first and second year in the proportion of 40 : 60 ratio.

6. External examiners for P.U. Examination

The Board resolved that the existing system of sending external examiners for practical examination should continue. However the University may consider the remedies towards the problems faced by the examiners in this respect.

7. Syllabus for Pre-University

The need to revise the Pre-University syllabus as proposed by Dr. S.K. Das, Lecturer, Department of Chemistry, Science College Kohima was taken note of and the Board recommended that action for updating the syllabus for all subjects may be taken up at the earliest. The Board also recommends that while doing so the syllabus of Central Board of School Education, other Boards/Universities should be consulted.

The meeting ended with a vote of thanks to the Chair and the members present.

(N.R. Chakraborty)  
Secretary

Pre-University Board of Edn.

(R. Lalthantluanga)  
Chairman

Pre-University Board of Edn

Pre-University Arts :

1. Compulsory Papers

- a) English - 2 Papers
- b) MIL Alternative - 1 Paper  
English

2. A student may offer any three subjects from any one of the following core groups of subject combinations as Elective subjects :

(a) History, Political Science, Education, Logic / Home Science

OR

(b) History, Political Science, Economics, IInd Language/ Psychology

OR

(c) History, Education, Economics, IInd Language/Psychology

OR

(d) Economics, Geography, Mathematics, Statistics

3. A student may offer any one of the following subjects as fourth subject :

Logic, Economics, Education, Pol. Science, IInd Language and Computer Applications, Psychology

OR

A student may offer any one of the following subjects as a fourth subject with restrictions as given below :-

- a) History may not be combined with Mathematics,
- b) Geography/Anthropology/Home Science may not be combined.
- c) Classic and Statistics may not be combined.

Pre-University Science

1. Compulsory Papers

- a) English - 2 Papers
- b) MIL/Alternative English-1 Paper

2. A student may offer any one of the following core groups of subject combinations as Elective subjects :

- a) Mathematics, Physics, Chemistry

OR

- b) Physics, Chemistry, Biology

OR

- c) Geography, Geology, Chemistry

3. a) A student may offer any one of the following subjects as fourth subject :

Mathematics, Geography, Geology, Physics, Anthropology, Home Science, Computer Applications, Biology/Advance Mathematics, Statistics, Psychology.

Pre-University Commerce

1. Compulsory papers

- a) English - 2 papers
- b) MIL/Alternative English- 1 paper
- c) (i) Economics Paper I  
(ii) Economics Paper II
- d) (i) Book Keeping  
(ii) Business Method
- e) (i) Commercial Arithmetic  
(ii) Commercial Geography  
OR
- f) (i) Computer Applications - Paper I  
(ii) Computer Applications - Paper II

2. A student may offer ~~one~~ of the following groups as ~~fourth~~ subject(s).

- a) (i) Secretarial Practice  
(ii) Shorthand and Typewriting/Salesmanship and Publicity.
- b) (i) Insurance/Commercial Mathematics  
(ii) Commercial Arithmetic/Commercial Geography
- c) Computer Applications

Vocational Stream of Pre-University (Arts)

Elective Subjects

A candidate who wishes to pursue a Vocational Stream of study may offer two subjects from a particular group of Arts or Science or Commerce Courses and one of the following subjects :-

- a) Horticulture
- b) Forestry
- c) Animal Production with specialisation in Poultry
- d) Piggery
- e) Meat Cattle Production
- f) Fisheries
- g) Agriculture
- h) Motor Mechanics
- i) Electrical Technology and Practice
- j) Printing Technology
- k) Secretarial Practice
- l) Sericulture
- m) Electronics
- n) Music

Fourth Subjects :

A candidate will be allowed to offer as a fourth subject from any of the remaining subjects from the groups from where the candidate has chosen the other two elective subjects.

A student choosing electives from Commerce Stream can offer as a fourth subject either 2(a) or 2(b) of Annexure D.

A student opting k) Secretarial Practice of the Vocational stream can choose only 2(b) of Annexure D. as a fourth subject.

COMPUTER APPLICATIONS

(An Elective Subject at the Pre-University Level)

1. Objective

This course of study in Computer Applications for P.U. students is meant to be one of the compulsory subjects or an optional fourth subject in their P.U. curriculum. The course is employment-oriented; a student on completion of this course could be in a position to execute DOS commands and to carry out any task in word processing, using Word Star, without any further external guidance. However, sufficient theoretical aspects have been added to give the student an insight into the fundamental workings of a computer as well as a good knowledge of BASIC language programming.

2. Eligibility

The course is open to P.U. students of Arts, Science and Commerce streams. It is recommended that the students be familiar with the use of a typewriter.

3. Duration

The course is to be completed in two academic years like all the other subjects of the Pre-University Course.

4. Course Structure

Paper I : Part I : Digital Computer Fundamentals (50%)  
          : Part II : BASIC Language Programming (50%)  
Paper II : Part I : System Commands : DOS (50%)  
          : Part II : Word Processing : Word Star (50%)

5. Detailed Syllabus

PAPER I : PART I :: DIGITAL COMPUTER FUNDAMENTALS  
Unit 1 : Introduction to Computers : Definition, characteristics, Capabilities, Classification of Computers, Programme/Hardware/Software, Basic Components of a digital computer, Stored Program Concept, RAM, ROM, REGISTERS  
Unit 2 : Introduction to Machine instructions, Assembly Languages and high level languages, Interpreters, Compilers  
Unit 3 : Number systems (Binary, Octal, Decimal and Hexa decimal systems), Inter-conversion of Number systems.

PAPER II : PART I :: SYSTEM COMMANDS : DOS  
(Practical)

The student should be conversant with the features of MS-DOS listed below.

1. Terms to know : Program, File, Filename, Directory and Directory Structure, Volume Label, Disk Drives, Drive Name, Prompt, Path, Pathnames, Wildcard, Boot, Diskette, Track, Head, Cylinder, Sector, Partition
2. Commands : append, assign, attrib, backup, break, chcp, chdir, chkdsk, cls, command, comp, copy, cty, date, del, dir, diskcomp, diskcopy, exe2bin, exit, fastopen, fc, find, format, graftbl, graphics, join, keyb, label, mem, mkdir, mode, more, nlsfunc, path, print, prompt, recover, ren, replace, restore, rmdir, set, share, sort, subst, sys, time, tree, type, ver, verify, vol, xcopy
3. Installation of MS-DOS, using FDISK program, using FDISK program, Using EDLIN command, Batch Processing, Purpose and use of Autoexec, bat and config. sys files, Use of DOSHELL Program, configuring the System using SELECT program, Installation of Device Drivers

BOOKS :

1. Microsoft MS-DOS User's Guide and User's Reference (Version 4.01)
2. Alan R. Miller, The ABC's of DOS 4

EVALUATION PATTERN :

1. Written : 15%
2. Viva : 5%
3. Practical : 15%
4. Internal Assessment : 15%

PART II : PART II :: WORD PROCESSING  
( Practical )

Word processing basics, economics of word processing. Using word processing in the business world, Features of the word processing systems.

The student should be conversant with the use of WordStar 5.0 with regard to the following :

Cursor Controls, Deletion, Insertion, Wordwrap, Justification  
Page formatting, Search and replace, Text rearrangement and boilerplating, Block Operations

Spelling Check, Thesaurus, Footnotes, endnotes

Printer Controls; bold, double printing, underline, line spacing, Page breaks, hyphenation, superscript, subscript, font selection, printer selection, Printing.

Mailmerge, Use of Dot commands, Use of Macros

Books :

1. WordStar 5.0. Manual
2. WordStar 5.0. Professional Handbook, by :

EVALUATION PATTERN

1. Internal Assessment : 15%
2. Practical : 35%

5:2 - Syllabus -

(i) Approval of the German language course -

No:AC:42:91:5:02:(i): Since the subject relates to the School of Languages, the Council RESOLVED to refer it back to the concerned School for necessary action.

(ii) Recognition of Vocational Stream by other Universities -

No:AC:42:91:5:02:(ii): Since the matter relates to equivalence of degrees with other Universities, the Council RESOLVED that the matter may be taken up with the respective Universities and also the Association of Indian Universities.

(iii) Revised Course Structure of Syllabus for M.A Anthropology.

No:AC:42:91:5:02:(iii): The Council deferred approval of the Revised Course Structure for M.A Anthropology and RESOLVED that the matter should be referred to the School Board of Social Sciences.

(iv) Proposed Revised Syllabus in Geography-

No:AC:42:91:5:02:(iv): The Council approved the revised syllabus for M.A/M.Sc in Geography effective from the current academic session.

5:3 - Research -

(i) Procedure for consideration of research topics, etc. in the Institute of Organising Systems and Bio-Physics-

*also send*  
No:AC:42:91:5:03:(i): The Council authorised the Vice-Chancellor to appoint a Committee with Dr. K.P.Sinha as a member. The recommendations of the Committee are to be submitted to the Council in its next meeting.

5:5 - Examination Matters -

(i) Panel of Examiners(Ph.D)-

No:AC:42:91:5:05(i): The Council RESOLVED to approve the panel of examiners for examining the Ph.D. theses of the following candidates and to recommend the cases to the Executive Council for its consideration

- (i) Procedure for consideration of Research topics, etc in the Institute of Self Organising Systems and Bio-Physics.

The first Ordinance on the Institute of Self Organising Systems and Bio-Physics provides that the Institute shall admit students to its M.Phil/Ph.D Programmes. The Ordinance however, does not spell out the procedure to be followed.

The normal procedure as laid down in the Ordinances as regard admission of students, approval of research topics, appointment of supervisors etc is processed through the Board of Post-Graduate Studies to the School Board and ultimately the Board of Research Studies. However, in the case of Institute of Self- Organising Systems and Bio-Physics there are no provisions for these Bodies. This has placed difficulties in registration of research scholars as per required procedure under the Ordinances OC-4 and OC-5.

If the Institute Board is to be equated with a School Board there still remains the question of a linkage with the PGS and BRS.

The matter is placed before the Council for consideration.

*Pls. authorise  
 both to look into  
 the matter of the  
 (for both to be included)  
 to be included of the rest of it*

5/16(1)

Closure of the Institute of Self-Organising Systems and Bio-Physics at NEHU.

The U.G.C. appointed an Expert Committee for appraisal of the Institute of Self-Organising Systems and Bio-Physics at NEHU. The report of the Committee is placed at Annexure 'A'.

The report of the UGC on the report of the Expert Committee was communicated to the Vice-Chancellor vide D.O. letter No. F.PA/S(NFE)90. dt. 18-6-90, for his consideration which is placed at Annexure 'B'. An extract of the UGC Resolution reads as follows :-

"The Commission generally accepted the report of the Expert Committee and desired that the contents of the University may be invited on the recommendations made by the Committee particularly regarding transfer of equipments and staff and starting of a Department of Bio-Physics. The Centre of Self-organising Systems at NEHU in the present form may be closed, after the tenure of the present Director expires and preparations in that directions should proceed. There is no intention of reducing the overall activity at NEHU".

The V.C. vide his letter D.O.No. NEHU/VCF.14-1/90-1579 dt. 16-7-90 had communicated to Prof. Jash Pal, Chairman, UGC his response to the Report and also the reaction of Dr. K.K. Mishra which are placed as Annexures 'C' & 'D' respectively.

When Dr. K.P. Sinha joined as Director, ISOS & B, he also submitted his comments on the then Vice-Chancellor vide his letter No. F.3-5/Biophysics/87-2179 dated 17.7.91, which may be seen at Annexure 'E'. Dr. Sinha, among others, suggested that the nomenclature of the ISOS & B be changed to that of the "Institute of Fundamental Research".

The reply of Prof. Jash Pal dt. 20.7.90 in response to V.C.'s letter dt. 16.7.90 is placed as Annexure 'F'. The Chairman, UGC, among others, suggested establishment of an "Institute for General Systems Dynamics" to replace the ISOS & B. As desired in the above cited letter, the Vice-Chancellor responded giving his suggestions vide D.O.No. NEHU/VCF 14-1/90-1839, dt. 27.8.90 (at Annexure 'G').

The Chairman, UGC vide D.O. letter No. F.1-5/90(CH) dated 12.9.90 (at Annexure 'H'), however, intimated to the effect that "This Institute in its present form and its present name cannot continue beyond February next year. However, as already mentioned, it may be re-organised in the form of a department/centre/institute in accordance with the discussions which have gone on and will happen with Dr. K.P. Sinha & others".

The matter is placed for consideration and decision of the Council.

Report of the UGC Committee to appraise the Institute/Centre of Self-Organising Systems and Biophysics, at North Eastern Hill University.

Committee's visit to NEHU with the background of setting up the Institute:

The Committee set up by the Chairman UGC with terms of reference attached herewith visited Shillong from 19th to the 21st of March. Members has examined all the available papers and they had long discussions all with the Vice-Chancellor Prof. Iqbal Narain, NEHU, and the Director of the Institute of Self Organising Systems and Biophysics. They visited the Institute building which is on the top floor of the Women's Hostel and looked into the position of equipment and infrastructural facilities. Discussions with individual members of the Institute staff were held in confidence, and meetings were held with Drs. Junjappa, (Chemistry) & Bhan Physical Sciences, A.L.Verma (Physics) and many of their colleagues - as also with members of the faculty of Life Sciences, and two members of the Governing Council of the Institute Prof.J.N.Singh and Prof.K.Rameshu who happened to be available. Since the working brief of the Committee is an overall assessment of the circumstances surrounding the setting up and working of the Institute, it is considered best to provide a sequential statement of events, which would show that problems have arisen because of practically every link in the chain of events.

1. On 29.7.1985 a Committee consisting of Prof.A.R. Varma (Physicist) and Prof.B.Bhatia (environmental Science) examined a proposal for setting up such an institute/Centre. The proposal, framed by Prof.R.K.Misra who was to retire in a few months from the Biophysics Department of the All India Institute of Medical Sciences, came from the then Vice-Chancellor of NEHU, Prof. V.K.Gaur (Geophysicist) the third member of the Committee was absent, but Prof.R.K.Misra, the proposer was personally available. The document this Committee is said to have examined had just about 300 words, which included such phrases as: "An automated and Self structuring organization is much needed in the country..... It must be stressed that the theory proposing living matter as a new state of matter has only been made from India, and it is our obligation to develop it fully". (Underline original). The Committee had no scientist who could be called an expert in either biophysics or self organising biological systems. The Committee's recommendations, in part stated: "It was recognized that heavy funding would be

necessary, may be upto a crore even, if the targets were to be achieved looking at inflationary trends today...Committee reiterated its warm support to the proposal, its own suggestions and requested UGC to go ahead with its adoption and implementation very early and thanked the UGC for bringing this proposal for consideration before them."

2. Within three weeks, on 19.8.1985, the UGC accepted this proposal, with equipment component of 65.5 lakhs, and other support, including teaching and research staff of Director, Professor/Reader 2, Lecturers 2 with additional Professor/Reader 2 and Lecturers 2 in the following year. Thus a proposal worded in general and vague terms, with no project document or identification of scientifically defined tasks, was approved at a cost which could run upto Rs.1 crore non-recurring and many lakhs per year recurring!

Special Contract Appointment of Director :

3. In November/December of 1985 a "Special Contract Appointment" was drawn for Prof.R.K.Mitra with officer on Special Duty of N.E.H.U. This contract is not either vague or general and it binds the University to appoint him whole time Director for five years period "with effect from 1st March 1986." It is worth noting that the Vice-Chancellor NEHU had already retired, an Officer on Special Duty was holding charge, and Prof.R.K.Mitra's name was perhaps under consideration as Vice-Chancellor of NEHU. The special contract is witnessed by the Special Secretary dealing with Higher Education in the Ministry of Human Resource Development.

The result was that in March 1986, Prof.R.K.Mitra joined NEHU as its Vice-Chancellor, but he held simultaneously another whole time post of Director of the Centre of Self-Organising Systems and Biophysics.

Expenditure to be met from NEHU's sub-plan:

4. The NEHU had received a letter from the UGC granting staff for the Centre and Rs.45 lakhs for equipment (1985-86) and another Rs.25 lakhs for equipment (1986-87) with a provision that the approval was subject to "the condition that the expenditure will be met out of the over all allocation of Rs.3 crores made to the NEHU under the sub-plan 1985-86." The Vice-Chancellor immediately sent off orders for equipment, drawing away nearly Rs.70 lakhs from the general allocation for the University which had included Rs.103 lakhs for equipment for science faculties of the university, which was left with just 33 lakhs perhaps for the whole plan period. Some staff was recruited to join by about the middle of 1986.

Lack of Planning :

5. Lack of scientific planning provision of space, electricity, water, furniture and other infrastructure, hasty and out of phase arrival of equipment late in 1986, and of staff, led to acute problems. Equipment lay in crates, people say, in the Vice-Chancellor's house. Space which had been embarked for the science faculty, and which they badly needed for class rooms, library and some laboratories was taken away for the Centre. Loss of equipment money was compounded by the loss of essential space, and this immensely antagonized the whole science faculty. In any case, it was in the second half of 1988 that some equipment came to be installed and many defects were revealed which could not be rectified because the guarantee period was over. Many essential components had not been ordered, making much of the equipment unfit for use.

Present State of Affairs :

6. Present position is that with original allocation and cost escalation due to changes in the exchange rate, approximately 96.47 lakhs have been spent on "major" equipment of which

- i) the network analyser (costing about 42 lakhs) has never functioned; the display is defective, the controller and some waveguides and coaxial cables were never ordered
- ii) the photo acoustic spectrometer (6 lakhs) has never worked.
- iii) the low level photon counter (2.5 lakhs) has defects.
- iv) the photo image acquisition system: (20 lakhs) microscope has not been coupled, there is no spectrum analyser or floppy disc to hold data. It also requires a chiller.

The laboratories have no proper furniture and lab tables, the few shaky tables that are there said to have been "loaned" from another project granted by external agencies to Dr. Vinod Singh. Even simple auxiliary equipment is not available, and the university having funnelled a lot of money to this Centre or Institute (which is said to be of the order of 1½ crore) is no more in a position to buy any other item for the Institute. Consumables are also not available.

The laboratory itself is on the third floor of the Women's Hostel building and this Committee (as everybody else) reached it via the fire escape, because the main entrance is denied to the lab. on the basis that it leads into the Women's Hostel.

7. The staff which was appointed since the middle of 1986, consisted of two professors (both theoretical physicist who had naturally limited knowledge of instrumentation,) but one of them soon left to join the Physics Department. The one who remains, Prof. Bajpai is full of complaints about the facilities, and the management of the University and the Director. Prof. Bajpai could be the next Director! Another staff member is Dr. Vinod Singh who is a biochemist and faced with a dysfunctional situation at the Institute, applied and obtained external support for projects of his own. There are two young persons, Bajpai and Duncan, who are physicist and chemist respectively, and they are products of NEHU, well spoken of by persons in the science faculty. But they have been able to do no work in the Institute. Lastly there is another lecturer Nonkynrih who seems to be enthusiastic but inexperienced. The Zoologist, a NEHU alumna Dr. D. Roy was out of station. We also met Dr. Satish Kumar there.

8. Lastly Prof. R. N. Misra himself: from March 86 to Feb. 1989 he was the Vice-Chancellor and the best he could do was to use university's funds for buying some equipment. He has had differences with his staff right from the beginning, perhaps basically because he could neither give leadership nor provide the wherewithal for any research. Then, according to him, until August 1989 or so, there was doubt about his tenure as Director, and so he says he could not do much. With all the hostility around him and the dysfunctional laboratories, no wonder he expressed his sincere disappointment to the Committee and said his dream had failed. But his enthusiasm for the "idea" he wants to pursue is unaltered.

Scrutiny of Scientific Basis of the Initial Idea :

9. The idea itself was not initially scrutinized for its scientific basis, and only in general terms dealt with desirability of interdisciplinary research in certain areas such as self organising systems, biotechnology, ecology and even socio-economic systems. When the UGC (in an overall review of NEHU under Dr. Bidwai) sent a Committee consisting of Professors R. P. ... and Vishwanath to the Centre in the middle of 1988, the Committee's opinion ran counter to the basic idea of Prof. Misra. the Committee said :

"According to Prof. Misra's "theory", which he is propagating for a long time, living matter is a "new" state of matter, (the so-called "living state"). He claims that with further development of this "theory", deeper insight could be obtained not only with regard to problems of aging, cancer, hypertension etc. but also "similar phenomena in social dynamics such as money flows, weather control and problems of growth... ..If one has to accept uncritically these wide ranging speculations and vague generalisations, then there is no alternative but to agree with Prof. Misra that a set of mathematical equations would some day be able to explain not only biology but almost all human activities. Such cartesian (mechanistic) ideas about life and the world have long been discarded." This Poddar Committee "to make the best of a bad bargain", suggested some interim support for the younger academic staff. When a research proposal encompassing areas such as molecular and cellular immunology, immunodiagnostic, vaccine development etc. was submitted on behalf of the Centre in 1988, Prof. K.M. Madhava of the Indian Institute of Science Bangalore, expressed "hesitation" to take any decision in the matter because there was "absolutely no infrastructure to undertake a research project of this nature....."

The present Committee shares the views expressed in these evaluations. Indeed, the lack of integrating leadership which we find in the working of the Centre and which is evidenced by wide ranging hostility of reputable scientists in NEHU itself, stems from the unconvincing nature of the thrust, or the untranslatability of the vague ideas into scientific projects.

Lack of internal and external interaction :

10. Lack of initial planning, of appropriate infrastructure, and the nature of the staff recruited, has resulted in very little research done at the Centre. Infact, whatever research individual staff members are doing is on a "stand alone" basis, which is a carry over of their previous work. Interaction with colleagues in other schools of the University by way of interdisciplinary seminars, journal, clubs or discussions etc. is nonexistent. Neither the Institute nor the science departments of the University have benefitted from each others existence. Intake of scholars for research is very small and only one scholar is at present enrolled.

Recommendations :

11. a) About the Institute :

In the light of this situation it is pertinent to ask us to what will happen when shortly Prof.R.K.Misra, the "prime mover" of the "moving spirit" leaves. The Committee is of the view that the Institute has not been a viable proposition and the best course of action is to wind it up, and adopt a more modest approach of setting up a Department of Biophysics, perhaps in the school of Life Science.

b) About the Staff :

Detailed discussions with the faculty of the Institute and of the other Departments lead us to make the following specific suggestion

i) The two Lecturers, Duncan and Bajpai are alumni of the NEHU and perhaps have accepted ability if they are transferred along with the posts to Departments of Chemistry, and Physics (or Centre of Science Education) respectively.

ii) Dr.Satish Kumar, a Reader, has joined only 3 weeks back and is on lieu from his previous post in another University. He can perhaps return to his University

iii) Dr.D.Roy (Zoologist, whom we could not meet since she was out of town) is from within NEHU and she could go back to the Department of Zoology with her post.

iv) Dr.Vinod Singh is a biochemist and he has attracted research support of external agencies. He could carry on his research activities, with his post, in the School of Life Sciences, to everyone's benefit.

v) Nongkynrih is a nuclear physicist from NEHU and she could go with her post either to the Department of Physics or the Centre of Science Education

vi) Prof.Bajpai could possibly join the school of Computer Sciences, with his post.

These are admittedly difficult decisions but the individuals as well as the University should realise that these adjustments would lead to the prospect of better performance compared to the frustrations which have prevailed.

c) About a possible Department of Biophysics :

The possible setting <sup>up</sup> of the Department of Biophysics should be a "bottom up" approach. The NEHU faculty and Academic Council should consider the proposition and make a modest approach to set up such a Department in order that teaching and research in this interesting and exciting field can be undertaken. Such a Department would be complementary to other specialisation already available at NEHU.

d) About equipment :

The equipment which had been obtained can be retained by the University because one or the other Department or research group can make use of it. However, the most expensive piece of equipment is the network analyser costing about Rs. 40 lakhs if of little use to NEHU. We suggest the UGC should act as intermediary and donate this equipment to a Department in any University who could make the best use of it. This could be ascertained by circulating the particulars to likely users. When the network analyser is given away, the NEHU could be compensated by award of a suitable sum to buy what equipment they, or their future Department of Biophysics may need.

e) About Director :

This entire exercise of evaluating the background and the current state of affairs regarding the Institute of Self Organising Systems and Biophysics, and the conclusion to which the Committee has been driven, namely to close down the Institute, clearly implies that the Director would henceforth have no role. We believe that, as Prof. Miam frankly confessed to us, he would not hesitate to share moral responsibility for the prevailing circumstance and hence not rely on whatever legal position there may be with the University. He is over 65 years of age in any case, which is the limiting age for faculty appointments.

f) About assisting NEHU to straighten out financial matters :

The Committee would also like to make one more suggestion to the UGC. The fact that the UGC had asked the NEHU by its letter No.F.6-6(Misc)/85(CUP) of November/December 1985 to pay the approved expenditure for the Centre/Institute out of the overall allocation of the University, led on the one hand, to largely deprive the Science Departments of funds which were earmarked for them, and on the other, escalation of price and many other expenditures for the Centre ordered by the Vice-Chancellor to come out of the NEHU's sub-plan allocation, had made the NEHU almost dry of funds. Their administrative and financial staff don't seem to be in a position to straighten out the accounts and make claims on the UGC which may even be fully justified. In order to restore the balance and help the University, the UGC should send one or two experts from its headquarters to sort out the expenditures and liabilities on either side. The Committee found the financial position of this Central University to be so bad that, to the best of our knowledge, over drafts are being resorted to. Perhaps an "on account"

payment of something like Rs.10 lakhs to the University may be considered by the UGC, if in the new budget year money has not already been sent to them.

Appreciation of assistance provided for the work of the Committee :

In the end the members of the Committee would like to express their appreciation of the friendly and frank discussions on the part of all concerned in the University, especially the Vice-Chancellor and Prof.R.K.Misra. We are grateful to the NEHU and the UGC for extending all facilities to the Committee. Dr.Kem of the UGC was most helpful.

D.P.Hira

578.6(10)

Annexure 'B'.

JOINT SECRETARY.

UNIVERSITY GRANTS COMMISSION  
BAHADURSHAH ZAFAR MARG  
NEW DELHI - 110 002.

D.O.No.F.PA/JS(NHU)/90

June 18, 1990.

Dear Professor Iqbal Namin,

The University Grants Commission has appointed an Expert Committee for appraisal of the Institute/Centre of self organising systems and Biophysics at North Eastern Hill University. A copy of the report of the Committee is enclosed. The Commission after considering this report took the following decision :-

"The Commission generally accepted the report of the Expert Committee and desired that the comments of the University may be invited on the recommendations made by the Committee particularly regarding transfer of equipments and staff and starting of a Department of Biophysics. The Centre of Self-Organising System at NEHU in the present form may be closed, after the tenure of the present Director expires and preparations in that directions should proceed. There is no intention of reducing the overall capability at NEHU."

This is to request you kindly to take further action at your end, and send us necessary comments of the University.

With regards,

yours sincerely,

Sd/-

( D.P.Hira.)

Professor Iqbal Namin,  
Vice-Chancellor,  
North Eastern Hill University,  
Shillong - 793001.

5:3:6(11)  
NORTH - EASTERN HILL UNIVERSITY  
Lower Lachumirra, Shillong-I,  
Meghalaya.

Label Narain  
Vice-Chancellor.

Annexure 31  
TOP CONFIDENTIAL.

DO.No.NEHU/WCF 14-1/90-1578  
July 16, 1990.

Dear Prof. Vash Dab.

I hope the letter finds you in the best of health and disposition. I am writing this letter to you in response to Confidential DO.No.F.21/JS(NF3)90 dated June 18, 1990 through which the report of the Rais Ahmed Committee and the decision of the UGC on it have been conveyed to me. I shall place the report in the next meeting of the Academic Council and the Executive Council and let you have their contents also. In the meantime, I shall be helped if the response to this letter also reaches me so that I can convey it, on your behalf, to the Academic Council and also the Executive Council.

1. I have shared the report so far with Prof.R.G.Michael, the Pro Vice-Chancellor and Mr H.W.T.Syiem, the Officer-on-Special-Duty. Both of them thought that I should share the report with Dr.R.K.Nisara, the present Director of the Institute of Self-Organising Systems and Bio-Physics also, and get his reactions. I have done so and his reactions are being enclosed with this letter.

2. Let me first begin with my own response to the report. I am not competent to examine the technical aspects of the report as this is not my field. I have, however, a general request to make to you and it is that the UGC may kindly give the University another chance to make amends for the faults that might have been there in the Institute at NEHU so that I may also have the satisfaction that I tried my bit towards remedying the situation, though I do not know with what success I would be in a position to handle it. The UGC may again appoint a committee after a couple of years to review the situation and if it reaches the same conclusion then it may recommend the winding up of the Institute and I will not mind it doing so.

3. It has been kind of the UGC to have permitted the continuance of the Institute till Dr.R.K.Nisara retires. After his retirement, much of the future would depend on the Director of the Institute and I shall try my best to have the best available person to be at the helm of affairs. A search committee would help me in this regard. Dr.C.H. Rao who is the Chancellor of the University can be requested to help with such committee 2/-...

around with other scientists.

4. The Committee has recommended that the various persons serving in the Institute should be transferred with their posts to other departments. I do not know whether it can really be done. There are some persons in the Institute who may not be taken in any department even when they carry their own posts with them and, so such, it may be difficult for me to bring out the distribution as suggested by the UGC, though I shall make an effort in the direction if the UGC is not in a position to accept my request for giving the University a second chance to improve the working of the Institute.

5. I understand that the Chief Minister of Meghalaya as also the Governor want the continuance of the Institute as well. They might have written to you already in the matter.

6. The public opinion is already whipped in favour of the continuance of the Institute. A few days ago there was a writeup in the Meghalaya Guardian which read as follows :

Move to shift institute opposed.

By a Staff Reporter.

SHILLONG, JULY 7: The Chief Minister of Meghalaya, Mr Brington Palsi Lyngdoh had written to the Chairman of the University Grants Commission (UGC) Prof. Yeoh Pal and the Minister of State for Human Resources and Development, Mr Chimanbhai Mehta asking them not to abolish the Institute of Self Organising Systems and Bio-Physics of the North Eastern Hill University (NEHU) the institute is located in the Physics Department at the Moyurbhanj Complex in Laitumkhrah.

It is learnt the members of the Research Scholars Welfare Association (RSWA) have vehemently opposed the idea of abolishing this vital institute, which has been beneficial for research scholars, particularly to those from the North-East.

The opposition by the RSWA erupted because it had learnt that there was a move by the NEHU authorities to close the institute. The RSWA, in an

ultimatum given recently to the Vice-Chancellor,

Mr. Iqbal Narain, has made it clear that this Institute should not be abolished.

The ISOS owns Scientific equipment worth over Rs.1 crore. The most valuable computer is the Network Analyser which is used for analysing electrical properties. This computer was specially imported from the USA. Other computers are, the Popp's Machine or Low Level Photon Counter, Photo Imaging Acquisition System (FEAS) and the Photo Aquastic Spectrum (PAS).

It is also learnt that a team of experts from the UGC had come to inspect the institute recently, and their report was awaited.

The Director of ISOS Dr. R.K.Mishra is learnt to have said that the Institute was at the last stage of completion except for some more financial assistance from the UGC.

Dr. Mishra also said that the institute has particularly served the tribal research scholars of the North Eastern Region since its inception.

The ISOS is one of the rarest institutes in the world. With five other countries having comparable aims and facilities.

7. As I wrote at the outset of this letter, I had shared the report with Dr. R.K.Mishra. His response has been two-fold. First, he has given to me an alternative plan of action (see for details enclosure I to this letter). Secondly, he has given to me a reaction to the report which, perhaps, he has already forwarded to you in the form of a letter ( see for details enclosure II to this letter).

I would once again reiterate my request in the end that is the UGC would very kindly give another chance with enough money to rectify the faults of the Institute, the University will be willing to undertake the difficult task. Otherwise we would do our best to follow whatever the ultimate decision of the UGC is in the matter.

With kind regards and best wishes,

Yours sincerely,

Sd/--Iqbal Narain

Prof. Yash Lal  
Chairman,  
University Grants Commission,  
New Delhi 110 002.

Enclosure

Copy to PVC and CSI for information.

ANNEXURE-12(I)

In order meet the observations of the Visiting Committee of the U.G.C. within the general context of NE, the following proposals are proposed:

**Name :** Institute for General Systems Dynamics

It defines the field more accurately, both in living and non-living systems. The word School/Department perhaps excludes a major section of the objectives with which the present institution was approved by U.G.C and funded. A similar but broader school is in existence in JNU (School for System Sciences and Computer Sciences). Ludwig Bertalanffy's Lab in Germany and Gaiter Memorial in U.C Berkeley (The most comprehensive book on the subject is written by Late E.Jantsch issued from Gaiter Lectures).

Area of study The Institute would start with bottom-up approach for the study of this subject and would thus study first more covered accessible and managable systems, to be followed on by more by the involved ones. Thus earliest studies will be on affect of:

- Institutions
1. Metabolic and mechanical energy dissipation on creation of phonons in several compounds of the body and generation of photons and excited states.
  2. Measuring of fields in living systems and photon emission.
  3. Study of energy propagation and its hierarchy in living systems (for example, generation, propagation and effects solitonic propagation).

Institute is almost fully equipped for these purposes. Later study of economics and social systems may be made by cooperation of experts in these areas acting as Associates.

- Structure:**
1. Same as present autonomous Institute, replacing mutatis mutandis "Self organisation" in existing Ordinance of the ISCSB.
  2. Several persons suitable for Director's post exist. Alternatively initiation may be made by having a foreign expert for a 2 or 3 years term only, to stabilise the Institute, or a Scientist Administrator may be appointed in

Contd/.. /-

place of the Director (Dr Sheldrake was in Hyderabad for Arid Zone's Research and Mellanby in Nutrition Research Lab. Kanpur).

3. To reduce capital and running cost, the proposed biotechnology laboratory should be in School of Life Sciences as a part of a consortium of Bio-Chemistry, Animal and Plant Tissue Culture and Genetics. Similarly the present Professor Bajpai will be several times more effective if he is in the Computer Centre.
4. Equipment and expertise in the Institute to be made available to all workers of NEHU, NE or elsewhere.
5. Vigorous Associate Exchange Programme
6. Liaison with active and cognate centres in India.
7. Ordinance on Adjunct Professors to be utilised for maximising the work of teachers in the Institute. These to be chosen in consultation with the V.C, the Director, and the Head of Adjunctive Department. The Director will bring up the cases where such action will improve the functioning of the Institute to attain its objective of generating efficient manpower in this field.
8. Comments of the Visiting Committee on financial matters may be adopted. It is understood that about 15 lakhs will be needed to bring the infrastructure of Institute to fully functional level. For the rest of VIIIth plan the Institute be treated for maintenance, routine salaries and expenditure as a Institute or School of similar size of personnel and equipment.

Conclusion: The above offers an alternative but also recognised the merit of the Report of the Visiting Committee and enables, perhaps more smoothly, the full realisation of its objective and encourages the potential, objectives, use of equipments and utility of the personnel. It adopts the recommendations of the Committee, avoids legal possibilities and takes cognisance of the sentiments of the North and is still within four corners of the Statutes and Ordinance of the NEHU.

Usual topics included in the text-books on this subject are: Autopoiesis, evolutionary feedback, ecological niches, Gain System, Organisation of celestial bodies, biochemical and

Contd/.../-

5:8.5(16)

bi-spherical co-evolution, Microevolution of life, Sociocultural evolution, communication, development of language, morphogenesis Time and space binding in structures, ethics, morality, management, creative process, prediction of monsoon, long range weather forecasting, optimality of design, stability and imperfections in city planning, revolution, argemaddon and war.

## Annexure 'D'(II)

Inspite of the eminence of the scientists of the team in their respective branches, you could not perhaps agree to my request to include an experienced worker in Self-Organising Systems - say Prof. K.P. Kastogi or K.C. Shrivastava or K. Subba Rao - to name a few.

In the inspection day- already curtailed from 2 to 1. Most of the day dragged on in other Departments and Schools, even though it was to be a social visit there ( to begin with for pre-lunch only) Since I was not asked to respond to criticism raised some untrue premises were left in the mind of the Committee :-

- (i) Dr. B.D. Sharma, former Vice-Chancellor asked suggestions from me in 1984. ( I joined as Vice-Chancellor in March 1, 1986). 1985 proposal was formally noted. Proposal was very extensive It was a copy of one given to Prof Abad Ahmad and comprised of some 60 pages, of this 15 pages were summary details. Prof. Rais Ahmad wanted only the objective. Even on my saying that I could get the 15 pages xeroxed, he insisted he only needed the objective of the Institute. The objective constituted a fraction of Gaiter lecturers of the University California, Berkeley- those which I considered practicable. If

contd ...2/..

300 words were supplied - well those are the words he demanded and no more. The Verma Committee was no smaller than the present one, and gave no half day to explain. The Report was placed in next Committee of the Commission - scheduled routinely - so was this one. Some of the meetings were called emergently to create/abolish the Institute. Dr. B.D.Sharma was specifically asked at the instance of the Chairperson to call it first charge of 7th plan. This he did in one and a half page letter. Following this staff and equipment were approved. The Commission in 277th meeting gave 100% approval adding that quantum and phasing if necessary be discussed with Dr. R.K.Mishra of IIMS. Advisory Council and Executive Council of NCSU approved the proposal of Institute/Advance Centre. How can then be a charge of diversion of money? The contract was drafted by the Officer-on Special - Duty, and signed by him as per law in November 1985 - approved by Executive Council in December 1985. I was offered Vice-Chancellorship on 17th February, 1986. My predecessor in a letter of 18th Feb. 1986 specifically asked me to hold only Vice-Chancellorship, and keep Directorship in abeyance. I joined both on 1st March, 1986 F/N, but as desired by Dr. B.D.Sharma, from whom I took over charge, NO NOTIFICATION AS DIRECTOR OF SOSB was issued until 24th Nov.1989. Prof. Brijpai was looking after the SOSB and even now he is acting totally independently of me in recommending foreign visits with payments, extension of leave, cond of Insp. direct annual reports, admitting students to Ph.D and M.Phil and leading a request to the Executive Council in 1989 that I be dismissed.

Perhaps the Committee were not informed about this, hence the comments regarding the Director.

(ii) About the value of my ideas the fact that Professor Prigogine and George Wald, both agreed to be on my Advisory Committee and my being a member of organizing group of this subject in Oxford, Temple University ( Penn ) Kaiserslautern ( Germany ), Meninger Foundation ISS&M (USA) and Professorial promotion Board in Univ. California San Francisco; in editorial board of two journals ( Academic press & Elsevier ) & international conferences on the subject, 7 anthologies and books, some 100 papers Diploma Award from MIP - Consejo Cultural Mundial, Albert Einstein World Award in Science, D.Sc ( Humboldt, Berlin, in Self Organising Systems ) at least weekly check of my credentials. I have not only done these but experiments and fabrication of new equipments

5:8:6(19)

(Mossbauer Spectrometer - one year of M's Nobel Award, TA, IR spectrometer for H<sub>2</sub>O water in tissues in early 1960's, MHD Cardiac Pump, Miniature Artificial Kidney, Dielectric manography for breast cancer and methods like information by Global Optimisation method, Plasma Oscillation in Biologic Materials. Kanchandran announced in Hyderabad as founder of Quantum Biology in the country'. The first even unit of Biomedical Engg, was in my Department in the Country, The equations presented to the Committee are Seminal Equations- a three wave boson interactions - never before used in biology. Brian Josephson wrote to me last week that this is the best way to explain biophoton emission. The equipments are there for this purpose- and of course other uses. Why would there be equipment, if I am only relying on mathematics ?

I wish the Committee has asked me some clarification before penning the comments against the Director. I was never asked to give a full length talk.

(iii) The Institute is at take off stage. It can be fully functioning in 4 months if some money is provided. If it has to be scattered after four months of Directorship, perhaps Mr J would on the same ground qualify for disbanding since Campus inspite of heavy investment has not come on in 14 years. and so would, many departments which did not publish a single paper in four initial years of their existence.

(iv) If it was a question of taking all equipments to Delhi at SCDU or JNU or Jamia, I could understand it but I cannot understand killing it all together. Biophysics Departments are not everywhere in 180 Universities. They are just a handful and this University can do without them. Besides depts. have to be, by statutes, attached to schools. Attachment to Life Sciences, would mean no Physics entrants and no biologist if in physics. That would finish Bio-Physics.

(v) The space was earmarked for none- it was a terrace of girls hostel and Dr. Shastri (Physics), Dr. Verma (Chemistry), took me to it, declining use of their own space.

No crates were kept in .C's bungalow

(vi) Work done and equipments roused.

- a) Stabilised power supply after heroic pleadings made in Oct. 1988 (No Electricity)
- b) The Administration had standard reply for requests- no money for "Bio-Physics"- not even for maintenance contracts- in the entire 1989-1990. (NO Money)
- c) In spite of E.C. resolutions in January, February, 1989, my Directorship was notified on 24th Nov.1989. (No authority)

Above are self explanatory

Lastly

My family, my wellwishers, my friends keep on asking :  
"Why are you here ? If you are not wanted just go, or finish your tenure and go. There is 17 member group in Delhi. They would outdo NEHU in few months". I wish anguish of the heart of a creative scientist is even vaguely understood. To me this institution means more a plague on a building. It means my best thought. It is my "Gadar" for this country. However insignificant if proper faculty adjustment is made, an small money, it will attract workers from all over India. I could have understood its movement, to say Delhi, but I cannot its dismemberment.

REPLY TO THE COMMENTS RAISED IN THE REPORT OF THE U.G.C. COMMITTEE ON I.S.O.I.S. ANNEXURE-'B'

After the appointment of the new Director, (Prof.K.P.Sinha of the I.I.Sc, Bangalore, who joined on July 1, 1991), the above report was studied by Professors K.P.Sinha and R.P.Sinha. In what follows the reply to various points are given below :-

The Committee has raised many questions and came to some conclusions which appear to <sup>be</sup> hasty and not based on verified facts. They have relied on the verbal statements of some members with whom they discussed in confidence (of page 1 of their report). In this connection, it should be pointed out that there is no governing council of the Institute. So far the Institute is a part of NEHU, whose Executive Council oversees various administrative matters. Prof.U.N.Singh and Prof.Karmeshu are the members of the Institute Board which is a body similar to the School Board of NEHU.

Pointwise reply :-

1. The proposal to start the Institute was debated in many Academic Council meetings of NEHU extending over months. It was proposed to be set up as an open ended research institute where interdisciplinary work will be carried out. It was not a mission oriented programme confined to a narrow object of finding out a new state of matter. It is well known that whenever and wherever a new institute is started (however small) it involves substantial input of resources, manpower and facilities. For the fruition of some of the projects a gestation period is involved and this Institute could not be an exception. From the inception, it was envisaged that the Institute will have a core staff and associates members drawn from other departments and institutions elsewhere in India. It may even have visiting scientists from abroad and run conferences, workshops, symposia etc. on appropriate futuristic topics. All these points were incorporated in the first ordinance issued by the Vice-Chancellor (with the concurrence of the Visitor) of NEHU.

2. It is unfortunate that no provision was made by way of recurring academic expenditure for running and maintenance of the equipments. Further, NEHU did not provide infrastructural and laboratory furniture for various activities. Owing to this, the equipment money remained tied up and did not produce desired results.

3. This point does not warrant any comment now in view of the charged situation.

4. This point involves the main reason of discontent of the other science faculty members of NEHU. Often the U.G.C permits the utilisation of general fund resources for specific purposes. Such things happen in other Universities/Organisations, where also a new Institute/Centre has to be initially nourished otherwise the new baby will die owing to lack of nourishment.

5. The defects pointed out are the teething trouble of many new departments. Of course, it is desirable to anticipate problems and plan beforehand. It is a patent fact that building laboratories in India is beset with all kinds of difficulties. One does not achieve the same result in time as done in USA and other countries. The Institute is housed at the top of the Women's Hostel and the University science departments were supposed to move to the permanent NEHU campus. Thus various construction activities in the form of stopping various means were not encouraged. Thus the charge that the Institute has taken away the space earmarked for science faculty does not hold good.

6. Concerning this point, we are taking steps to make various instruments functional, acquiring various components and developing infrastructure. For this, the Institute has been consistently requesting NEHU authorities for finances right from Sept. 1986.

We shall project our requirements in a proposal to the U.G.C. It is true that the fire escape cannot be a proper entry to the Institute. It is risky and dangerous. It is also not desirable that the Women's Hostel and the Institute should co-exist. The obvious solution is either to shift the Institute or the Women's Hostel or both to separate building in the main NEHU campus. It is further pointed out that Prof.R.K.Misra, as Vice-Chancellor, tried his best to shift the Women's Hostel (their building being completed in 1988) but did not succeed.

7. The Committee missed that a Professor (A.M.Dwivedi) with expertise in experimentation joined in August, 1986 but left after a year - under unpleasant circumstances. This caused delay in setting up equipments. After his departure other faculty members took up the challenge to get the major instruments installed and made functional. As noted above, this will be achieved after appropriate funds.

The existing staff is as good as anywhere else and in due course results will be forthcoming. Already, some good papers are published in new fields, which were undertaken in the new areas.

8. This point requires a psychological amplification. The hostility towards Prof. N.K. Misra in the capacity as Vice-Chancellor, got manifested against him, when he became full time Director of the Institute.

9. The idea of starting the Institute is based on sound foundations. We do not agree that any interdisciplinary research Institute with appended goals should not be started. Such Institute are being started all over the world. Although the staff might not have agreed with the pet hypothesis of Prof. Misra, they pursue valid scientific research work.

In the changed and enlarged context, we strongly feel that the Institute should continue. In fact, future lies in such institutions, and it is desirable to have one in North-Eastern region of India. It is improper to charge that other NEHU scientists are hostile to the Institute owing to the vagueness of the ideas and projects envisaged by Prof. N.K. Misra. The hostility arose from other factors mentioned earlier.

10. This is not true. There have been informal contacts with academic staff of other departments of NEHU. This interaction will grow further with the acquisition of relevant facilities. Further, the faculty has offered courses in other science departments. This will continue. The Institute plans to offer futuristic courses in anticipated emerging areas. The number of research scholars has gone up and in due courses, it will come up to a reasonable level. But we do not want to make it too large.

About the recommendation of the Committee :-

By appointing a new Director (Prof. K.P. Sinha), the complexion of the Institute has changed. Thus the U.G.C and NEHU have decided to continue the Institute whose scope is now enlarged and it will progress in newer directions.

It is proposed to change the name to "Institute of Fundamental Research" whose thrust will change from time to time. It will pursue researches in interdisciplinary areas embracing various branches of physical, biological and social sciences. It will not duplicate the activities of the traditional departments. The current thrust will be on complex systems, both living and non-living.

5:8:6(24)

Yash Pal  
Chairman.

UNIVERSITY GRANTS COMMISSION  
BAHADURSHAH ZAFAR MARG  
NEW DELHI - 110 002.

ANNEXURE 'P'

D.O.1No. F.6-5/90(CM)

July 24, 1990.

Dear Dr. Iqbal Masih,

I have your letter. The report of the Committee was presented to the whole Commission and the decision of the Commission was communicated to you. I am not in a position to alter this decision on my own even if I so desired.

Having said this I would also like to point out that the Commission or I do not want to penalise the University. We want to help it. Some suggestions have been made by the review committee - however the University can suggest its own alternatives. If the University can meaningfully use all the equipment, it has received under the programme, we would not like to move it. However, if some of the equipment can be used by others, and the University does not need it, the Commission would find a way of compensating the University. Please tell the Chief Minister and the Governor that moving things away from NEHU has never been the intention. The intention is to ensure that first-rate work develops in the University. The name of the Centre as it exists is not important. Something else can replace it, if it is properly argued. As the Committee says, and the Commission concurs, its rationale and work have not created a first-rate cohesive group. Let there be a restructuring. The resources would be forthcoming for anything worthwhile grown through a group proposal. There are many occasions when restarting is better. This seems to be one.

I have seen Dr. Mishra's suggestion. I have no problem if an "Institute for General Systems Dynamics" replaces the present institute. A special committee can be appointed, involving Dr. C.N.R. Rao and others to define somewhat better and more realistically what this institute would do. Much would depend on finding an appropriate leader. It will need to develop a personality, based on the work of the people who gather. It should not set down grandiose, all encompassing objectives. It should start activities in one or two areas and then build up. I am not in favour of starting with a foreigner.

The question of autonomy can be discussed in the framework of the guidelines issued by us to you, for departments, centres etc.

Prof. Iqbal Masih,  
V.C. NEHU, Shillong.

Yours sincerely  
Sd/-  
(Yash Pal)

DO.No. NEHU/VCF 14-1/90-1839  
August 27, 1990.

Dear Prof. Yash Lal,

Many thanks for your DO.No.F.6-5/90(M) dated July 24, 1990. I had sent copies of your letter to the Governor, and the Chief Minister as desired by you. I have also sent to them copies of the UGC Committee Report on the Institute of Self-Organizing System and Bio-Physics (ISOSE) as suggested by you in one of our later meetings.

Just for my clarification, I have to write the following and would look forward to having your reactions at an early date:

1. The ISOSE will continue as it is till the contract of Dr.R.K.Mishra expires. In the meantime, I would consult the people in the University particularly the Executive Council for their opinion about its abolition.
2. I have been seeking advice from different quarters about a substitute which may replace the present Institute. One of the suggestions that I have received is that it may then take up studies of theories and experimentation of hierarchical dynamics. I do not understand much of science and, therefore, your particular advice in the matter is solicited.
3. I may draw the first Ordinance for the purpose of the functional autonomy of the Institute to enable it to undertake quality academic work only after the tenure of Dr.Mishra, Director, is over.
4. The new Director of the Institute, after Dr Mishra is not with us, may examine whether it is worthwhile to continue with the present categorisation of subjects in ISOSE in terms of Bio-Physics, Biotechnology, human biology and so on or he would like to reframe it in any manner. Reframing may also become necessary if the Institute is to be called by any other name like the

Institute for General Systems Dynamics as suggested above.

5. As far as I can think, the structure and nature of the Institute will assume the form of ICFP (Triesto) type as is specified by the 1966 generating Committee. The implication is that it will have a small faculty with a ring around it of robust exchange of personnel and institutional collaboration. Your ideas in this regard are also solicited.

6. As suggested by you, there may not be subcentres until the Institute has sufficient amount and maturity of work to its credit. In the meantime, collaboration in regard to research work may be encouraged with other centres on equal footing in terms of mutual exchange of personnel etc. We may think also in terms of temporal loaning of some of the equipments in the interest of academic progress as per general policy of the UGC subject to its clearance by the Executive Council of the University.

7. As far as the transfer of equipment to other units is concerned, the matter may have to be placed by the Vice-Chancellor before the Executive Council and he may go according to its advice. If it does decide to transfer some equipments to any other units outside the University, it may be desirable that the cost of the transferred equipments will be reimbursed by the UGC to the University. This you have already very kindly agreed.

The Vice-Chancellor may take similar decision with regard to books in consultation with the Executive Council.

8. I agree with your suggestion that a High Power Committee for the selection of a Director to be appointed as a special Committee with Prof. C.N.R. Rao, Chancellor of the University, as its Chairman. He would also be representing Chemistry and will also look after instrumentalist disciplines. You may very kindly agree to join the Committee

as a Physicist. There can be other members like Dr.R.P.Rastogi, Vice-Chancellor, Banaras Hindu University (Chemistry), Dr.Sharad Chandra, Director, CCMB (Biology), Dr.C.G.C. Palan, FRB, Senior SC, ICMR (Medicine), Dr.Bhamba, Vice-Chancellor, Punjab University (Mathematics) and Dr.S.C.G. Sudarshan, Texas, Director (Particle Physics Group) and so on. I may be there as Member Secretary of the Committee.

I have given just a tentative list of members which can be modified with suggestions from Prof.C.N.R. Rao and you.

What will be important for the Committee to consider the names of the present members of the faculty of the Institute along with outsiders for appointment as Director. In regard to the present faculty members, if you kindly agree we may ask them if they would like to be considered for the directorship of the Institute by the Search Committee. If so, they may send their biodata.

9. I would like to have your advice about filling the post of Reader/Professor which is vacant presently in the Institute. Should we advertise it immediately and fill it or should we wait till the reorganisation of the Institute takes place ?

10. I would like to emphasize that as far as funds of the Institute are concerned, there are funds which have been approved by the UGC but not released to NEHU in the Seventh Plan and first year of the Sub-plan of the VIII Five Year Plan. This may kindly be released at an early date.

The University will be submitting its plans for the VIII Five Year Plan of the Institute which may be considered and the money given to us accordingly.

5:8:6(28)

These are some of the suggestions which I am inclined to take up for the implementation of the report of the UGC in two years' time which you have very kindly perhaps permitted to be presented to the Institute before the UGC takes a final decision about its continuance or not.

My only reply in this regard shall oblige before I place the suggestions in this letter for consideration of the relevant bodies in the University.

With kind regards and best wishes,

yours sincerely,

sd/-

(Iqbal Narain)

Prof. Yash Pal,  
Chairman,  
University Grants Commission,  
New Delhi 110 002.

Copy to: :  
Dr. R.K. Mishra, Director, ISOSB, (Bijni Complex, /  
NEHU for information.

DO.No.F.6-5/90(CM)

September 10, 1990.

Dear Dr. Iqbal Hameed,

Thank you for your letter.

I think the first thing is to find a new person. Everything else should be done in discussion with him. In place of me I would suggest the name of Dr. Virendra Singh, Director, TIFR as a member of the Committee, but this is, of course, for you to decide. Even the name of the Institute and its function should evolve. Basically what we are looking for is something related to Biophysics, but with larger interests.

I do not think it would be proper straightaway to say that the Institute will be like ICTP. Such institutes are inter-university affairs which are being set up now as registered societies and called inter-universities centres. This institute being an institute of the University cannot have that status. ICTP is an independent organisation founded by various UN agencies. It can even give grants. This particular aspect cannot be incorporated in the Institute within the University. As far as UGC is concerned it cannot give a special status only to an idea. With the Review Committee and the Commission's decision, lot of loose thinking, while setting up of the earlier institute, must be left behind.

I do not want to repeat what I have already said in regard to the equipment. I suggest that sufficient advance action should be taken so that the new department/institute starts functioning by February next.

What is required for sustaining the staff and marginal operation activities of the "Institute", can be projected and discussed with the Vice-Chairman, UGC for resource release. However, no major expenditure based on long term plans should be incurred.

5:8:6(30)

It is clear from all the discussions which have taken place, including the report of the Review Committee and following UGC consideration that this Institute in its present form and its present mandate cannot continue beyond February next year. However, as already mentioned, it can be reorganised in the form of a department/centre/institute in accordance with the discussions which have gone on and may happen with Dr.C.N.R.Rao and others.

With regards,

yours sincerely,

Sd/-

(Yash Pal).

Prof.Iqbal Narain  
Vice-Chancellor  
North Eastern Hill University  
Shillong.