

NORTH-EASTERN HILL UNIVERSITY

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Shillong

No.AC:66-2/Conf/2001-479

Dated Shillong, the 19th November, 2001

To

All members of the
Academic Council,
North-Eastern Hill University.

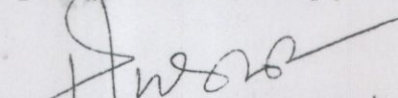
Subject: Agenda for the 66th meeting of the Academic Council.

Sir/Madam,

I am to forward herewith a copy of the agenda for the 66th meeting of the Academic Council to be held on 28th and 29th November, 2001 at 10:00 A.M. in the Seminar Hall, Mayurbhanj Complex, NEHU, Shillong for favour of your perusal.

Enclo: a.a.

Yours faithfully,


(P.K.D.Purkayastha)
Assistant Registrar (Conf)

AGENDA ITEMS FOR THE 66TH MEETING OF THE ACADEMIC
COUNCIL SCHEDULED ON 28TH & 29TH, NOVEMBER, 2001

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Item No:2-Reporting item

i) Changes in the IVth Semester Course in Philosophy.

The changes in the IVth Semester Course in Philosophy was placed in the 65th meeting of the Academic Council wherein, the Council vide its Resolution No:AC:65:2001:5:2(iv) considered the changes and Resolved to approve the same after dropping repeated topics and including some current topical ones and also that the reference books should be of the latest editions.

Accordingly, the Head, Department of Philosophy vide her letter placed as Annexure-'A' has resubmitted the course content and the list of readings which is placed as Annexure-'B'.

The matter is placed before the Council for information.

NORTH-EASTERN HILL UNIVERSITY
NEHU Campus, Shillong - 793022

No:F.9/Phil/MA/2001/3127

Dated 6th October'01

To

The Deputy Registrar,
Conference
NEHU, Shillong.

Sir,

Kindly refer to the Minutes of the last Academic Council meeting held on 7th and 8th June'01 (Vide Resolution 5:2(iv) which approved of the changes made in the 4th Semester (M.A.) course titled, Contemporary issues in Indian Society. The Council had suggested that we also make relevant changes in the suggested readings. I am enclosing herewith a copy of the course content and the list of readings for the information of the Academic Council.

Thanking you.

Yours sincerely,

Sd/-

(S Miri)
Professor and Head
Department of Philosophy.

Encl:a.a.

Contemporary issues in Indian Society(Comp.)

1. Nation and Nationalism. The concept of Indian Nation.
2. Understanding Indian History.
3. Secularism, Religious Conversion and Religion Pluralism.
4. Change, Progress and Social Justice.

Suggested Readings:1. Books

1. Tagore, Rabindranath : Nationalism, Rupa
2. Madan, T N : Modern Myths, Locked Minds, OUP, Delhi
3. Vivekananda, Swami : The Ideal of a Universal Religion'
in Selections from the Complete
Works of Swami Vivekananda,
Advaita Ashrama, Calcutta, 11th
Impression, 1993
4. Parekh, Bhikhu : Political Philosophy of Mahatma
Gandhi Ajanta, New Delhi.
5. M N Roy : Reason, Romanticism and Revolution,
Ajanta, New Delhi.
6. Erich Fromm : Marx's Concept of Man
7. Parekh, Bhikhu : 'The concept of Fundamentalism' in
Alexsandrass Shtromas (ed) The end
of 'ISMS'? Blackwell, Oxford, 1994.
8. Selbourne, David : In Theory & Practice: Essays on
Politics of J P Narayan, OUP,
Delhi, 1985

Articles :

1. Chakrabarty, Dipesh : 'Postcoloniality and the Artifice
of History: Who speaks for 'Indian'
Pasts ? in Padmini Mongia(ed)
Contemporary Postcolonial Theory
A Reader, Arnold, New York, 1996.
2. Bhattacharya, K C : 'Swaraj in Ideas' in IPQ, Vol:XI,
No:4, Oct, 1984.
3. Sen, Amartya : 'On Interpreting India's Past' in
Sugata Bose and Ayesha Jalal (Ed)
Nationalism, Democracy and Develop-
ment QUP, Delhi, 1997.
4. Miri, Mrinal : 'Identity, Tribesman & Development'
in B N Saraswati (Ed) Interface
of Cultural Identity & Develop-
ment, New Delhi, 1996.

Item No. 3 - Ratification of action taken by the
Vice-Chancellor.

(i). Panel of Examiners

The respective School Boards considered and approved the panel of Examiners to the following candidates and the matter is placed before the Council for ratification.

<u>Sl. No.</u>	<u>Name of candidates</u>	<u>Departments</u>	<u>Degrees</u>
1.	Ms B.J. Devi	Bio-Chemistry	Ph.D
2.	Ms H.S. Ranhotra	Bio-Chemistry	Ph.D.
3.	Shri Siby K.G.	Philosophy	Ph.D.
4.	Juthsutho Phoji	Philosophy	Ph.D.
5.	Mr Ramengliana	Philosophy	Ph.D.
6.	Brinda Bazely Rymbai	Education	Ph.D
7.	Erica Mary Jyrwa	English	M.Phil
8.	Graceful Sohtun	Khasi	M.Phil
9.	Last June Mary Kharlyngdoh	Khasi	M.Phi.
10.	Renewbiang Dkhar	Khasi	M.Phil.
11.	Rollingstone Dkhar	Khasi	M.Phil
12.	Angelish Marbaniang	Khasi	M.Phil
13.	Sumarnita Skhembill	Khasi	M.Phil
14.	Badashisha Nongsiej	Khasi	M.Phil
15.	Banteilang Sohtun	Khasi	M.Phil
16.	Holin Roy Kharbudnah	Khasi	M.Phil
17.	Aitylyne Shylla	Khasi	M.Phil
18.	Shri A Tomba Singh	Chemistry	Ph.D
19.	Shri K. Gunaseelan	Chemistry	Ph.D
20.	Mr Moses M. Naga	Lib. & Information Scs	Ph.D
21.	Mr. T. Temjen	-do-	Ph.D
22.	Mr P. Hangsing	-do-	Ph.D
23.	Mr Tamal Kumar Guha	-do-	Ph.D
24.	Ms C.L. Nongpluh	Geography	M.Phil
25.	Ms V.L. Dumai	Geography	M.Phil
26.	Mr P. Singson	Geography	M.Phil
27.	Mrs N. Mukherjee	Anthropology	Ph.D
28.	Mr M. Kotal	Anthropology	Ph.D
29.	Mr T. Tsopoe	Anthropology	Ph.D
30.	Mr R. Kr Dutta Choudhury	Anthropology	Ph.D

(ii). Declaration of Ph.D/M.Phil Results

The respective School Boards considered and approved the following Ph.D/M.Phil results and the matter is placed before the Council for ratification.

<u>Sl.No.</u>	<u>Name of candidates</u>	<u>Department</u>	<u>Degrees</u>
1.	Jyotirmoy Prodhani	English	Ph.D
2.	Elizabeth	Education	Ph.D
3.	Hmingthanzuala	Education	Ph.D
4.	Evergreen Wriang	Khasi	M.Phil
5.	B.Dhaimon Nongpoh	Khasi	M.Phil
6.	E.Shullai	Khasi	M.Phil
7.	Lolina Nongkhlaw	Khasi	M.Phil
8.	Wanpynbiang Lawai	Khasi	M.Phil
9.	Debashish Bora	English	M.Phil
10.	Swanalee Devee	English	M.Phil
11.	Ms Helen Hmar	Forestry	Ph.D
12.	Shri Lalnundanga	Forestry	Ph.D
13.	Shri S.Alemeren Jamir	Botany	Ph.D
14.	Ms Luckily Ranee	Botany	Ph.D
15.	Ms Vineeta Chauhan	Botany	Ph.D.
16.	Ms Sosaline Mishra	Physics	Ph.D
17.	Shri Syama Prasanna Tripathy.	Physics	Ph.D.
18.	Shri Prashanta Sarkhel	Chemistry	Ph.D.
19.	Mrs Natalie West	Economics	Ph.D
20.	Mr Bijoy Bharali	Lib. & Inf.Sc.	Ph.D
21.	Mr Lalrinthanga	Economics (Mizoram Campus)	Ph.D
22.	Abdul Hanan	Geography	M.Phil
23.	Mark J Ford	Geography	M.Phil
24.	R Zoramchhuana	Geography	M.Phil
25.	Pradip Goswami	Geography	M.Phil
26.	Miatmon Suting	Geography	M.Phil

THE RAJENDRA KUMAR SUNEHARI DEVI JAIN CHARITABLE ENDOWMENT

The Rajendra Kumar Sunehari Devi Jain (RKDJ) Charitable Trust created a corpus fund of Rs.16,466/- with NEHU in 1987 for awarding Book grants to M.Sc.(Zoology) students. NEHU have been awarding Book grant annually to the students of the Department of Zoology from the interest accrued on the investment of the Fund. In appreciation of the performance of NEHU, the Trust has proposed to donate a sum of Rs.83,534/- to increase the Corpus Fund to Rs.1,00,000/-(one lakh) only. The Faculty of the Department of Zoology decided to use 60% of the interest on the Corpus Fund for awarding a P.G. merit scholarship and the remaining 40% of the interest to award Book grant to two students of General category and two SC/ST students each year. The Deans' Committee in its meeting held on 8.11.2000, agreed to accept the offer of the RKSDJ Charitable Trust to enhance the Endowment to Rs.1,00,000/-. The Deans' Committee also agreed that (i) the name of Trustees be entered in the permanent list of VIPs during Convocation, and (ii) local hospitality should be offered to the Donor/s nominee (without payment of TA/DA). The Deans Committee observed that it would be necessary to frame an Ordinance on FKSDJ Endowment, and resolved that the Head, Department of Zoology and the Dean, School of Life Sciences may be requested to prepare a draft Ordinance. However, the Head, Department of Zoology, in consultation with the Dean, School of Life Sciences, feels that framing of a "Regulation" (not an Ordinance) may be helpful in easy and smooth operation of the Endowment. The draft Prepared by the Head, Department of Zoology and the Dean, School of Life Sciences is enclosed herewith for consideration of the Academic Council.

Acad.

5:2:1(1)

5:2-SYLLABUS

i) Syllabi for three courses for Certificate Courses
in ~~Computer Applications~~ proposed by the Computer Centre

The syllabi for three courses for Certificate courses in Computer applications proposed by the Computer Centre were placed in the 63rd meeting of the Academic Council wherein, the Council vide its Resolution No:AC:63:2000:5:2(iii) considered the syllabi and resolved that the same should be reframed to conform to the Ordinances and that the Computer Centre may however, start short term training courses on Computer applications.

Accordingly, after necessary changes, the Computer Centre has re-submitted the above syllabi vide ~~his~~ letter No: 3682, dated 1.11.01, placed as Annexure-'A'.

The matter is placed before the Council for consideration.

COMPUTER CENTRE
NORTH-EASTERN HILL UNIVERSITY
BIJNI COMPLEX
SHILLONG- 793003

Ref No:3682

Dated 01.11.01

To

The Chairman,
Academic Council
North Eastern Hill University,
Shillong-793022

Sir,

As per University Grants Commission, New Delhi directives and also to be self-financing with the provision to contribute towards the core fund of the University, the Management Committee of the Computer Centre had decided that the Centre should start some Certificate Courses in Computer Applications. Accordingly, the Centre has prepared three different - One semester Certificate courses, which were discussed in the earlier Academic Council (Ref.Meeting minute No:AC:63:2000:5:2).

Accordingly changes were made in the syllabi with consultation with Prof H K Mukherjee of NEHU and Prof Gautam Barua of IIT, Guwahati.

It is requested that syllabi of the course proposed by the Computer Centre (enclosed herewith) may once again be placed before the Academic Council for necessary consideration and approval.

Thanking you,

Your faithfully,

Sd/-

(P P Dey)
Officiating Director.

Certificate Course in Web Designing

This is a course of 6 months duration meant for a novice in computer with a graduation in any discipline to learn the Web designing. This course has tremendous impact, in the sense that the whole world is moving towards web enabled technology and e-commerce.

The course consist of 4 (four) Papers which is of 100 marks each. Each paper will have 48 hours of theory classes and 96 hours of practical classes.:-

Paper - I : Computer Fundamentals And HTML & DHTML (48 Hours Theory + 96 Hours Practical)

1.1 Basics of Computer (Hardware)

Introduction, Data Representation, Memory Organisation, Input/output Organisation, Instruction Sets, ALU and control unit organisation, Microprocessor Architecture.

1.2 Software

Introduction, System Software, Application software, Categories of Languages, Elements of programming language, Operating System, Compilers, GUI and GUI terms, Editor (Notepad), Browser (IE, Netscape)

1.3 Hyper Text Markup Language

Introduction, HTML Elements, Lists, HR, Text formatting, Elements, Address Element, Links and Addressing, Linking basics, HREF, NAME, Images and Anchors, Scrolling with <MARQUEE>, Text Alignment, Tables and Fonts, Word Hinting <NOBR>, <WBR>; Tables, Frames and Floating Frames, Basic Interaction through Forms, Predefined Colors.

1.4 Dynamic HTML

Style Sheets - Introduction, Basics, Adding Style to a Document, Linking to an Outside Style Sheet, Embedded Style Sheets, Using In-line Style, Use of Ids, Use of CLASS.

Contextual Selection and Grouping of Styles

Style Sheet Reference - Introduction, LINKS, FONTS (Font-family, Font-size, Font-style, Font-weight, Font-variant, Text-transform, Text-decoration, Font); TEXT (Word-spacing, letter-spacing, line-height, Text-align, Text-indent); COLOR, BACKGROUND-COLOR; BACKGROUND IMAGE (Background-repeat, Background-attachment, Background position); LAYOUT (Margins, Border-width, Border-color, Border-style); PADDING, WIDTH, HEIGHT, FLOAT, WHITE-SPACE, LIST ITEMS.

TextBook: 1. Computer System Architecture By M. Moris Mano.

Date Of Edition - 1996 Publisher: Prentice Hall of India

2. HTML 4.0 by E. Stephen Mack & Janan Platt.

Date of edition - 1998 Publisher: BPB Publication

3. Dynamic HTML by Joseph Schmuller.

Date of edition - 1998 Publisher: BPB Publication

- Reference Books:
1. Computer Organisation & Architecture By William Stalling.
Date of edition - 2000 Publisher: Prentice Hall of India
 2. Web Publishing with HTML 4 by Laura Lemay.
Date of edition - 2000 Publisher: Techmedia
 3. Dynamic HTML : The Definitive Reference - Goodman
Date of edition - 2000 Publisher: Shroff Publishers

Paper - II- Java script and VB-Script
(48 Hours Theory + 96 Hours Practicals)

2.1 JavaScript

- JavaScript Overview
- Syntax and Command Blocks
- Outputs
- Dialogs and Prompts
- Data Types
- Variables
- Expressions
- Operators and Comparison
- Functions
- More on Objects
- Arrays
- Events
- Forms
- Tables
- Loops
- Frames
- Document Object Model
- Window Object
- Cookies
- Strings
- Math Object
- Java Applets
- Assignment Functions

2.2 VB-Script

- Working with Objects
- Strings, Numbers, Dates and Time, Arrays, Case, Random Occurrences, Variables
- Program Construction
- Subroutine, Function, If...Then...Else, For...Next Loop, Do loop, Do While or Do Until, Select Case, Event Driven Coding, Error Trapping
- User Interaction
- MsgBox Function, Confirming User Input, Image Map, Dynamic Feedback Panel, Building a Simple Image Browser, Playing Sounds, Pop-Up Menu ActiveX Control.
- Input and Output
- Working with Windows and Frames, Working with Browser Program, Working with Locations and Links, Working with Scripts, Working with Documents, Anchors, Working with Forms and Elements.
- Exploring Objects, Events, Methods and Properties
- Data Validation
- ActiveX in VBScript
- Multimedia
- Frames
- Examples
- Grouping Controls and Sharing Procedures, Client-Side Data, Validation, Quiz Time, A Simple Game, A Web Calculator, Business on the Web.

- Textbook: 1. Pure JavaScript by R. Alex Wyke, Jason d. Gilliam, & Chartton Ting.
Date of edition - 1999 Publisher: Techmedia
2. VBScript Interactive Course by Noel Jerke, Michael Hatmaker, Jonny Anderson.
Date of edition - 1998 Publisher: Techmedia

- Reference Books 1. The ABCs of JavaScript: Lee Purcell, Mary Jane Mara.
Date of edition - 1997 Publisher: BPB Publication
2. VBScript in a Nutshell By Lomax
Date of edition - 2000 Publisher: Shroff Publishers

Paper - III : ACTIVE SERVER PAGE
(Theory : 48 Hours Practicals : 96 Hours)

1. Introduction & Working with Variables - What is ASP? Running ASP Pages, Creating ASP Pages, Understanding ASP Script, The ASP Process, Variables Data types, Integer, Floating-Point Numbers, Date, Boolean, Currency & Object.
2. VBscript operator & built-in function - What is a control Structure? Types of Control (conditional, Looping, Branching), Control Structure Examples, Typecasting Variables, Formatting Functions, Math Functions, Date Functions, String Functions, Other Functions.
3. Objects & Response Object - Building blocks of Objects, Built-in ASP Objects Collections, Working with Objects, Event, What is Response Object, Dissecting the Response object.
4. Communicating with User & Collecting Form Information - Receiving Information from the User, Using Advanced Form Techniques, Using the different Form Fields, Retrieving the Results of a Form, Using the QueryString to send Information.
5. Working with the Request Object & Maintaining Persistent Information on the Web - Accessing the HTTP Headers, Accessing the Environment Variables, Using Cookies, Ways to Maintain State, The Session Object, The Application Object, Initializing Application & Session Variables.
6. Working with Common ASP Components, Reading & writing Files, & Debugging ASP Scripts - Using Components, Developing with Microsoft's ASP Components, Browser Capabilities Component, Server-Side Includes, Redirecting Users, Accessing Files and Folders, Debugging the ASP Scripts, Handling ASP Errors, Handling non-ASP Errors.
7. Databases and Using SQL Statements - Relational Databases, Databases and ASP, Connecting to a Database, Reading data from a Database, Inserting, Updating and Deleting Database Records, Enhancing Information Retrieval, Understanding The CursorType and CursorLocation Properties, Sorting Recordsets, Filtering Recordsets, What is SQL?, The SELECT SQL Statement, Allowing Users to Query Data.
8. Using Advanced Database Techniques - Advanced Features of the Recordset Object, Using Stored Procedures, The Command Object.

TextBook : Active Server Pages Bible - Eric A. Smith
Date of edition - 1997 Publisher: BPB Publication

Reference Books : 1. Active Server Pages 3.0 Scott Mitchell, James Atkinson
Date of edition - 2000 Publisher: Techmedia

**Paper 4. Development Tools & Project
(48 Hours Theory + 96 Hours Practicals)**

4.1 MS-Word97

Creating HTML and Hyperlinks in Word, Browsing through files using Word, Using PowerPoint presentation for Internet Web Animation, Using Excel Worksheets as HTML documents, using forms created in Access for Internet.

4.2 Macromedia Dreamweaver:

Adding text, inserting images, establishing links, creating lists, setting up tables, making client side image maps, interactive forms, using frame & frameset, accessing external programs, creating & using objects, using & creating behavior, customising dreamweaver, adding multimedia elements, building style sheets web pages, working with layers, working with timelines.

4.3 Macromedia Fireworks :

Fireworks Basics, Creating and Importing Documents, Drawing Objects, Editing Objects, Color and Transparency, Using Text, Editing and Painting, Pixels, Applying Effects to Objects, Compositing and Masking, Optimizing Graphics, Exporting, Creating Hotspots and Image Maps, Slicing Images, Creating Buttons, Creating Advanced Rollovers, Creating Animation, Automating Repetitive Tasks, Working with Dreamweaver and other HTML, Editors, Keyboard Shortcuts, Using Fireworks Help Credits.

4.4 Project

The student has to create their own web page. Uploading and Hosting on a Website.

Textbook: 1. Mastering Microsoft Office 97 Web Publishing by Michael Young.
Date of edition - 1997 Publisher: BPB Publication
2. Dreamweaver 3 Bible Joseph W. Lowery
Date of edition - 2000 Publisher: IDG Books India
3. Fireworks 3 Bible Joseph W. Lowery Simon White
Date of edition - 2000 Publisher: IDG books India

Reference: 1. Microsoft Office 97 By Paul McFedries et.al.
Date of edition - 1997 Publisher: Prentice Hall of India
2. Macromedia Dreamweaver 3 - Steven Moniz
Date of edition - 2000 Publisher: BPB Publication
3. Fireworks 3 for Windows & Macintosh Visual Quickstart Guide -
Sande Cohen.
Date of edition - 2000 Publisher: BPB Publication

5:2:2(1)

ii) Syllabus for M Sc Bio-Chemistry

The School Board of Life Sciences in its meeting held on 18.10.01 approved the syllabus for M Sc, Bio-Chemistry which is placed as Annexure-'A'

The matter is placed before the Council for consideration.

5:2:2(2)

M. Sc. Biochemistry Syllabus
North-Eastern Hill University

Course No.	Course Title	Max. Marks
<u>Ist Semester</u>		
BC 101	Introductory Biological Chemistry	100
BC 102	Environmental Biochemistry & Metabolic Pathways-I	100
BC 103	Enzymology	100
BCP 101	Practicals	150
<u>IInd Semester</u>		
BC 204	Techniques in Biochemistry	100
BC 205	Physiological Chemistry	100
BC 206	Bioenergetics	100
BCP 202	Practicals	150
<u>IIIrd Semester</u>		
BC 307	Genetics	100
BC 308	Medical Biochemistry	100
BC 309	Metabolic Pathways-II	100
BCP 303	Practicals	150
<u>IVth Semester</u>		
BC 410	Molecular Biology	100
BC 411	Microbiology	100
BC 412	Immunology	100
BCP 404	Practicals	150

BC 101 Introductory Biological Chemistry MM 100

Unit 1. Chirality, optical and stereoisomerisms, RS designation, proton transfer and oxidation-reduction reactions. Thermodynamics of cellular reactions: work function, free energy and equilibrium constant.

Unit 2. Substitution reactions (SN^1 , SN^2 & SN^3); elimination, addition & condensation reactions (including hydrolysis), carbonium ion, carbenes and free radicals.

Unit 3. Donnan equilibria, ion transport, surface tension, viscosity and its application, dielectric constant, dipole moment, acid-base concept, mono- di- and poly protic acids, pH and indicators, buffer solutions and their action.

Unit 4. Properties, configuration and functions of amino acids, essential and nonessential amino acids, mode of peptide bond formation, levels of protein structure, concept of domain structure, protein targeting, folding and molecular chaperones, naturally occurring peptides, growth regulators in plants.

Unit 5. Structure, chemistry and biological functions of carbohydrates and lipids. Structure and properties of various forms of DNA and RNA.

Suggested Readings:

- Atkins P.W. (1996) The Elements of Physical Chemistry, Oxford Univ. Press.
 Caret R. L. and Topping D. (1997) Principle & Application of Inorganic, Organic and Biological Chemistry, WCB Pub.
 Carey F. A. (1996) Organic Chemistry, McGraw-Hill.
 Finar I. L. (1995) Organic Chemistry, ELBS Pub.
 Morrison R.T. and Boyd R.N. (1989) Organic Chemistry, Allyn & Baton.
 Nelson D.L. and Cox M.M. (2000) Lehninger's Principles of Biochemistry, Worth Publ.
 Stryer L. (2000) Biochemistry, W.H. Freeman.
 VonHolde K. E. (1985) Physical Biochemistry, Prentice-Hall.
 Zubay G. (1998) Biochemistry, W.C. Brown Commun., Inc.

BC 102 Environmental Biochemistry & Metabolic Pathways-I MM 100**A: Environmental Biochemistry MM 50**

Unit 1. Concept of environment, environmental cycles and rhythms, evolution of life.

Unit 2. Biological hazards (animal care, prevention of acquired infection, microbiological safety, infection hazards and laboratory animal housing). Microbes as geochemical agents: microbes as agents of geochemical change, P-, O-, C-, N-, S- cycles: cycles of matter through geochemical time, influence of humans on the cycles of matter.

Unit 3. Radiations and chemicals as environmental hazards, types of radiation, radiation as mutagens, monitoring of radiation and safety measures, chemicals as carcinogens, chemical toxicity, handling and safety measures.

B: Metabolic Pathways-I MM 50

Unit 1. High energy compounds, glycogenolysis, glycolysis, TCA cycle.

Unit 2. Catabolic pathways leading to TCA cycle, amino acid catabolism, oxidative pentose phosphate pathway.

Unit 3. Mobilization of fats, hydrolysis of triacylglycerides, oxidation of fatty acids, glyoxylate cycle and gluconeogenesis.

Suggested Readings:

- Haris D. A. (1995) Bioenergetics at a glance. Blackwell Scientific.
 Kiefer J. (1990) Biological Radiation Effects, Springer- Verlag.
 Nelson D. L. and Cox M. M. (2000): Lehninger's Principles of Biochemistry, Worth Pub.
 Nicholls D.G. (1982) Bioenergetics: an introduction to chemiosmotic theory, Academic Press.
 Stainier R. Y., Ingraham J.L, Wheelis M.L. and Painter P.R. (1995) General Microbiology, MacMillan.
 Steere N. V. (1986) Handbook of Laboratory Safety, CRC Press.
 Stryer L. (2000) Biochemistry, W.H. Freeman.
 Zubay G. (1999) Biochemistry, Win C. Brown Comm., Inc.

BC 103 Enzymology MM 100

Unit 1. Isolation and purification of enzymes, criteria of purity, specific activity, active site and enzymic catalysis, factors affecting the rate of enzyme catalysis, factors involved in enzyme-substrate complex formation, enzyme denaturation, enzyme classification.

Unit 2. Kinetics of enzyme catalysed reactions (kinetic transformations and plots: Michaelis-Menten, Lineweaver-Burk, Eadie-Hofstee, Hill), determination and significance K_m , K_{cat} , K_{cat}/K_m and V_{max} ; Competitive, noncompetitive and uncompetitive inhibitions, kinetics of bisubstrate reactions.

Unit 3. Structure, function and significance of coenzymes: CoA, NAD⁺, NADP⁺, FMN, FAD⁺, TPP, lipoic acid, pyridoxal phosphate, biotin, folic acid and cobalamine.

Unit 4. Features and mechanism of the action of chymotrypsin, lysozyme and carboxypeptidase A; Regulation of enzyme activity: induction, repression and covalent modification.

Unit 5. Allosteric regulation of enzyme activity: Patterns of end product inhibition, modes and models for allosterism and its significance; zymogen forms of enzymes, mechanism of zymogen activation and physiological significance of zymogenicity; definition, distribution, regulation and significance of isozymes; Enzyme engineering: immobilization, design.

Suggested Readings:

- Dixon M. and Webb E.C. (1979) Enzymes, Longman.
 Nelson D.L. and Cox M.M. (2000): Lehninger's Principles of Biochemistry, Worth Publ.
 Price N.C. and Stevens L. (1989) Fundamental of Enzymology, Oxford Sci. Pub.
 Robert A.C. (1996) Enzymes: A practical Introduction to Structure, Mechanism and data analysis.
 Rosevear A., Kenned J.F. and Cabral J.M.S. (1987) Immobilized Enzymes & Cells.
 Stryer L. (2000) Biochemistry, W.H. Freeman.
 Zubay G. (1998) Biochemistry, Win C. Brown Commun. Inc.

1. Verification of Beer-Lambert's Law.
2. Measurement of nucleic acid and protein by UV spectrophotometry.
3. Kinetics of decomposition of hydrogen peroxide using FeCl_3 as catalyst.
4. Preparation of buffer using Henderson-Hasselbalch equation and determination of its buffering capacity by acid & alkali.
5. Isolation and estimation of casein from milk.
6. Isolation and estimation of glycogen from liver.
7. Estimation of Protein by Lowry and Bradford methods.
8. Identification of amino acids by colour reactions.
9. Formal titration of amino acids.
10. Determination of free proline by method of Bates et. al.
11. Determination of K_m , V_{max} & K_i of an enzyme.
12. Estimation of DNA using diphenylamine.
13. Estimation of RNA using orcinol.

Suggested Readings:

- Clark J.M. and Switzer R.L. (1977) Experimental Biochemistry, W.H. Freeman.
- Cooper T.G. (1977) The Tools of Biochemistry, John Wiley.
- Harlow E. and Lane D. (1988) Antibodies: a laboratory manual, CSH Publ.
- Jayaraman (1996) Laboratory Manual in Biochemistry, New Age Int. Pub.
- Krishnamurthy G.B., Kasovia P. and Ostroff D.J. (1994) Statistics, Jones & Bartlett Pub.
- Plumer D.T. (1993) An Introduction To Practicals in Biochemistry, Tata McGraw-Hill.
- Sadasivam S. and Manickam A. (1996) Biochemical Methods, New Age Int. Pub. Delhi.
- Sambrook J. and Russel D. W. (1989) Molecular cloning, CHS.
- Segal J.H. (1976) Biochemical Calculations, John Wiley.

Unit 1. Principles and applications of gel filtration, ion exchange and affinity chromatography, gas liquid chromatography, high performance liquid chromatography, chromatofocusing, electrophoresis and isoelectrofocusing.

Unit 2. Transmission and scanning electron microscopy, immunogold labelling and energy dispersion analysis of x-rays (EDAX); principles and applications of equilibrium dialysis, ultrafiltration, freeze drying, protein sequencing and amino acid analysis.

Unit 3. Spectrophotometry (UV & visible, atomic absorption, infra-red, ORD & CD, fluorimetry), centrifugation (preparative & analytical), membrane electrodes and their applications.

Unit 4. Liquid scintillation counting, gamma counting, autoradiography, sequencing of nucleic acids, blotting techniques (Southern, Northern, Western & South-Western), statistical analyses of experimental data (mean, SD, SEM, student's t test).

Unit 5. Principles and biological applications of mass spectrometry, NMR, Raman, ESR, X-ray crystallography.

Suggested Reading:

- Boyer R. F. (1986) Modern Experiment Biochemistry, Addition-Wesley Publ. Co.
- Evans J. N. S (1995) Biomolecular NMR, Spectroscopy, Oxford Univ. Press.
- Freifelder D. (1982) Physical Biochemistry, W. H. Freeman.
- Hayat M. A. (1986) Basic Techniques for TEM, Academic Press.
- Walker J.M. and Gyastra W. (1983) Techniques in Biochemistry and Molecular Biology, MacMillan
- Wilson K. and Goulding K H (1992) Principles and Techniques of Practical Biochemistry, Foundation Books.
- Wilson K. and Walker J. (1994) Principles and Techniques of Practical Biochemistry, Foundation Books.

5:2:2(5)

BC 205

Physiological Chemistry

MM 100

Unit 1. Digestion and absorption mechanisms, components of body fluids, regulation of water and electrolyte balance and role of kidney and hormones in its maintenance, acid-base balance, role of body buffers.

Unit 2. Structure and chemical nature of biomembranes, movement of water and solutes, membrane transport mechanisms (active and passive: uniport, symport and antiport), ion channels and ionophores.

Unit 3. Excitable membranes and nerve conduction, chemical regulation of synapses, neurotransmitters; muscle proteins, microfilaments and microtubules, muscle contraction; cell motility; biochemistry of vision.

Unit 4. Extrinsic and intrinsic pathways of blood coagulation, mechanism of blood coagulation, coagulation abnormalities, plasma proteins and their functions, blood groups, chemistry of respiration.

Unit 5. Biosyntheses, chemistry and biological actions of endocrine hormones, mechanism of steroid and protein/peptide hormone action, growth factors and their action mechanisms, chemistry and action of prostaglandins.

Suggested Readings:

- Devlin T. M. (1997) Textbook of Biochemistry with clinical correlations, Wiley-Liss Publ.
Ganong W.F. (1997) Review of medical physiology, Lange Med. Publ.
Murray R.K., Granner D.K., Mayes P.A. and Rodwell V. W. (2000) Harper's Biochemistry, Lange Med. Publ.
Nelson D.L. and Cox M.M. (2000) Lehninger's Principles of Biochemistry, Worth Publ.
Norman A.W. and Litwack G. (1996) Hormones, Academic Press.
Stryer L. (2000) Biochemistry, W.H. Freeman.

BC 206

Bioenergetics

MM 100

Unit 1. Life, energy & metabolism; Energy, entropy & the living cell; Gibb's free energy: measurement & application; Ion, electrochemical potential differences; oxidation-reduction potential: photons; Bioenergetic interconversions; Chemiosmotic energy transduction (chemiosmotic theory, energy transducing organelles, Mitchell's postulates).

Unit 2. ATP & ion gradients; Substrate-level phosphorylation; Cofactors in oxidation/reduction reactions; Respiratory chain of bacteria and mitochondria (plants & animals).

Unit 3. Photosynthetic electron transport chain of bacteria & chloroplast; Chemiosmotic proton circuits (including stoichiometry, H^+/O , P/O ratios).

Unit 4. Inhibitors & Uncouplers; The ATP synthetase complex; Mechanism of ATP synthesis; Control of ATP Synthesis, F1-structure and function relationship; FO-structure & function relationships.

Unit 5. Integration of mitochondria/ chloroplast and cytoplasm. Alternative uses of proton gradient (heat/ transport/ bacterial motion/ bacteriorhodopsin).

Suggested Readings:

- Annual review of Biochemistry (1997).
Haris D.A. (1995): Bioenergetics at a glance, Blackwell Scientific.
Nelson D.L. and Cox M.M. (2000): Lehninger's Principles of Biochemistry, Worth Publ.
Nicholls D.G. and Ferguson F.J. (1992): Bioenergetics 2. Academic Press.

BCP 202

Practicals

MM 100

1. PAGE and SDS-PAGE.
2. Estimation of carbohydrate by Nelson's and Anthrone methods
3. Estimation of inorganic phosphate.
4. Fractionation of cell organelles by centrifugation.
5. Measurement of photosynthesis by oxygen evolution and effects of inhibitors/uncouplers.
6. Measurement of respiration by oxygen consumption and effects of inhibitors/uncouplers.
7. Scintillation counting, quenching and calculation of radioactivity.
8. Separation of proteins by gel filtration and calculation of molecular weight.
9. Statistical analyses using computer soft wares (e.g. Excel).

Suggested Readings: As for BCP 101

BC 307

Genetics

MM100

Unit 1. Monohybrid crosses, independent assortment, multiple alleles, cytoplasmic inheritance, sex determination; organization of genetic materials in the nucleus and organelles, regulation of cell cycle, aneuploidy and polyploidy.

Unit 2. Concept of gene, fine structure of gene, structure and organization of pro- and eukaryotic genes, mechanism of recombination, unit of recombination, inter- and intracistronic complementation, linkage and crossing over.

Unit 3. Microbial genetics: Transformation, transduction, conjugation and sexduction.

Unit 4. Mutagens and molecular mechanisms of mutation, transition, transversion, frameshift, and site-directed mutagenesis, consequences of mutations (inversion, translocation & deletion). DNA damage and photo-, excision-, mis-match-, post-replication- and SOS-repair systems.

Unit 5. Operons and controlling elements; Regulation of gene expression in viruses, pro- and eukaryotes, homeotic genes and development; Transposons: structure and function, uses in tagging, isolation and characterization of genes.

Suggested Readings:

- Athenly A.G. (1999) Science of Genetics, Emily Barrosse pub.
- Friefelder D. (1994) Microbial Genetics, Jones & Bartlett Publ.
- Gardner E.J., Simmons M.J. and Snustad D.P. (1991) Principles of Genetics, John Wiley.
- Griffiths A.J., Griffiths A.J.F., Miller J.H., Suzuki D.T. and Lewontin R.C. (1993) An Introduction to Genetic Analysis, W.H. Freeman.
- Russell P.J. (1998) Genetics, The Beryamin/Cummings pub. Co. Inc.
- Strickberger M. W. (1985) Genetics, Prentice-Hall of India Pvt. Ltd
- Tamarin Robert H. (1993) Principles of Genetics, Wm. C. Brown Publishers.
- Weaver Robert F. and Gelbart W.M (1992) Genetics, Wm. C. Brown Publ.
- All others in BC 410.

Unit 1. Diseases caused by abnormalities in the liver (fatty liver, jaundice, hepatitis, cirrhosis, liver function test), kidney (nephrotic syndrome, glomerulonephritis, renal failure and amyloidosis, kidney function test), bone (mineralization and demineralization, rickets, Paget's disease), ocular tissue (cataract and night blindness).

Unit 2. Inborn errors in amino acid, carbohydrate, lipid and nucleotide metabolism: phenylketonuria, alkaptonuria, albinism, Tay-Sachs disease, Lesch-Nyhan syndrome; biochemistry of anemia and abnormal hemoglobins, thalassemia, porphyria, Wilson's disease; enzymes used in clinical diagnosis and prognosis.

Unit 3. Diseases caused by metabolic disorders of endocrine glands: Diabetes, obesity, atherosclerosis, Addison's disease, Conn's syndrome, Cushing's syndrome, hypo- and hyperthyroidism, gonadal dysfunction, dwarfism and gigantism; gastrointestinal disorders, Marasmus & kwashiorkor.

Unit 4. Diseases caused by chromosomal abnormalities: Down, Turner and Klinefelter syndromes; Parkinson's disease, Alzheimer's disease, cystic fibrosis, myocardial infarction; biochemistry of aging.

Unit 5. Biochemical basis of drug action and detoxification mechanisms, drug resistance, sensitivity and addiction, alcohol intoxication, biochemical features of cancer cells, theories of chemical and viral carcinogenesis.

Suggested readings:

- Bhagavan N. V. (1992) Medical Biochemistry, Jones & Bartlett Publ.
 Delvin T. M. (1997) Textbook of Biochemistry with clinical correlations, Wiley-Liss Publ.
 Ganong W. F. (1997) Review of medical physiology, Lange Med. Publ.
 Gilman A. Goodman, Rall T.W., Nies A.S. and Taylor P. (1991) The Pharmacological Basis of Therapeutics, Maxwell Macmillan Intl. Ed.
 Murray R. K., Granner D.K., Maycs P.A. and Rodwell V. W. (2000) Harper's Biochemistry, Lange Med. Publ.
 Stryer L. (2000) Biochemistry, W. H. Freeman.
 Timiras P.S. ed (1994) Physiological Basis of Aging and Geriatrics, CRC Press.

Unit 1. Biosyntheses of disaccharides, starch, glycogen and cellulose; sugars and sugar derivatives of bacterial cell walls; interconversion of sugars.

Unit 2. Biosyntheses of fatty acids, triacylglycerides and cholesterol.

Unit 3. Regulation of fats and cholesterol biosynthesis, biosynthesis of eicosanoids; nucleotides biosynthesis and its regulation.

Unit 4. Biosynthesis of amino acids and its regulation; Urea cycle.

Unit 5. Biosynthesis of porphyrins and its regulation; Nitrate metabolism; nitrogen fixation, sulphate reduction in plants.

Suggested readings:

- Gallon J. R. and Chaplin A. E. (1987) An Introduction to Nitrogen Fixation, Cassel Educational.
 Goodwin T. W. and Mercer E. I. (1990) Introduction to Plant Biochemistry, Pergamon Press
 Nelson D.L. and Cox M.M. (2000): Lehninger's Principles of Biochemistry, Worth Publ.
 Rai A. N. (1990) Handbook of Symbiotic Cyanobacteria, CRC Press
 Rai A. N. Bergman B. and Rasmussen U. (2002; In press) Cyanobacteria in Symbiosis, Kluwer Academic Pbl.
 Rawn J. D. (1999), Biochemistry, North Carolina Biol. Supply Company
 Stryer L. (2000) Biochemistry, W.H. Freeman.
 Zubay G. (1999) Biochemistry. W. C. Brown, Commun. In.

BCP 303

Practicals

MM 150

1. Estimation of sugar in urine and blood
2. Estimation of blood cholesterol.
3. Estimation of blood urea.
4. Estimation of blood calcium.
5. Isolation of DNA and determination of melting point and AT/GC ratio.
6. Assay of enzymes of clinical significance such as serum GOT and GPT.
7. Assay of alkaline phosphatase activity.
8. Determination of rate of DNA synthesis.
9. Irradiation of cell with UV and measurement of photorepair by studying cell survival.
10. Isolation of spontaneous and induced mutants.
11. Isolation of eukaryotic chromatin.

Suggested Readings:

As In BCP 101

BC 410

Molecular Biology

MM 100

Unit 1. Information transfer in biological system, replication of genetic material in viruses, prokaryotes, eukaryotes and organelles; replisome.

Unit 2. Transcription in prokaryotes and eukaryotes, post-transcriptional processing (hnRNA, tRNA, rRNA, maturation of mRNA, introns and exons, RNA splicing, RNA editing), polymorphism.

Unit 3. Colinearity of genes and proteins, Genetic code (deciphering codons, Wobble hypothesis, degeneracy of codons, universality and exceptions), translation in prokaryotes and eukaryotes, post-translational processing, translational regulation of gene expression, proteome.

Unit 4. Gene cloning: general strategy, isolation and purification of nucleic acids, DNA manipulating enzymes, restriction endonucleases, restriction modifications; vectors (expression, reporter, helper & effector plasmids, lambda DNA, cosmid, YAC), selection of recombinant clones.

Unit 5. Restriction analysis (shot gun approach, gene bank, cDNA bank, chromosome walking, RFLP & SNP), genetic engineering in biotechnology (PCR, molecular probes, antisense RNA probes and their applications, isolation of genes, genetic fingerprinting, medical, pharmaceutical and agricultural applications); transgenics, Human genome: salient features.

Suggested Readings:

- Albert B., Bray D., Rudi J., Raff M., Robert K. and Watson J.D. (1994) *Molecular Biology of the Cell*, Garland Publ.
- Burden D. W. and Whitney D.B. (1995) *Biotechnology: Proteins To PCR*, Birkhauser.
- Garo G. (1999) *Cell and Molecular Biology*, John Wiley & Sons.
- Glick B.R. and Pasternack J.J. (1994) *Molecular Biotechnology*, ASM Press.
- Lewin B. (2000) *Gene VII*, Oxford Univ. Press.
- Maniatis T., Fritsch and Sabrook J. (1984) *Molecular Cloning*, CHS.
- Old R. W. and Primrose S.B. (1994) *Principles of Gene Manipulation*, Blackwell Scientific Publ.
- Sambrook J. and Russell D. W. (2001) *Molecular cloning*, Vol. 1 & 2, CSHL Press.
- Smith C.A. and Wood E.J. (1994) *Molecular Biology and Biotechnology*, Chapman & Hall.
- Plus all the references mentioned in BC 307.

Unit 1. Outlines of microbiology; microbial world (fungi, bacteria, viruses); culture techniques (theory & practice of sterilization, microbial nutrition, culture media); microbial growth (kinetics of growth, measurement of growth); pure, synchronous and continuous cultures and their uses.

Unit 2. Bacterial and viral genomes, mutations, use of mutants, isolation of mutants, population dynamics, selection and adaptation, consequences of mutation in cellular organelles, mutant types of bacteriophages, plasmids.

Unit 3. Microbial pathogenesis: bacterial toxins, viruses and cancer; human pathogens: epidemiology of infectious diseases caused by bacteria, fungi, protozoa and viruses.

Unit 4. Exploitation of microbes by humans: food and beverages, chemotherapeutic agents, proteins, enzymes, chemicals and biofertilizers.

Unit 5. Microbial interactions; An overview of symbiotic associations with plants and animals; Specificity, Symbiotic genes, signal transduction (Rhizobium-legume symbiosis as a model), metabolic exchanges, parasitism, pathogenesis & resistance (interactions and mechanisms).

Suggested Readings:

- Ahmadjian V. and Paracer S. (1986) Symbiosis, Univ. Press.
 Atlas R.M. (1997) Principle of Microbiology, Wm. C. Brown Publishers
 Madigan M.T., Martinko J. M. and Parker J. (1997) Brock Biology of Microorganisms, Prentice-Hall.
 Maloy S.R. Cronan J.E. Jr and Freifelder D. (1994) Microbial Genetics, Jones & Bartlett Publ.
 Prescott L.M., Harley J.P. and Klein D.A. (1993) Microbiology, Wm C. Brown Publ.
 Rai A.N. (1990) Handbook of symbiotic cyanobacteria, CRC Press.
 Smith D.C. and Douglas A.E. (1987) The Biology of Symbiosis, Edward Arnold.
 Stanier R.Y., Ingraham J. L, Wheelim. L. s and P.R. Painter (1995) General microbiology, MacMillan Edu. Ltd.
 Tolaro K. and Tolaro A. (1993) Foundations in Microbiology, Wm. C. Brown Publishers.
 Tortora G.J., Funke B.R. and Cese C.L. (1989) Microbiology: An Introduction, The Benjamin/Cummings Pub. Co., Inc
 Wilkinson J.F. (1987) Introductory Microbiology, Blackwell.

BC-412

Immunology

MM-100

Unit 1. Cells of immune system; innate and adaptive immunity, lymphoid system, functions of granulocytes, clonal selection theory. Antigen: processing and presentation to T cells, antigen specific receptors on lymphocytes, genetic control of immunity, immune tolerance.

Unit 2. Antibody structure, classification and functions: isotypes, allotypes and idiotypes; antibody diversity, monoclonal antibodies, myelomas and hybridoma.

Unit 3. Histocompatibility: structure of MHC antigens (H-2 and HLA) and their genes, role in regulation of immune response, allograft, graft vs host and mixed leucocyte responses, NK cells and cytotoxicity, cytotoxic factors; complement system.

Unit 4. Hypersensitivity and basis of inflammation, autoimmune diseases, immune deficiency diseases (AIDS and SCID), immunity to viruses, bacteria, fungi, Protozoa, worms and tumors; immunomodulators, use of carriers in immunotherapy and drug targeting; vaccines (natural and synthetic).

Unit 5. Antibody-antigen interactions, immunoprecipitation, immunoelectrophoresis, agglutination, complement fixation, immunoblotting, ELISA & RIA, techniques & strategies of immunization and raising antibodies, problem and prospect in developing vaccine for disease like AIDS & malaria.

Suggested Readings:

- Attasi M.Z., van Oss C.J. and Abslon D.R. (1984) Molecular Immunology, Maxel Dekker.
 Catty D. (1989) Antibodies: a practical approach, Vol.1 & II, IRL Press.
 Clark W.R. (1983) The Experimental Foundation of Modern Immunology, John Wiley.
 Cullough K.C. Mc (1990) Monoclonal Antibodies in Biotechnol: theoretical & practical aspects, Cambridge Univ. Press.
 Goldsby R.A., Kindt T.J. and Osborne B.A. (2000) Kube Immunology, W.H. Freeman & Co.

- Gregoriadis G. (1992) Liposome Technology, CRC Press.
Harlow E. and Lane D. (1988) Antibodies: a laboratory manual, CSH Publ.
Janeway C.A. and Travers P. (1994) Immuno Biology, Blackwell Scientific. Pub.
Roitt I.M. (1994) Essential Immunology, Mosby & Crower Publ.
Tizard I.R. (1988) Immunology: an introduction, Saunders College Publ.

BCP 404

Practicals

MM 150

1. Agarose gel electrophoresis of DNA and recovery of DNA fragments by electroelution.
2. Separation of single and double stranded DNA by hydroxyapatite column chromatography.
3. Estimation of thiol group in a protein.
4. Estimation of tryptophan residues in a protein.
5. End-group analysis of a protein.
6. Mapping of enzyme active site.
7. Culture and measurement of growth of *E. coli* and *Nostoc*.
8. Nutrient uptake by cyanobacteria
9. Measurement of nitrogenase activity.
10. Isolation of plasmid from *E. coli* and its fragmentation by endonuclease.
11. Radioreceptor assay and calculation of B_{max} and K_d .
12. Raising antibody; immunodiffusion and ELISA.
13. Isolation and separation of alkaloids/terpenoids from plants.

Suggested Readings:

As In BCP 101 .

(iii) M.A.Syllabus in Philosophy.

The School Board of Humanities & Education in its 15th Meeting which was held on 30th, October, 2001 approved the following four compulsory courses of M.A. Programme in Philosophy.

1. Moral Philosophy.
2. Indian Ethics.
3. Modernism and Responses.
4. Social & Political Philosophy.

The syllabus is placed as Annexure 'A' for consideration of the Council.

MORAL PHILOSOPHY (COMP)

- I. Ethical Naturalism and Non-Naturalism
- II. Nature of Moral Reasoning
- III. Universalizability/Generalizability
- IV. Rights, Justice, Punishment

Suggested Readings

- | | |
|----------------|---|
| Moore, G.E | <u>Principle Ethics</u> (Chs 1 & 3), Cambridge University Press 1903. |
| Mill, J.S | <u>Utilitarianism</u> (Chs, 2 & 4) |
| Perry, R,B | Value as any object of any Interest
(<u>Readings in Ethical Theory</u> , ed Sellars and Hospers, pp. 138-151) |
| Stevenson, C.L | <u>Ethics and Language</u> (Relevant Chs)
Yale University Press 1944. |
| Hare, R.M | <u>Freedom and Reason</u> (Relevant Chs) |
| Toulmin, S.E | <u>The Place of Reason in Ethics</u> ,
(Relevant Chs), Cambridge University Press, 1950. |
| Paton, | <u>The Moral Law</u> Hutchinson and Co., 1972. |
| Singer, M | <u>Generalization in Ethics.</u> (From Sellars and Hosper, Readings, pp 529-547) |
| Blake, R-M | <u>On Natural Rights</u> (Sellars & Hosapers, pp. 567-577) |
| Ross, D | <u>Rights</u> (Sellars & Hospers, pp. 567-577). |
| Rawls, J. | <u>Justice as Fairness.</u> (Sellars & Hospers pp. 578-595). |
| Lewis, C.S., | <u>The Humanitarian Theory of Punishment</u> (Sellars & Edwards, pp 646-650). |

INDIAN ETHICS
(COMPULSORY)

1. Ethical Ideals : Artha, Kama, Dharma and Moksa
2. Karma and Bondage : Jainism, Buddhism and Advaitvedanta
3. Sadhanas : Karma Yoga, Jnanayoga and Bhakti-yoga
4. Buddhist paramitas and Jain's Concept of triratna.

Suggested Readings:

1. R.Nagraj Rao, Essays in Indian Philosophy, and Religion, Lavani Publishing House, New Delhi, 1971.
2. S.Gopalan, Hindu Social Philosophy, Wiley Eastern Publisher, New Delhi 1979.
3. Balgadhkar Tilak, Gita Rahasya, Pune, 1915. Chapter III, IV and XII
4. S.N. Das Gupta, A History of Indian Philosophy, Vol. II 1969 pp. 190-115. 439-536.
5. Har Dayal, The Bodhisattva Doctrine in Buddhist Sanskrit Literature, Motilal Banarasidass, Delhi, 1970, Chapter V pp., 165-269.
6. Dayanand Bharagva, Jain Ethics, Motilal Banarasidass, Delhi, 1968.

Additional Readings:

1. Rajendra Prasad, Karma, Causation and Retributive Morality Munshiram Manoharlal Publishers, New Delhi, 1989, Chapters XIV and XV, pp 210-319.
2. Rajendra Prasad, Varnadharma, Niskama Karma and Practical Morality: A Critical Essay on Applied Ethics, D.K. Printworld, New Delhi, 1999, Part I Chapters I, II pp 3-68.
3. Dayakrishna, "' Yajna and the Doctrine of Karma: A Contradiction in Indian Thought about Action' ". Journal of Indian Council of Philosophical Research, January and April, Issue 1989 pp 61-73.
4. Wendy Doniger O'laherty (ed) Karma and Rebirth in Classical Indian Traditions: Motilal Banarasidass, Delhi 1983.
5. Nalini Kant Brahma, Philosophy of Hindu Sadhana
6. Vishvanath Prasad Verma, Early Buddhism and its Origin Munshiram Manoharlal Publisher, 1973.
7. S.Sogoni K.G Ethical Doctrines of Jainism, Sholapur, 1967.

MODERNISM AND RESPONSES

SOCIAL AND POLITICAL PHILOSOPHY (PART - Y)

- I. Descartes and Kant
- II. Popper and Kuhn
- III. Freud and Foucault
- IV. Gandhi

Suggested Readings:

Descartes : Meditations (Relevant Chapter) and Rules (Relevant Chapter), Descartes' Meditations and other selections, Open Court ed. Chicago, 1912.

Kant : What is Enlightenment? (Essay)

Popper, K; : Conjectures and Refutations (Relevant Chapter), Routledge and Kegan Paul, 1963, Ch.10, Pp.215-250

Kuhn : The Structure of Scientific Revolution (Relevant Chapter), Chicago University Press, 2nd Ed., 1970.

Freud, J. : Civilization and Its Discontents in collected work of Freud, Penguin (trans.) Joan Riviers, London : Hogarth Press, 1975.

Foucault, M. : Madness and Civilization, London, 1967. The History of Sexuality, Vol.I, Penguin, 1993.

Gandhi : Hind Swaraj, Narvijan Publishers.

Parekh, Bikhu : Political Philosophy of M.K. Gandhi, Ajanta, New Delhi.

Bilgrami, A.A. : "Gandhi on Truth", (Forth-coming).

M.A.SOCIAL AND POLITICAL PHILOSOPHY (COMP.)

1. Justice
2. Power
3. Rights and Duties
4. Evolution of Society

The above four titles will be discussed with reference to Gandhiji, Marx, Jaya Prakash Narayan and Aurobindo.

Suggested Readings:

1. Rawls John, A Theory of Justice, Oxford University Press, 1972.
2. Kothari Rajni, Footsteps into the Future, New York, 1974.
3. J.Hick & L.Hempal-Gandhiji's Significance for Today, New York, 1989.
4. Parel, A., The Meanings of Gandhiji, Hawaii, 1971.
5. Erich Fromm, Marx's Concept of Man, New York, Frederick Ungar Publishing Company, 17th Printing, 1971.
6. Aurobindo The Foundations of Indian Culture, SRI AUROBINDO, Pondicherry (V.14), Sri Aurobindo Ashram, 1972.
7. Selbourne, David, In Theory and Practice: Essays on Politics of J.P. Narayan, O.U.P., Delhi, 1985.

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- 1
iv) Certificate course on Floriculture.

The certificate course on Floriculture was placed in the 64th meeting of the A.C. wherein, the council has approved in principle the said Certificate course and that it should be made more of a general character so that students from any stream or without a University's degree can undergo the course. Accordingly, the course consisting of 6 weeks duration has been modified by the Unit~~for~~ Distance Education and the same was considered and approved by the School Board in Humanities and Education in its meeting held on 30th, October, 2001.

The course content is placed as Annexure - 'A'

The matter is placed before the Council for consideration.

GENERAL COURSE ON FLORICULTUREINTRODUCTION

Floriculture is now a fast emerging industry in India. The Socio-economic factors such as changes in social values of people, environment, increase in population standard of living, development, of hotels and shopping centres and people becoming more aware and educated about usages of various flowers have lead to the overall increase of flowers trade and production. Therefore, floriculture is now turning into a high technology activity, like all other areas of horticulture. There is a acute shortage of skilled man power, who is to actually worked in the fields, is to be trained in the advanced method of cultivation and uses of various technically superior and efficient inputs.

The present course is being offered to develop a poor of skilled management resource in practical field of floriculture for Class X passed standard for 6 (six) weeks.

Course Schedule

1. Total Period : 6 (Six) weeks
2. Total working days : 36 days
3. Total hours @ 6 hrs/day : 216 hrs
4. Theory : 82 hrs
5. Practical : 120 hrs
- Field visit : 14 hrs

GENERAL COURSE ON FLORICULTURE

1. **OBJECTIVE** : To develop a pool of skilled management resource in practical field of floriculture.
2. **ELIGIBILITY** : Class - X passed students, preference to those :
 (i) Freshers seeking to make a career in Floriculture development.
 (ii) Engaged in floriculture enterprises.
 (iii) To get engagement in floriculture establishment.
3. **POTENTIAL TRAINEES** : Unemployed youth after class X passed/ Lower level manager of private/public enterprises of floriculture and related aspects.
4. **DURATION** : 6 (six) weeks
5. **COURSE OUTLINE** : (i) Introduction to the importance of floriculture, with reference to commercial aspects within and outside of state/Country.
 (ii) Importance of flower garden, design layout, land scaping etc. for Home/ Public places.
 (iii) Establishment of Nursery, layout design, management.
 (iv) Introduction to different groups of crops in floriculture including details of their package of practices.
 (v) New technologies in floriculture covering propagation, Garden management seed and seedling production, protected cultivation like green house, shadower etc. modern irrigation method including drip irrigation etc. Integrated Nutrient management, micro-propagation plant protection, harvesting and pre-post harvest management of flower crops with special reference to commercial aspects.
 (iv) Book keeping, accounts and commercial aspects of floriculture.
- (details are given at curriculum) ann I
 (theory)
- Details of practicals - Annexure III
6. **OUTCOME** : Certificate in General Course on Floriculture
 - Skill in flower cultivation
 - Skill in gardening
 - Skill in nursery management
 - Skill in flower marketing

7. ORGANISATION : Department of Distance Education North-Eastern Hill University, Shillong.

8. RESPONSIBILITIES OF IMPLEMENTATION :

1. Identify and select the trainees
2. Arrange to start course and continuing as per schedule.
3. Provide course materials and other items related to the training to the candidates
4. Arrange the theory and practical classes
5. Periodic evaluation of the trainees.
6. Arrange fields visits
7. Examination to be conducted at the end of the course
8. Award the Certificate to the trainees after proper evaluation of the candidates.

9. List of requirements, Apparatus etc. Annexure II

Sl. No.	Requirements, Apparatus etc.	Annexure II
1.	Land clearing in land preparation	Land clearing in land preparation
2.	Flower garden, Different types of flower garden	Flower garden, Different types of flower garden
3.	Planting	Planting
4.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
5.	Planting of seasonal flowers	Planting of seasonal flowers
6.	Planting of ornamental plants	Planting of ornamental plants
7.	Planting in seedbeds	Planting in seedbeds
8.	Planting of plants from nursery beds	Planting of plants from nursery beds
9.	Planting of plants & transport	Planting of plants & transport
10.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
11.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
12.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
13.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
14.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
15.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
16.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
17.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
18.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
19.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns
20.	Planting of plants in garden, parks, lawns	Planting of plants in garden, parks, lawns

COURSE CURRICULUM FOR GENERAL COURSE ON FLORICULTURE

Duration: 6(Six) weeks
 Theory : 82 hrs
 Practicals : 120 hrs

Sl.No	Related topics	Practicals Task	Credit Hours		Re ma rk s
			Theory	Practi.	
1	2	3	4	5	
<u>INTRODUCTION</u>					
1.	Introduction to general Course on Floriculture	-	2	-	-
2.	Flower garden, Different designs, layout Land scaping steps involves in land preparation - Plains - Shopping/Hill/terrain explain the advantages of each operation Layout- objectives -Details of each Plan layout - calculation of number of plants.	Layout of Home/public/School garden Hegde/ Boundary Planting. Land scaping for different types of flower gardens. Land preparation No.of plants bushes shrubs etc.for permanent planting.			
3.	Planting Digging/Filling of pits Procurement of Nursery plants seeds, Layering bulbs etc, Multiplication	Planting -Digging of pits -Filling of pits -Selection of healthy/vigorous plants. -Removal of plants from nursery beds. -Packing of plants & transport - Propagation, methods	10	20	
4.	Planting of plants in garden, parks, layers After care of newly plants -preparation of basin - Irrigation - Mulching	- Propagations, methods planting. After care - Cleaning supporting watering in regular interval preparation of irrigation channels, sheds protection etc.	10	10	
5.	Planting of seasonal flowers.	- Selection, Collection of seeds/Seedlings Plants. -Planting in Seedbeds - Putting of ornamental plants - Repotting of old potted plants	10	20	

1	2	3	4	5
6.	In nursing, watering, Irrigation and plant protection schedule of different flower crops. Calculation of doses -Use of micronutriate -Use of Biofertilizers	- Application of fertilizers fertilizer, method calculation -Application of manure, Ferti- zers -Soil manure for seedbed, plantation etc. Fõiler application.	5	10
MID TERM EVALUATION				
7.	Caltural Practicals Describe the details of various cultivation of flowers. -Clean cultivation -Cover cultivation -Srotected cultivation - Inter cropping - Mulching - Weeds control -Plant protection -Diseases-Describe various diseases	-Combination of different types of flower mulching training etc. Control measure -application of fungieides pesticides micro nutrient by soil application/Foliar application.	5 15	5 5
8.	<u>IRRIGATION</u> Methods of Irrigation time schedule.	‡Preparation of basin -Irrigation channels -Drip Irrigation -Mulching wire U.V films	5	5
9.	Concept of poly Green -House-Uses -Maintenance	Construction of poly Green House of different types	5	5
10.	Maturity indices Harvesting, picking packing, preservation etc	1. Cut flowers 2. Packing 3. Preserved with treatment of chemical - prepare of garland - prepare of Bogue and basket	5	5
11.	Visits of floriculture important gardens nurses, markets etc.			
11.	Final Evaluation.		5	5
Total			82	120

LIST OF EQUIPMENTS, APPARATUS & IMPLEMENTS FOR A GROUP OF
20-25 STUDENTS FOR TEACHING GENERAL COURSE ON FLORICULTURE.

Sl. No.	NAME	QUANTITY
01.	Khurpi	20 Nos.
02	Sickle	20 Nos.
03.	Iron peg	20 Nos.
04.	Spade	20 Nos.
05.	Handle Rake	20 Nos.
06.	Hand Hoe	20 Nos.
07.	Digging Fork	10 Nos.
08.	Secateur	20 Nos.
09.	Cutting Knife	10 Nos.
10.	Budding Knife	20 Nos.
11.	Budding and grafting knife (combined)	20 Nos.
12.	Pruning knife	20 Nos.
13.	Crafting knife	20 Nos.
14.	Water cane	05 Nos.
15.	Hedge shear	05 Nos.
16.	Grass shear	05 Nos.
17.	Tasla	10 Nos.
18.	Trenching Prowel	05 Nos.
19.	Batti	05 Nos.
20.	Grass cutting sword	05 Nos.
21.	Trenching Hoe	05 Nos.
22.	Transplanting Trowel	05 Nos.
23.	Pruning saw	05 Nos.
24.	Tree pruner	05 Nos.
25.	Marking Rope	05 Nos.
26.	Measuring Tape	05 Nos.
27.	Axe	05 Nos.
28.	Glass container	05 Nos.
29.	Hose pipe for irrigation	100m.
30.	Sprayer	2
31.	Duster	2
32.	Wheel barrow	2

MANURES/CHEMICALS

- 01. Ammo sulphate
- 02. Urea
- 03. Single super phosphate
- 04. Di-ammonium phosphate
- 05. Plant micronutrients
- 06. Plant Hormones
- 07. Pesticides/Fungicides etc.

CONSUMABLE ARTICLES

- 01. Plastic bag
- 02. U.V. Film 200m
- 03. Black mulch
- 04. Tags.

PRACTICALS

Practical - 120 hrs

MANURES/CHEMICALS

1. Studding and identifying seeds/bulbs/cutting etc of second/bianual/perimial flowers. 01
2. Planning of designing of Nursery seed beds preparation sowing management etc. 02
3. Planning of Lawns, land preparation for lawn, Planting hedges Shrubs, flowers etc. 03
4. Planting of seasonal flowers in the beds. 04
4. Potting of ornamental plants. 05
5. Repotting the old potted plants. 06
6. Manuring, watering, irrigation and plant protection schedule for different flower - crops 07
7. Repotting the old potted plants. 08
8. Propagation, multiplication etc. hazaring, budding etc of source flower - crops. 09
9. Identification and detailed studies of seasonal flowers. Shrubs, creapers, Bulbous, trees of flower plants. 10
10. Designs of Home Garden, Public park etc. 11
11. Harvesting of flowers, preservation of cut-flowers packing transportation to market. 12
12. Preparation of garlands, boque and baskets. 13
13. Visits to model Nursery, flower gardens, parks land scaping. 14

ANNEXURE - I

Theory Paper I.: Documentation, ecological requirements and management of ornamental plants.

Unit I : Documentation of ornamental plants (including wild ornamentals) of the region growing under different edapho-climate conditions and screening them for floriculture purposes: some idea about the environmental conditions which can optimise the growth of some important ornamental plants.

Unit II: Nursery techniques for raising seedlings, plantation techniques and management of plantation.

Unit III: A general idea of ecological requirements of selected ornamental plants and their response to soil characteristics, temperature, light and nutritional regimes.

Unit IV: Common diseases of ornamental plants, diseases control and other plant protection measures.

TEXT BOOKS

Paper I

1. Garden Flowers - By V.Swarup
National Book Trust, Year 1986
2. Gardening in India - T.K Bose
Oxford & I.B.M Year 1985

Theory Paper II: Propagation and marketing of ornamental plants of floriculture.

Unit I : Modes of Propagation, methods of mass propagation and establishment, application of growth hormones etc.,

Unit II : Introduction of Micro propagation methods and their applications.

Unit III : Processing and packaging of the flowers for transport to distant places, post harvest technology.

Unit IV : Economic benefits of Floriculture: Creation of Mandays, output-input analysis or cost-benefit analysis, marketing support and networking with large market centres

List of Books and Suggested Readings

Prof (Mrs) B.Lyndem Laso, Centre for Distance Education, was requested by the Committee to prepare the list in consultation with the Scientists of the ICAR and other subject experts who had attended the third meeting of the Committee as coopted members. The list so prepared has to be incorporated in the Annexure.

(Prof. R.S Tripathi)
Chairman of the Committee.

OF SUGGESTED READING & REFERENCES:

" Floriculture and Land Scapping "

Edited by T.K Bose, R.g Matta, R.S Dhua and P.Das
Naya Prakash Publications, 206, Bidhan Sarani,
Calcutta, Price - Rs. 2500/-

2. "Commercial Flowers"

Edited by Bose and Yadav
Naya Prakash Publication, 206, Bidhan Sarani Cal.
Price Rs.1350/-

3. "Orchid of India"

Edited by Bose and Bhattacharjee, P.Das & U.C Basak,
Naya Prakash Publication, 206, Bidhan Sarani Cal.
Price- Rs.2500/-

4. "Commercial Floriculture"

Author S.Prasad,
Agro Botanica
4E 176, J.N Vyas Nagar, Bikaner - 334003
Price - Rs. 595/-

5. "Ornamental Orchids of North Eastern India"

Published by ICAR, Umiam - 793103
Technical Bulletin No.5 (1983) a.

6. "Production Manual of Anthurium"

APEDA, New Delhi
Agril. Produce Export Development Authariy.

5:2:5(1)

(v).Distributions of Marks in Media Technology.

As per the general pattern of Examinations, the Board of Under-Graduate Studies in Media Technology in its meeting held on 19th, September 2001 has decided to allot 40% marks in each pass paper for Objective questions and the remaining 60% for descriptive questions and thus has recommended the distributions of marks as per Annexure 'A'.

The matter is placed before the Council for consideration.

Excerpt from the minutes of the meeting of the BUGS in
Media Technology held on 19 - 09 - 2001.

Paper No.	Name of the paper	Objective	Descriptive	Project/ Practical	Internal Assessment
C-1	English for Communication	32	48	1	20
E1-1	Test and image Processing *	16	24	40	20
E2-1	Culture and Society in North-East India **	24	36	20	20
1	Mass Communication Theory and Research**	24	36	20	20
4	Print Journalism **		60	20	20
C-2	Writing for Radio and Television **	24	36	20	20
C-3	Film Appreciation **	24	36	20	20
E1-2	Web Designing and Development ***			80	20
E2-2	Advertising and Public Relations	32	48		20
2	Videography **	24	36	20	20
5	Principles of Photography **		50	30	20
6	Sound for Media I**		50	30	20
C-4	Man and Environment	40	60		
E1-3	Photojournalism and Photographic Practices**	24	36	20	20
E2-3	Media Endirepreneurship & Marketing	32	48		20
3	Sound for Media II **	20	30	30	20
7	The Photography Project **			100	
8	The Audio Project **			100	

* Question paper should also be set for the practical examination, and external examiners would be required

** Question paper for practical examination is not required, however, external examiners has to be called for conducting of viva.

*** Question papers for practical examination should be set for 40 marks. The other 40 marks is for project. External examiners would be required for both the practical examination and the project which should be held on different days.

5:5:1(1)

5:5- EXAMINATION MATTERS.

(i).Panel of Examiners /Paper setters/Moderation Board for Under-Graduate Subjects.

The rēspective Boards of Under-Graduate Studies have considered and recommended the panel of Examiners/ Paper setters/Members of the Moderation Board in respect of the following Subjects:-

- 1.Clinical Nutrition & Dietetics.
- 2.B.E. Computer Science and Engineering.
- 3.Media Technology.

The matter is placed before the Council for Consideration.

5:6-Estt.of New Deptts./
Centres/Courses.

5:6:1(1)

i) Report of the Deptt. of Education towards
introduction of education in Human Values.

The Joint Secretary, UGC. vide its letters
No.D.O.No.F.25-1/93/SR-III dated 8th Sept., 2000 (Annexure
'A') and D.O.No.25-1/93/SR-III dated 16th April, 2001 has
directed this University to take appropriate action on the
Report of the Department of Education related Parliamen-
tary Standing Committee.

The matter was circulated to all Deans, but
subsequently the Deans' Committee decided to refer the
matter to the Academic Council.

Hence the matter is placed to the Academic
Council for consideration and necessary directions in
view of the fact that any developments on this subject
should be informed to the UGC.

No:G:33-9/Acad/MHRD

Dr. Talak R. Kem.
Joint Secretary,

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110 002

D.O.No.25-1/93/SR-III

Dated 16 April, 2001.

Dear Prof. Miri,

As you might be aware that the Ministry of Human Resource Development has set up group of experts and core committee for introduction of Education in Human Values (EHV). Some of the institutions have even nominated their nodal officers and have also set up EHV cells. It is expected that some Value Education related activities are being initiated by your institution in the direction of introduction of Education in Human Values.

You are therefore requested that the UGC be kept informed about the activities concerning Conferences/Seminars/Symposiums or programme of any other kind which leads to achieving ultimate goal of inculcating Value Education in Human Values in teachers and students. We would also be grateful if you could write to us if there is any nodal officer for organizing Value Education related activities in your institution and instruct him/her to inform the UGC about the developments in this direction.

With regards,

Yours faithfully,

Sd/-

(Tilak R. Kem)

Prof. Mrinal Miri,
Vice-Chancellor,
NEHU., Shillong.

5:6:1(3)

NORTH EASTERN HILL UNIVERSITY
SHILLONG.

ADDENDUM

The Proposal for a Seminar on "Human Rights" in the School of Social Sciences was also discussed. In this connection, the communication from the University Grants Commission, for a cell on EHV, was considered. It was recommended that the proposed Seminar might take-up issues relating to Education in Human Values in the University as well.

With regards,

Prof. Primal Mittal
Vice-Chancellor
NEHU, Shillong.

5:6:1(4)

'ANNEXURE A'

Dr. S.P. Dasthakur,
JOINT SECRETARY

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

No.
D.O. No.F.25-1/93/SR-III

Dated: 8th Sept., 2000.

Dear Sir,

This has reference of D.O. No.11-4/97-Sch.IV(EHV) dated 31st July, 2000 regarding 81st Report of the Department of Education related Parliamentary Standing Committee on due based Education. The UGC has been repeated to take appropriate action on the part highlighted here under:

"The Committee is of the view that in the advanced stage, i.e. at the College and university level, like human co-existence and also ethical values in science and technology and comparative study of all religious need to be taught by prescribing special books. Literature with special emphasis on co-existence and non-imposition of fundamentalisties will have to be produced".

In view of this, the university is requested to take necessary action in the matter and also may kindly report the status to the UGC accordingly.

It may be added that two meetings of the Group of Experts on Introduction of Education in Human Values were held and the Ministry of Human Resource Development, Department of Secondary Education and Higher Education has to place report of the action taken before the Group and the Core Committee in the next meeting. Hence your action taken report will assist UGC to communicate to the MHRD in the matter.

This may be treated as most urgent.

With regards,

Yours sincerely,
sd/-

(Dr.S.P.DASTHAKUR)
Joint Secretary.

The Vice-Chancellor,
NEHU., Shillong.

ii) Suggestion to start the M.Ed. Programme
in the University.

The Commissioner & Secretary to the Government of Meghalaya Department of Education, Shillong vid his D.O. No.RC/PER/2000/157, dated 10th, Oct. '2001 as placed at Annexure 'A' has drawn the attention of the University to the fact that Teacher training is an area which has hitherto not been given adequate priority in the policy of the State Government, resulting in recruitment of untrained School teachers at all levels, and therefore, has suggested to the University to explore the possibility to start the M.Ed. Programme,

In this connection an interim reply as made by the Vice-Chancellor to the Commissioner & Secretary is placed as Annexure 'B'.

The matter is placed before the Council for consideration.

Shri Ranjan Chatterjee, IAS
Commissioner and Secretary,
Government of Meghalaya,
Education Department,
Main Secretariat Building,
Shillong-793001

Office: 0364-222016
PABX : 2262
RESI : 0364-500714
FAX : 0364-222016,
225978

D.O.NO.RC/PER/2000/157

Dated 10th October 01

Dear Prof Miri,

Teacher's training is an area, which has hitherto not been given adequate priority in the policy of the State Government. This has resulted in large scale recruitment of untrained school teachers at all levels. In the last review meeting in Delhi it transpired that the position of Meghalaya is one of the worst in the country. The National Council of Teachers Education (NCTE) has taken a serious note of this and insisted that the State should henceforth only appoint trained teachers.

We have set up three(3) DIETs and four(4) more are in the pipeline. The NCTE has recommended that the eligibility criteria of the lecturers should be M Ed plus Masters degree in a school subject plus 5 years of teaching experience. We find it to our dismay that NEHU does not have the facility for imparting M Ed. Education in the State. Consequently, we are compelled to reduce the eligibility criteria. This will have allongterm implication because the DIETs are meant for training up the Elementary school teachers.

Under the circumstances, may I kindly request you to kindly explore the possibility of commencing M Ed course at NEHU at an early date so that we can depute our DIET Lecturers for this course. Infact I would urge you to kindly see that as far as possible our local candidates of Meghalaya receive the M Ed course covering both in-service and pre-service candidates.

I shall grateful for having your considered views on this matter.

With personal regards.

Yours sincerely,

Sd/-

(Ranjan Chatterhee)

Prof Mrinal Miri
Vice-Chancellor,
NEHU, Shillong.

Copy

Mrinal Miri
Vice-Chancellor

No: NEHU-UCF 22-1/2001-1490
29th October, 2001

Dear Shri Chatterjee,

Thank you very much for your letter of 10th October, 2001. We welcome your suggestion that the University should start the M Ed programme in addition to the programme of M A in Education. However, any proposal for a new academic programme, will have to go through the various bodies of the University and finally must have the approval of the University Grants Commission. We shall start the process immediately and hopefully shall see some result in the near future.

With regards,

Yours sincerely,

(Mrinal Miri)

Shri Ranjan Chatterjee,
Commissioner & Secretary,
Govt. of Meghalaya, Education Dept.,
Main Secretariat Building,
Shillong:-793001

Copy to :- The Registrar, NEHU, Shillong, along with the original letter from Shri Chatterjee. This may please be placed before the ensuing AC meeting.

Sd/-
(Mrinal Miri)

:iii) Request from the Principal, St. Anthony's College for introduction of P.G. Courses in Bio- Technology, Business Administration and in Computer Science or to grant permission to introduce P.G. Classes in these subject in the colleges.

Content of the letter No.SAC/SM/38/01-02, dated 12.5.2001 received from Fr. Stephen Mavely, SDB, Principal, St. Anthony's College, Shillong, addressed to Vice Chancellor is reproduced below for perusal of the Council:-

" Respected Sir,

As you aware, this college is offering several Degree Courses that are employment oriented as well as offering opportunities for further studies in these fields. Earlier, the University was engaged in a serious study to start Post Graduate Departments in some of these fields: (a) Business Administration (b) Computer Science and, (c) Biotechnology.

As the graduate of this college as well as the students of the region do not have the opportunities for pursuing Post Graduate Studies in these fields in the University, may I request that the University reconsider starting some of these very much sought after post graduate departments. Alternatively, the University could allow colleges to start such post Graduate Department.

I will be grateful if this matter could be scheduled for discussion at the Academic Council.

Thanking you, and with kind regards."

The request of the Principal has been placed before the Dean's Committee as desired by the Vice Chancellor and the Dean's Committee referred the matter to the Academic Council.

Hence, the matter is placed before the Academic Council for necessary deliberation and decision.

j) Guidelines for the Publication Grant.

The 95th Dean's Committee held on 21.8.2000 decided to grant/sanction 30% of Unassigned Grant in lumpsum to the Director Publication Cell. The Selection of cases is to be done by the Publication Advisory Committee and Publication Cell should also evolve a set of guidelines which should be approved by the Academic Council.

Subsequently, the Director Publication vide Annexure 'A' forwarded the recommendation of the Committee constituted for the purpose, which was placed before the Dean's Committee Meeting held on 8.5.2001. Consequently, the Dean's Committee vide Annexure 'B', while appreciating the suggestions made by the Publication Cell, recommended the following :-

- a) Manuscripts on important and relevant issues may be commissioned by the University
- b) Books, recommended as "texts", may be considered for reprinting by the Publication Cell;
- c) Collections of published articles, which may not be easily available to students but which are considered to be essential reading material for students, may be considered for publication;
- d) NEHU may enter into collaboration with other publishers on the basis of MOUs based on the merits of different cases.

The matter is placed to the Academic Council for decision.

Publication Cell. The 94th Dean's Committee confirmed the Amendment to the decision that granted 30% of unassigned grant to Director, Publication Cell and suggested that it should evolved a set of guidelines for this purpose.

Accordingly, a Committee was constituted to prepare tentative guidelines that could be discussed in the Publication Committee and the Governing Body of the Publication Cell. This Committee consisted of :-

- | | |
|----------------------------|--------------|
| 1. Prof. E.N. Lall | Member |
| 2. Prof. S.N. Rai | Member |
| 3. Prof. Ramesh Sharma | Member |
| 4. Prof. R. Gopalakrishnan | in the chair |

The Committee met on 29th December, 2000 in the Office Chamber of the Director, Publication Cell. The members deliberated upon the decision of the Dean's Committee and the amendment to the decision. The members unanimously recommended the following tentative guidelines. These are :-

1. That this grant shall be used for publications of textbooks at the Under Graduate (UG) and Post Graduate (PG) levels.
2. That the authors shall be part of NEHU Teaching Faculty. Any other member of NEHU staff with academic orientation and with themes of interest may also be considered.
3. The authors shall be invited to write textbooks at UG and PG levels in all subjects taught at NEHU.
4. The author shall submit the manuscript to the Publication Cell. The Publication Cell will refer the manuscript to a panel of referees/experts. Based on the recommendation of the experts and the author's response, the Publication Cell will reimburse the cost of preparing the manuscript at the prevailing rates.
5. A token honorarium to the authors and referees shall be decided by the Publication Committee/Governing Body.
6. The Panel of referees shall include a minimum of two referees out of which one will be suggested by the author.
7. Out of the revenue generated by the Publication Cell from this account, 30% will go to the University Corpus Fund and the rest shall be used for publication.

Sd/-
Director Publications

Abstract copy of the Dean's Committee held on

8.5.2001

Item No. 5 Guidelines for Publication Grants:

The proposals submitted by the Publication Cell were considered. While appreciating the suggestions made by the Publication Cell, The Dean's Committee also recommend the following.

a) Manuscripts on important and relevant issues may be commissioned by the University

b) Books, recommended as "texts", may be considered for reprinting by the Publication Cell;

c) Collections of published articles, which may not be easily available to students but which are considered to be essential reading material for students, may be considered for publication;

d) NEHU may enter into collaboration with other publishers on the basis of UOM based on the merits of different areas.

6:2:1(1)

6:2- Appointment/Creation of Post/Termination of Service etc

- i) Re-employment of Teachers after Retirement at the age of 60/62 years in the Universities and Colleges.

The meeting of the MEPA which was held on 23rd January '01 conducted a National level discussion meet on Re-employment of teachers after Retirement at the age of 60/62 years in the Universities and Colleges and after discussion each of the items at length finally made the recommendations which is placed as Annexure-'A'

The matter is placed before the Council for consideration.

National Level Discussion Meet on
Re-employment of Teachers after
Retirement at the Age of 60/62 years
in the Universities and Colleges

23rd January 2001

Report



Educational Policy Unit
National Institute of Educational Planning
and Administration
17-B, Sri Aurobindo Marg
New Delhi 110 016

Acknowledgments

It is an established fact that teachers desirably constitute a key position in the educational structure. Proper selection, timely upgradation of knowledge and skills, and optimum utilization of their services, for drawing the best out of them assumes great significance in the management of higher education system. Obvious it is, that the quality of personnel drawn to the system depends on the norms laid down interms of pay scales, qualifications, service conditions, other benefits etc. In India, it has been the responsibility of regulatory bodies like the Universities Grants Commission, Ministry of Human Resource Development, All India Council for Technical Education etc. depending on the sector of education that the concerned body is assigned with. Committees and Commissions one after the other, since the Higher Education commission (1948), till date, have not only suggested improvements in the emoluments and service conditions of teachers but also utilization of services of meritorious teachers even after their superannuation to cater to the existing and future requirements of the higher education system. In the recent past, the age of retirement & superannuation of teachers has been an issue of debate since the 5th pay commissions' recommendations is implemented. Retirement of teachers varies from state to state and the fact remains, that there is shortage of quality teachers and the demand for such teachers is increasing day by day.

In order to draw the expertise and experience of people of eminence in the higher education system on the issue of reemployment, at the initiative of UGC, NIEPA organized a one day national level discussion meet on "Re-employment of Teachers after the Retirement at the Age of 60/62 years in Universities and Colleges" on 23rd, January 2001 in the NIEPA premises. The positive responses received from the experts and the participants from all over the country and the active participation by the MHRD and UGC was very much encouraging and inspiring. Above all, the participation of teacher union's and their concern and commitment for Quality of Higher Education System and the teachers' status and prestige is worth recording. The representation of AIFUCTO and FEDCUTA provided valuable insights into the actual 'State of the Art' of re-employment in universities and colleges and provided critical suggestions focused on the needed review.

Grateful thanks to all those who, directly or indirectly, contributed to the recommendations which is the major outcome of this meeting.

Our special thanks are to the eminent educationists, Chairmen and Vice-chairmen from State Councils of Higher Education; Vice-chancellors, Pro-Vice-chancellors, Rectors and professors from universities; College Principals; representatives of Teacher's Unions and other subject experts for their continuous involvement and active participation in the meeting. Obvious it is, that, their contribution would go a long way in ensuring the due status to the teaching profession in general and the teachers in particular, and more so, the quality of higher education system.

We thank Prof. B.P. Khandelwal, Director NIEPA and the NIEPA faculty for their guidance, advice, support and co-operation. Our sincere thanks are also due, to all the members from different sections like Administration, Accounts, Computer and Typing Pool of NIEPA for their ready cooperation and support in the various activities connected with the organisation of the meeting. We thank one and all sincerely.

K. Sudha Rao

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National Level Discussion Meet On Re-employment of Teachers after Retirement at the Age of 60/62 Years in the Universities and Colleges

Introduction

The word retirement indicates voluntary and involuntary termination of employment—voluntary because of age, disability, illness or personal choice and involuntary because of conditions of service. It also means giving up formally one's, job, or office. It is an ethical and academic concept related to discharging ones duties effectively and efficiently. But the question still remains whether it is physical or mental or for that matter is it related to various capacities of the body. Studies have shown that the average life span of modern man has increased, as a result the amount of time spent outside the service has increased more than the amount of time spent in it. Firstly the length of time prior to entering employment has increased depending on the pre employment knowledge and skills needed. Secondary and more dramatic has been the increase in the length of retirement, which has almost doubled in some cases. In the period of high technological change, comparatively younger persons and those with less education tend to be dropped from employment. Present industrial trends are such that education and continuing training through the employed life are becoming characteristic. Studies have shown that sustained productivity in most learned fields occurs over the later part of life span and no amount of intelligence can be a substitute for experience.

Athletic achievement in sports, it has been reported decline by age 45 to a level not reached until age of 70 in the areas where other the physical attributes are called into action. There seems some basis for accepting the general view that physical capacities develop later and permit high-level achievements during most of the usual employed life-span. Social skills mature later and in individuals with good health in a favourable environment are maintained at a high level throughout the life-span.

The teachers in Higher Education are amongst those whose functions are multifarious, and include teaching, research, extension and to the students services like counseling, advisory, supervision and guiding etc. Training today takes longer than in the past and for the same length in service compared to other professions, the teacher reaches an advanced point in his age. It is also believed that the best of an active teacher emerges with increasing experience. Radhakrishnan Commission observed that "University teachers as a class belong to the longest lived group in any community and the reasons are that they have a more disciplined life and live in more congenial surroundings. They are not exposed to the same physical and nervous strains as many other areas and on the whole they enjoy more equable conditions of existence. Even though their physical vigor may decline the intellectual capacity may remain unimpaired. Thus in case of teachers age may not be a disability, for experience enriched the mind and maturity of knowledge ripens into wisdom".

Planning is also vital to the faculty members in order to prepare for the post-retirement years, to organize a life of reduced stress, to launch a new career and the universities and colleges should assist with reasonable assurance that retirement will not be a burden for them; especially for those who has been in meritorious service. The importance of this objective lies in the fact that, the offer of assistance should be in line with retirees' ability to maintain self-esteem and lead a rewarding life. It is not part of the ethic of our nation, or for that matter any modern nation, that people should work for a living until they die.

A sensible system must however, be certain to meet general concerns and normal situation rather than try to cover every variation. A sensible system must also balance the individual, institutional and societal goals and it must recognize reasonable norms of experience. If we consider the normal entry age of teacher into higher education system, which is 28 to 30 year, and the minimum service permissible is 33 years, than a teacher has to necessarily retire after 60-63 years. But how to utilize the services of the retired meritorious teachers? There have always been different provision in the

system to retain and utilize the services of the best and meritorious teachers. The UGC from time to time has constituted various commissions and committees and issued notifications pertaining to Re-employment of teachers after retirement.

Teachers decidedly constitute the most important component of any educational structure. Providing emoluments and service conditions commensurate with the role of teachers in the development process has, therefore been a major policy concern of the University Grants Commission. Some of the critical remarks made by different Commissions formed by UGC on the *age of retirement* of University and College teachers are as under:

Radhakrishnan Commission (1948) on Indian University Education	“The ordinary superannuation age for all teachers should be sixty but a Professor--provided he is in good health, should be allowed to serve till 64; no extension, however, should be for more than two years at a time”
Education Commission (1964)	“The retirement age of teachers in higher education be ordinarily 60 years, with provision for extension generally up to 65 years, and in a few cases, even up to 70 years.”
Committee on Governance of Universities and Colleges (1971)	“If a University/College requires the services of a teacher after the age of Superannuation, he/she should be appointed on a contract not exceeding five years. During the contract period, the teacher should not be given any administrative responsibility e.g. Head of the Department or Dean of a faculty etc. He/she should devote himself/herself entirely to the teaching and research.”
Sen Committee (1973)	“The age of Superannuation should be 60 years and thereafter no further extension in service should be given. If a University/College requires the services of a teacher after the age of Superannuation, he should be appointed on a contract not exceeding five years”
Mehrotra Committee (1986)	“The age of Superannuation for teachers to be 60 years and thereafter no extension in service to be given. However it would be open to the University or College to re-employ a superannuated teacher according to the existing guidelines framed by the UGC upto the age of 65years”.

By the time fifth pay committee started functioning it was learnt that recommendation of the fourth pay committee have been implemented in bits and pieces. For example pay scales have been implemented by all the universities where as implementation of age of superannuation has not been affected with the result it varied in the state government and aided colleges. Thus variation in the ages of retirement of university and college teacher existed between the government colleges and private colleges as well as among the Central Universities and State Universities. A clear-cut recommendation regarding this may be necessary for the benefit of higher education institution.

On the basis of recommendations of various commissions and committees UGC issued from time to time letters/notifications pertaining to the *Age of Superannuation* of University and College Teachers. Some of the salient parts of those letters/notifications are reproduced as under.

<p>UGC Letter/ Notification No.F.1-67 / 79 (CPP-I), 11th April, 1990 issued to the Secretaries of the State Governments and Union Territories and the Registrars of all Universities including Deemed Universities <i>Subject: Reemploy- ment of superannuated teachers by the universities and colleges as also of Superannuation of the teachers in universities and colleges.</i></p>	<p>“The Government of India /MHRD, (Dept of Education) while revising the pay scale of the teachers on the recommendations contained in the Mehrotra Committee Report indicated in their notification No.F.1-21/87-U.1 dated 22nd July, 1988 inter-alia, that ‘the age of superannuation for teachers should be 60 years and thereafter no extension in service should be given. However, it would be open to a university or college to re-employ a superannuated teacher according to the existing guidelines framed by the UGC up-to the age of 65 years’ “it has been decided that in the case of teaching staff the age of retirement may be 60 years with extension for a period not exceeding three years if the Executive Council on the recommendation of the Vice-Chancellor is satisfied that such extension is in the interest of the university. In special cases, where a teacher has been given extension for a period of three years i.e. up to 63 years and still considered to be fit for work in the interest of the University, a further extension for a period not exceeding two years be given. With regard to mode of extension to be given to the teaching staff from 60-63 years and then from 63 to 65” ‘The Commission agreed that the procedure to be followed may be left to each university to decide’. In the case of the Central Universities the Commission had also considered if the universities could re-employ teachers for a limited period beyond the age of 60 years, and expressed “it would be open to the university, if it so desired, to re-employ a talented teacher for a limited period, beyond the age of 60 years. It would however, be necessary for the university to make suitable statutes/ordinances in this regard.”</p>
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<p><i>UGC's Consolidated statement based on letters No.F.1-22/97-U.I issued on 27th July 1998, 22nd September 1998 and 6th November, 1998 by MHRD</i></p>	<p>"The age of Superannuation of university and college teachers, Registrars, Librarians, Physical Education Personnel, Controller of Examinations, Finance officers and such other university employees who are being treated at par with the teachers and whose age of Superannuation was 60 years, would be 62 years and thereafter no extension in service should be given. However, it will be open to a university or college to re-employ a superannuated teacher according to the existing guidelines framed by the UGC up to the age of 65 years."</p>
<p><i>UGC Notification on Revision of Pay scales, Minimum Qualifications for appointment of teachers in Universities and Colleges and other Measures for the Maintenance of standards 1998</i></p>	<p>"The benefit in service, up to a maximum of 3 years, should be provided for the teachers who have acquired Ph.D. degree at the time of entry, so that, almost all teachers get full retirement benefits which are available after 33 years of service, subject to the overall age of Superannuation. Other conditions with respect to Superannuation benefits may be given as per Central/State Government Rules.</p>

The provision of extension or re-employment was not meant to be a provision for extension up to the age of 65 years for all teachers. It was to be used selectively and was to be justified in terms of institutional needs. This provision is not used generally in most of the state universities. Only few central universities are taking advantage of the provision to give re-employment to all teachers up to 65 years. While the provision may be retained, it may here to be ensured that the practice of re-employment as a routine may not be allowed to be followed by an institution.

Objectives of the Meeting

The main objective of the meet is to *deliberate, discuss, recommend and provide input to policy and program to enable proper utilization of the services of meritorious teachers ensuring quality, excellence and relevance in the system based on the authentic data and information.*

The other objectives of the meet are:

- to understand "*The State of the Art*" scenario of re-employment in the universities and colleges in the light of recommendations made by various committee and commissions;
- to analyze the terms of reference of re-employment of academic and non-academic staff in the universities and colleges;
- to provide forum for sharing of thoughts and brainstorm on the issues concerning the re-employment, keeping in view;
 - (i) the assumptions and expectations from this scheme to the system and the;
 - (ii) impact of the present practices of re-employment in the universities and colleges on the system in the present social context;
- to develop a report based on the proceedings, discussions, recommendations and suggestions, and finally;
- to provide input to the policy makers, planners and implimenters at the Center, State and institution levels and;
- to facilitate utilization of services of meritorious teachers to to ensure quality, excellence and relevance in the higher education system.

Date, Venue and Time Schedule

The national level discussion meet was held on 23rd January, 2001 at NIEPA premises. The detail program is provided in the *Annexure - I*

Members Present

As the main objective of the programme was to provide inputs to the policy making, planning and management of the provision of re-employment in universities and colleges, the meet was geared for senior level education planners, administrators and implementers at all the levels viz: Center, State and Institutional levels. The members who attended the discussion meet are : Vice-chairmen of the State Councils of Higher Education, Joint Secretary/Deputy Secretary Department of Education, Ministry of Human Resource Development, Chancellors, Vice-chancellors, Pro-Vice-Chancellors from the Central and State universities, Eminent professors from the universities, leaders of the professional bodies like presidents secretaries and members of FEDCUTA and AIFUCTO, Principals of colleges and Subject Experts who are directly involved in improving the quality of higher education system in India. The actual list of the members present in the discussion meet is given in **Annexure II**.

Programme Management Team

The discussion meet was managed by Prof. K. Sudha Rao, Programme Director and Head the Educational Policy Unit with the assistance of Brig. P.R. Prasad, Consultant and Dr. Mithilesh Singh, Programme Coordinator NIEPA. NIEPA as a team worked in cooperated manner in completing the task assigned to each section which inturn facilitated in successful conduction of the meeting.

Proceedings of the Discussion

INAUGURAL SESSION

Prof. B.P. Khandelwal, Director NIEPA, while welcoming chairman UGC and others members of the discussing meet expressed thanks to all for their confidence on NIEPA and its faculty. Introducing NIEPA while highlighting its role and functions in general and in respect of Higher Education in particular he mentioned NIEPA has been successful in providing neutral ground and facilitating informed discussions enable better policy making, planning and administration through its indepth research and other academic inputs. Further he emphasized the need for studying various areas of concern in higher education system. In its continuous quest for excellence in higher education the UGC has been initiating actions from time to time and one such is the organization of this meeting on re-employment of teachers in NIEPA.

Prof. K. Sudha Rao, Head Educational Policy Unit, NIEPA, outlining the objectives of the meeting made a presentation on the '*State of the Art*' of re-employment of teachers in central and state universities based on the research study candidated by herself and Dr. Mithilesh Singh. Since the scheme has been differentially implemented in universities and colleges for improvement of quality, excellence and relevance it may be appropriate to share the experiences of different universities and experts in the system, in the common platform like this, for providing better input to planning and management of the scheme for the benefit of the system. It is therefore, members have been chosen carefully to represent all important categories viz. Central and State Universities' Chancellors; Vice-chancellors; Pro-Vice chancellors and professors, presents, secretaries of national level professional bodies, officials from UGC representatives of MHRD, representatives of State Councils of Higher Education and senior most, reputed and eminent educationists in the country, both serving and retired

and college principals. It is to ensure informed discussions and effort has been made, to study and present the recommendations of various committees and commissions, appointed since independence, on the subject. Relevant extracts from the writings of experts on the subject have also been provided as background materials for the meeting. To make sure that the teachers opinions are brought to the forum analysed data collected from teachers by administering a questionnaire to some of the universities and colleges was presented to the group so that that the meeting could have an informed and data based discussion.

Chairman UGC, in his opening remarks observed that he is grateful to all the members for their commitment and immense involvement in discussing such an important and relevant issue. He said "The meeting has been convened to have an open minded discussion on the subject without any predetermined notion or views." Recounting the history of the scheme he stated that the first debates on the subject started early as in 1988, when provision for re-employment was made up to 65 years, after superannuation at 60 years.. The duration of re-employment was fixed differently by different universities ranging 2 to 5 years in the combination as 3+2 years or 2+3 years or 1+1+1+1+1 years etc. But extensions were granted to almost all as a matter of routine, without taking into consideration the individual merit in terms of teaching and research factor or the institutional, need etc. Thus it became virtually a matter of extension from 60 to 65 without any selection or screening process.

The scheme of re-employment, the chairman continued, has not been in practice in all the universities. It is limited to only central universities. Moreover in some central universities it is applicable to the college teachers as well for example Delhi University, while in others after trying it for few years have stopped reemployment. Reemploying teachers without any special criterion, has made it routine activities. Either it should have been made applicable to the meritorious and deserving people only, in the interest of the institution and higher education system or in the service condition itself it should have

been stated as retirement age is 65 years. Moreover the discrimination between universities and Colleges is quite disheartening.

The chairman also pointed out that the conference of Vice-Chancellors at Gowhati held in Dec. 2000, resolved unanimously that it must be discontinued and no re-employment to be granted after 62 years. He further stated that re-employment should not be treated as a rehabilitation measure, as it will block the entry of new blood, and delay or prevent the promotion of juniors resulting in frustration. The services of good teachers no doubt should be utilized in the teaching and research by the institution. Such teachers, would not only bring repute to the institutions but also assist in building the younger faculty and students.

The system was introduced mainly to ensure that teachers, who are good and providing useful services to the system and who cannot be replaced be continued to provide their valuable services to the system. Unfortunately it has been mostly abused without taking into consideration the needs of the institutions and the higher education system. The discussion meet therefore should consider all the scheme from various angles and discuss issues involved with an open mind and evolve a formula to ensure maximum utilization of the funds planned for the same for utilizing the services of meritorious teachers in its existing form, or modified form or revised form, so that it takes into account what is best for the country, to the institutions, to the higher education system and to the students.

After the address by Chairman, UGC, Prof. K. Sudha Rao Head, Educational Policy Unit, NIEPA, made a presentation of the findings of the study on reemployment of teachers after retirement in institutions of higher learning; and recommendations of various committees and commissions appointed since independence. To supplement the historic picture with the latest on the subject she presented an analysis of responses

through administration of questionnaire to the teachers received from seven central universities and 31 colleges.

Immediately after the presentation, the Chairman UGC, expressed his desire to know from the members, ^{the} actual ground realities. The members responses and experiences as narrated by them have been summarized and presented below :

- AMU and BHU are not practicing the re-employment scheme
- Assam University, Silchar being a new University, the scheme of re-employment has not been implemented yet as so far no body has applied for reemployment
- Viswa Bharti is giving re-employment to its staff.
- Pondicherry University it is in practice, one teacher has already been reemployment.
- In IGNOU, after retirement, they are grouped under consultancy cadre. The post against person gets vacated and the concerned person has to vacate the residential accommodation as well.
- JNU, DU, JMI, Hyderabad Central University, and NEHU, are reemploying all most all the teachers till the age of 65 years except selected few till 2000.
- Calcutta and H.P. universities extends the services upto 65 years
- In West Bengal it is in-built in the Statutes
- In all UP State Universities provision to reemploy a teachers from the date of his superannuation 60 years to end of the academic session (June 30 next)
- In some universities the term extends upto the end of the academic year only.
- Some universities the scheme has been extended to non-teaching staff as well.

Open Session

Prof. K. Sudha Rao requested Prof. S. N. Hegde, Vice Chancellor, Mysore University to Chair the session and remarked that as in Mysore university there is no re-

employment system Dr. Hegde might be able to conduct the session in a objective and unbiased manner.

Presiding over the session, Dr. Hegde requested the members to have free and open exchange of views on the various issues connected with re-employment keeping in view the interest of the system and the institution. He assured the members that every one would/get an opportunity to present their viewpoint and knowing the importance of the issue every members's view is equally important and hence take part in the discussion.

One of the member representative of FEDCUTA recounting on the history of re-employment stated that till 1978 in Delhi University regular extension of 5 years, was given to everybody after 60 years. It was later converted into re-employment scheme and continued the same way even after the Fifth Pay Commission though the age of superannuation was raised to 62 years, 3 years extension was given. However in Delhi University, 100% teachers do not get re-employment.

The data presented by Dr. K. Sudha Rao reveals that hardly few pesons retire every year and hence it is apparent that only a small percentage become entitled for re-employment. Hence it may not be a big problem and may not be treated as a national issue; as only a few universities are following the practice. The national seminar should therefore take a stand for making it available to all because certain things are decided by the pay package offered at the time of pay revision for which M/HRD is also a party. Till such time the next pay commission decides, it would be unfair and uncalled for to tinker with the existing provision

Continuing the discussion, the member stated that UGC issued a notification indicating the retiring of age limit upto 62 years for teachers but no such limit was indicated for Vice-Chancellors, Chairman UGC, members of EC, AC and such other

comparable positions. Why this discrimination in age limits? There is a general feeling that this concession of employment upto 65 years in respect of teachers is sought to be withdrawn to thin down the permanent faculty. Even the scheme of part-time lectures has been abolished. The government by decreasing the allotment of funds to higher education and privatizing it, is trying to make the system weak. The UGC is trying to make an issue out of a non issue, because if one considers the person entering the teaching profession in the higher education system, which is 26 to 30 years and the minimum service for drawing full pension as per the norms 33 years, which means obvious it is that a teacher has to necessarily retire after 61-63 years. Even granting re-employment to a certain percentage say 2/3rd of retiring persons, after getting decision from a seminar like this, may not be fair to the system. Therefore the member asserted that the provision of re-employment must be there with improved guidelines and the UGC must be involved in such a scheme.

President AIFUCTU, referring to the size of the union and its membership as around 400,000 teachers across the country mentioned that the scheme of re-employment is not in operation in all the universities and colleges. No state government, barring Gujarat and MP have even accepted the minimum age of 62 years for retirement. In a state like Kerala, the age of retirement is at 55 years. Some states have 58 years as the age of retirement of college teachers and 60 years for university teachers. UGC should therefore take necessary steps to bring in uniformly in the age of retirement by raising it to 60 years for college teachers and 62 years for university teachers throughout the country. The present crisis in the higher education system arises out of non-at all levels performance and also lack of proper allocations. Thousands of teaching positions are abolished or reduced. For example Gujarat from 3000 to 2000, AP from 12000 to less than 6000 in 1986. Re-employment is not at all an issue. Rather implementing the UGC/MHRD decision of rising the retirement age of teachers to 62 years is the issue. It will raise the image of teaching profession. Greater responsibility must be shown by MHRD/UGC in providing more funds and increasing the number of posts and filling the

existing vacant posts. Concluding his presentation he asserted, that as a principle AIFUCTU association does not want any re-employment rather it wants uniformity in the age of retirement at 62 years. Re-employment should be abolished as in West Bengal. Taking a selfish view without keeping in view the youngsters who are not able to get job may not be good for the higher education system.

President FEDCUTA presenting the perspective of the association, observed that the service conditions of teachers in the country are awful. It may be worth while to study, as observed by Rastogi Commission, why talented teachers are not coming to the profession, and even those who are in, are trying to fly away? There is a need for optimizing the utility of the services of teachers, unlike in Kerala where it is being frittered away. The three major factors relevant in the situation are whether after 62, fossilization is taking place, or intellectual meno-pause occurring or is there all round decline in the individual? The three dimensions of ethical issues involved in the scheme of things are :

- i. Are you desiring ?
- ii. Are you deserving - peer group pressure
- iii. Are you dignified to stay in the community or family

Continuation of service after superannuation could be as extension, or on contract. In USA the system of contract is followed which keeps the teachers in perpetual agony and anxiety. We need not look at USA model? We can have our own model. But before we adopt any model we have to answer the following seven questions :

1. Is it a concession for central university teachers only?
2. Is it imperative for the maintenance of university and college system?
3. Is it an out-dated practice hence needs termination?
4. Is it a global development in the knowledged society?
5. Is it a lacuna of non-central universities?

6. Is it a facility that helps in building the image of the Department, University and assists in maintaining the level of excellence - Indispensability factor?

7. Is it an exercise in optimizing and maximizing the intellectual resources of our country for ensuring quality of higher education system.

Continuing the discussion he observed that the analysis carried out and presented at the commencement of the session by NIEPA has been able to take into account the pathological and psychological factors deficits only the empirical data collected from university and colleges. It would be interesting to study the reemployed teachers, assessment of the role and the contributions made by the re-employed teachers. A in-depth study is needed to understand the pathology of re-employment and its impact on the system. There are two types of retired/retiring teachers viz. (i) those who ask for reemployment and (ii) those who say good-bye on superannuation. Further it should be analysed whether it is humiliating or is it too much to be re-employed etc.

There is need to look into the consistent recommendation made by different committees and commission for retaining and optimum utilization of capable, talented and outstanding senior teachers. Cognizance may also be taken keeping in view the facilities made available to the teaching community since Radhakrishan Commission, like Sabbaticals, orientations and refresher programmes etc. Provision may also be made for voluntary retirement scheme in the education sector after 15 years of service. This innovation be introduced and continued.

The concept is yet to be made fully functional observed one of the participating Vice-Chancellor. Teachers have been victims of politics and bureaucracy. Duties and responsibilities of teachers have come up for scrutiny after the pay commissions. Teachers work does not finish at 5 p.m. as he has to prepare for the next day and next lesson. He is in touch with younger generation and influences then. Re-employment

should be viewed not only from purely academic angle but also other non-academic factors to be taken into consideration. Any decision to be taken should not be merely in a ritualistic manner but rather from an academic, institutional and students' point of view.

President, Delhi College Principals' Association expressed that utilizing the services of eminent teachers including principals after retirement is a welcome opportunity for the institutions and students. Delhi University college principals are not given re-employment as they are under the control of governing bodies where as all most all teachers are given extension. There should be uniform guidelines laid down for hiring the services all academic staff of the Higher Education System. Asserting that suitable criterion be evolved for selecting the good teachers placed before the members, following parameters for consideration:

- Academic contribution
- Participation in curricular and co-curricular activities
- Regularity in teaching and research
- College should recommend the case and forward the application
- Satisfactory performance appraisal report
- Proper a selection committee to screen the application consisting of
 - Chairman, governing body,
 - Principal and
 - 3 experts (2 external out of which one to be govt. or UGC representative)
 - Presentation and no interview
 - Committee to record the recommendation.

One of the member, a former Vice-Chancellor observed that teaching has lost its value during recent times. The main concern should be for high academic standards, although practices will differ and continue to differ with individuals and institutions. He

stated that he was in favour of hiring the services not only upto 65 years but also upto 70 years, because a teacher is generally at the peak of his ability around 55. The problem has arisen only because everybody was given re-employment without any check. One has to think of ways to go about it in a systematic manner, so that, only the deserving get it. Humanities and social science teachers are at the peak at that age, where as, in the case of science teachers it is different. Teachers themselves should not seek re-employment. The institution, based on the performance and usefulness of a particular teacher, should recommend it. Suitable mechanism should be developed, such that, only deserving and good teachers are hired. One way is to make student assessment of teacher at least, during the last five years preceding the date of retirement should be made mandatory. Assessment of teachers therefore must start from the age of 55 years.

One of the participating professor observed that since the discussion was leading towards consensus for hiring of services of teachers' after retirement it may be better to find out whether there is any body, who does not agree with the concept of utilizing the services of retired teachers. As there were no immediate response the, discussion continued.

One of the member representing the Central Universities teacher union observed, Central Universities have good teaching faculty. Re-employment of teachers does not block the chances of younger teachers as 40% of the posts are already vacant. It is obvious from the statistics provided during the presentation not even 1% of the teachers are getting re-employment in Central Universities. Therefore it was suggested that it

should be continued and the rules for re-employment must be made rigid. MHRD and UGC must ensure that the institutions concerned, take appropriate steps for career planning and growth of teachers with suitable incentives and service conditions.

Secretary AIFUCTO stated that the re-employment of teacher is not an institutional problem but a national problem, because different states follow different rules. Consequent to the pay revision on 1.1.1986, due to the Pay Commission, the age of retirement of teachers has been fixed as 60 years. Even at that time Bihar had made its retirement age at 62 years so government of India forced Bihar to bring it down to 60 years to have uniformity in the country. Even now there is no uniformity in the age of retirement as it is different in different states. UGC/NIEPA/MHRD should work out the age of retirement of teachers, so that there is uniformity in the country and evolve a uniform scheme for hiring the services of meritorious teachers.

Emphasising the need for hiring the services of good teachers in the North-East, one of the professors from North Eastern States remarked that they are cut off from the main stream and hence do not get competent and good teachers for senior positions. Also people who are medically fit and willing to offer their services are difficult to find. Since all teachers are not of the same quality, he advocated that the policy of utilizing the services of teachers should be based on qualitative assessment of individual cases and services of the such teachers be made available to the needy institutions. Re-employment should be viewed as recognition of good work in teaching and research. It should not be viewed as teachers need rather it is for the benefit of the institution. At the same time it

should not be at the expense of youngsters who are waiting for career advancements. In this connection he suggested the model followed by IGNOU.

The age of retirement in all universities should be uniform asserted one of the members, a professor in a central university. Criterion for selection of teachers in the university system should be well defined with clearly laid down age for appointment. He also highlighted the need for rigorous selection procedures to be adopted at the entry stage of teachers. Suitable and clear guidelines should be framed for hiring the services of retired teachers so that there is uniformity and transparency in the system without impairing the dignity of the teacher.

Since the meeting was proceeding towards consensus building, another professor from central university joined the discussion by providing validating reasons for hiring the services of retired teachers as, doubling of life expectancy, increase in the active life span, late entry into the job due to specialization, availing of rich experience of teachers which does not involve extra cost, consideration for issues in education like quality and relevance, societal needs and globalisation etc. with note of caution that while laying down criterion for selection and deciding the procedure for selection, the dignity of the teacher must be kept uppermost.

One of the participating Vice-chancellor from a central university remarked that though the All-India Conferences of VCs, held at Gawhati unanimously recommended the discontinuation of the scheme of re-employment, but for practical reasons like the challenges of new millennium and its complex problems, hiring the services of a retired

teacher is absolutely essential. However, while operationalizing the scheme, he recommended that the following factors may be kept in view.

1. It should be selective and should be need-based (felt needs of students, the faculty and the institution and not a teacher)
2. The scheme should be made the best procedurally.
3. Should be in the larger interest of the university and Higher Education- equity, relevance and quality.

Vice Chairman, of one of the State Councils of Higher Education joining the discussion observed that the members who had spoken till then, meant the same, but have expressed in different way. The teacher community according to him could be broadly divided into the following categories:

- a) 25% teachers are excellent.
- b) 55% teachers are routine
- c) 20% teachers are delinquents.

With a wide spectrum of teacher characteristics, the necessity for full-proof scheme of hiring the services of excellent teachers, if they so desire, are not deprived of the same, needs no emphasis. Measures have also to be taken and parameters have to be decided so that suitable teachers are selected even from the "routine" type for hiring and re-deployment, in the interest of the institution..

Another professor of a central university speaking in favour of re-employment observed that there are apprehensions in the minds of the people that the system is trying to do away with the scheme of re-employment. This has to be guarded against and also uniformity has to be brought into the university system. The most important questions that are to be answered therefore are how to select the best teachers for hiring them for services? and who, is to select them? and what gives them dignity and status to work in an institution even after their retirement

Another member, Chancellor, of one of the university from Tamil Nadu, observed that re-employment or utilisation of services of experienced teachers is always good but the re-employability should be based on specific criteria like:

- contribution of the teacher
- innovations made in teaching/learning process
- dedication and commitment to the service
- meritorious performance during the service period
- He/she should have been a role model during service period
- Health need not be a main criterion though good health is desirable.

Emphasizing the need for providing proper guidelines with definite criteria it was suggested feed-back from the students could be one of them that the institution should keep a track record of every teacher, but the period for consideration and decision can be laid down in the guidelines.

Highlighting Higher Education and its difficulty in achieving uniformity in it because of Education being in the concurrent list was the focus of discussion raised by a Vice chancellor from a central university in the North East. While developing criterion, he emphasised the need for recognising the existing differences between Colleges and Universities and between Science and Humanities' teachers. Science teaching has global relevance and impact and hence there will always be greater demand for science teachers. The dignity of teacher must also be kept in view while developing guidelines and criteria.

A Pro-Vice chancellor from a central university while making his point, cautioned against doing away with the scheme, because a teacher never retires. As the teacher contributes to knowledge generation, and knowledge dissemination his/her services should be utilized without any upper age limit. Those who do not fully fit into the system may be offered VRS (Voluntary Retirement Scheme) after 15 years of service even before the age of regular retirement. For free mobility of teachers he recommended that one uniform scheme be developed for utilizing the services of retired teachers all over the country with uniform service conditions for College and University teachers.

At this point, one of the participants intervened to say that the UGC has already issued guidelines in this regard for all the universities in the country.

Joining the discussion one of the Delhi College principals stated that some of the universities have made provision in their respective University Acts and Statutes for re-employment of teachers after 62 years. Outlining the distinguished services of teachers their physical fitness on the one hand and the need of the college and university on the

other emphasized the need for utilizing the services of retired teachers with a condition that there is need for developing an effective and good efficient method of assessing and identifying the right kind of teachers should be for optimum use of our resources as the teachers grow over a period of 30 or 40 years with their experience. But if it is done routinely as is the practice now in some colleges, the purpose is defeated and therefore, instead of dishonestly calling it re-employment, every retiring teacher may as well be made to retire at the age of 65 years.

Member FEDCUTA stated that in all developed countries and in most of the developing countries the age of retirement of teacher is 65 years. In India teaching profession is treated differently and hence the need for re-employment arose. We are, however coming closer to other countries where the age of retirement is 65 years. Granting re-employment to experienced teachers will not affect the prospects of younger teachers, interests of the junior teachers, are better looked after if all the existing vacancies are filled. It may also be worthwhile to find out why Aligarh Muslim University and Banaras Hindu University are not implementing the principle of reemployment scheme even though their Acts and Statutes explicitly provides for the same.

General Secretary, AIFUCTO expressed the view that there are about 40% of the posts, which are vacant in Universities. Grants-in-aid have been cut off in M.P. Even government grants are stopped in some states. It is therefore necessary that first of all the vacant posts are filled and then only the question of re-employment thought off where as

member FEDCUTA opined that there was no need to discuss the question of re-employment as it is there in the system and also the Vth Pay Commission has already recommended for the same.

The chairman of the session summarizing the proceedings observed that the scheme is good but its impact on the system has not been studied in a systematic manner. Teachers in Medical Colleges retire at the age of 65 years. Even in the university system experience and expertise of teachers should be utilised in the fullest extent possible. Re-employment or contractual appointment on yearly basis should be need-based and be available to the system. It should be by invitation from the institution/college and not on demand by the individual teachers. A message should go to all that teacher if wanted by the system is an award or a reward in recognition of the good services rendered by the individual. The institution as in the state of Karnataka must generate the funds needed for the purpose internally.

Chairman, UGC giving his concluding remarks observed that there should be some method, with suitable provisions, to appoint capable and talented superannuated teachers in colleges and universities so that they continue in the service of the institution, with distinction and recognition. Teachers who are Physically fit and with sane mind should be given the opportunity to serve. Even physically handicapped could be finest material for research activities. When such deserving people occupy higher positions even the younger people will accept them as men who operate the system are more important than the positions they occupy.

As has been expressed by many, Chairman, UGC also joined that the word "re-employment" is not a suitable word, which sounds derogatory and connotes a sense of rehabilitation. These words must be replaced by suitable expression, which upholds the dignity of the teacher, gives respectability and recognizes the eminence of the person and profession.

There must also be a proper system of selection of teachers, keeping in view the importance of the profession. University or college may invite a teacher to continue after retirement but proper and clear guidelines must be laid down for the purpose. At the moment the system is abused so badly that AMU and BHU have stopped it in their respective universities. If it is to be done faithfully and sincerely there must be clearly laid down guidelines as to who should be given the opportunity? And how is this to be done? In order to have uniform policy and procedure through out the country it may be necessary to place all universities under the Central Government and all colleges under the State Governments. The scheme of re-engaging the teacher after superannuation to be made applicable to all state universities also, as some of them are doing excellent work. He exhorted the members' expressed the hope that the meeting would come out with comprehensive and consolidated recommendations on the issue, for effective implementation.

President, DUTA remarked that the name of the scheme does not matter but the existing guidelines of UGC need to be reviewed so that there is uniformity in the service

conditions of teachers in all universities and colleges in the country. There should not be any maximum quota or limit laid down for re-employment in the individual institutions.

One of the former vice chancellor stated that the selection of teachers for re-employment should be at two levels. In the first round selection to be made by invitation and volunteering or through expression of willingness. In the second round further screening to be done and final selection made. There should be no automatic element in the system, and the selection procedure should be dignified so that the genuine teachers are recruited and non-genuine are rejected. He further stated that generally teachers are appointed based on their abilities in teaching or research or both. In the case of teachers appointed on the basis of teaching ability, student's appraisal for the last five years may be taken into consideration. For research abilities the quality and level of publications may be taken into account.

A representative of FEDCUTA observed that before re-appointing a teacher, the institution must decide what he will be doing for the next three years or during the time period for which the extension is granted. In order to ensure transparency and the best man is not left out, certain negative parameters like involvement in embezzlement, moral attitude disciplinary actions must be taken due to cognizance of before utilizing the services of any retired teacher.. He also suggested three levels of selection for hiring the services of teachers .

At the lowest level college teachers' services be hired after receiving the proposal sent through Governing Board to the Vice-chancellor. The Vice-chancellor may

recommend and UGC may finally approve and Executive Council to take the final decision for continuing the service of the teacher upto 65 years.

At the second level there could be consultants who should be on invitation after consultation with the faculty and outside expert. The Executive Council will approve the appointment upto the age of 65 years.

The top level consists of service of eminent teachers who could request to continue upto 65 years with the approval of Executive Council.

At the end of the programme it was decided unanimously that the sub-committee be constituted from amongst the invitees of the discussion meet to work out a detail scheme of hiring the services of retired and retiring teachers. The sub-committee be provided with the major recommendations of the discussion meet. Further the scheme thus evolved be approved as a part of the discussion meet and also be submitted to UGC for its consideration.

Accordingly the sub-Committee was constituted and meeting was held on 12th April, 2001.

The minutes of the Sub-committee is appended In **Annexure III**

The meeting concluded with Vote of Thanks by Prof. K. Sudha Rao.

Recommendations and Executive Summary

1. The meeting was of the unanimous opinion that the services of good teachers should be available to the system of Higher Education as long as possible.
2. Good teachers generally are at the peak of their abilities during the later stages in their career and as such the experience and knowledge acquired by them during the 30 or 35 years of service must be utilized by the higher education institutions suitably.
3. The institutional needs and system's requirements should be of paramount interest in taking any decisions regarding the availing of services of teachers after superannuation or retirement.
4. At college level, the teaching abilities and at university level both teaching and research capabilities of individual teacher are to be considered besides other qualities while enlisting their services.
5. Suitable criterion for assessing the teaching abilities and research capabilities of teachers are to be developed.
6. Students' appraisal of teachers, especially during the last five years of service of teachers, has also been suggested, by a majority of the participants members, to be given due weightage in the selection of teachers, after superannuation or retirement.
7. A healthy and dignified procedure for seeking the services of deserving teachers is to be evolved in the interest of institutions rather than encouraging teachers to seek it for personal benefit.

- 15.30 - 16.30 hrs. : **Group Work :**
Re-employment of Teachers in Universities
And Colleges after Retirement
- : **Group I**
Policy Framework for Re-employment: Policy
Statements, Norms, Procedures and Guideline
- : **Group II**
Implementation of Re-employment Scheme in
Changing Society
- 16.30 - 18.00 hrs. : **Plenary Presentation and Discussion on Group Reports**
- : **Chief Guest :** Prof. Hari Gautam
- : **Observation:** Prof. B.P. Khandelwal
- : **Vote of Thanks:** Prof. K. Sudha Rao

Annexure-II

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Annexure III

**Minutes of the Meeting of the Sub Committee on
Re-employment of Teachers Scheme
to be Replaced by**

Scheme of Honorary Distinguished Faculty

Title of the Scheme – Honorary Distinguished Faculty

The discussion meet on re-employment of teachers after retirement, in the universities and colleges, held on 23/1/2001 recommended that a sub-committee be constituted to explore, recommend and workout the modalities to utilize the services of meritorious teachers, for the benefit of the institution in particular and Higher Education System, in general.

Accordingly the Director NIEPA constituted the sub-committee consisting of the following members:

- | | | |
|----|---|----------|
| 1. | Prof. B.P. Khandelwal, Director, NIEPA | |
| 2. | Prof. M. Anandakrishnan, Vice-Chairman, SCHE, TN | Chairman |
| 3. | Prof. Pabitra Sarkar, Vice-Chairman, SCHE, WB | Member |
| 4. | Prof. S.N. Hegde, Vice-Chancellor, Mysore University, Mysore | Member |
| 5. | Prof. C.P. Bhambari, Professor of Eminent, JNU, ND | Member |
| 6. | Prof. V.C. Pandey, Allahabad University, Allahabad | Member |
| 7. | Prof. R. N. K. Bamezai, School of Life Sciences, JNU, ND | Member |
| 8. | Ms. Madhu Arora, Dy. Secretary, MHRD, ND | Member |
| 9. | Prof. K. Sudha Rao, Head, Educational Policy Unit,
Secretary
assisted by Dr. Mithilesh Singh, NIEPA, ND | Member |

The sub-committee met on 12th April 2001 to suggest a plan of action for utilizing the services of distinguished and meritorious teachers after retirement in the universities

and institutions of Higher Learning. Prof. C.P. Bhambari could not attend the meeting as he had to go to Germany on an official visit. Mr. Brig. Prasad, Consultant, NIEPA joined the meeting on request.

Director NIEPA requested Prof. M. Anandakrishnan, Vice-Chairman, SCHE, TN to chair the meeting.

In his initial remarks the Chairman of the committee explained the importance of such a scheme and the needed input from the members for ensuring its quality and relevance and the various factors that are to be considered by the members of the committee to ensure its utility for the benefit of the system.

The Committee reviewed at length the merits and demerits of the existing practices and procedures of utilizing the services of teachers by re-employing them in the universities and colleges after retirement in the background of the recommendations made by the participants of the meeting held on 23rd March 2001. Keeping in view the above, and to accord due status and prestige to the profession and the teacher, it was decided the word "*Re-employment*" be replaced by a name befitting to the profession and the status of such meritorious teachers. It was accepted, that facility be titled as "*Scheme for Honorary Distinguished Faculty*". Further, it discussed in detail the various components of the scheme, such as, nomenclature of the scheme, criteria for selection, selection procedure, the levels of institutions to which the scheme is applicable, the service conditions, procedure for appointment, financial implications, whether it should be on invitation or by nomination and such others. The sub-committee developed the guidelines, after detailed discussion on the various issues, for utilizing the services of retiring and superannuated teachers from the universities and colleges as honorary distinguished faculty. The details are as under:

Objectives:

The main objective is to take advantage of the competence and experience of retiring and retired teachers, who have excelled in their performance and contributed in

great measure during their working period in the institution, and still desire to contribute towards strengthening of teaching, research and extension components of the institution for the benefit of the system.

The other objectives of the scheme are:

- to take advantage of the experience and expertise of the teachers who have proved their quality and performance over a period of time;
- to primarily utilize their services for on going programmes that are to be further strengthened in the institutions;
- to utilize their services also for launching new programmes in the university departments and colleges in case sufficient preparatory work has already been done for the commencement of the new programme by the department or college concerned;
- to make available the services of such teachers to other universities and colleges in rural and remote areas, other than the institution from which they retired;
- to make available the services of such specialist teachers in new frontiers of knowledge and skill to the deserving and desiring institutions all over the country;
- to ensure that the services of such distinguished faculty is not to be utilized as substitute to the existing vacant positions; and
- Finally, to create a link between institutions located in different regions in different states.

Scope and coverage

The main purpose of the scheme of honorary distinguished faculty is to move the focus from the individual teacher and institution to the country as a whole. The scheme seeks to maintain a pool of human resources at the national level comprising of eminent and distinguished teachers whose services may be utilized by different types of institutions, at different levels for teaching research and extension purposes, for building departments, for developing institutions, for training faculty and for other academic purposes.

- The scheme also seeks to provide a mechanism for inter-institutional (i.e. between the Universities) and intra-institutional (i.e. between a University and its Colleges) mobility of teachers as well as mobility of eminent teachers from the more advantaged to the less advantaged institutions;
- The scheme is expected to cover and shall be applicable to all central and state universities, as well as their affiliated/autonomous/constituent colleges and to institutions deemed to be universities recognised by the UGC;
- The services of the members of the UGC pool of honorary distinguished faculty may be utilized by any institution covered by the scheme in any part of the country in accordance with the terms of service under the scheme;
- The positions available under the scheme will be under the **UGC's Pool of honorary distinguished faculty** and be available to all the above mentioned institutions of higher learning, and;

- The appointment of Honorary Distinguished Faculty is purely on the basis of contract appointment, for a maximum period of three years and not exceeding the age of 65 years.

Composition and Size

The total size of the UGC Pool of honorary distinguished faculty would be of 2000 positions. Each university would recommend only 10% of the retiring/superannuated or about to retire teachers to UGC every year.

The UGC Pool of Honorary Distinguished Faculty shall comprise of teachers who have superannuated/retired from any institution covered by the scheme, fulfill the **Eligibility Criteria for Selection** and have been finally selected by the UGC in accordance with the prescribed **Methodology for Selection**.

The total size of the UGC Pool of Honorary Distinguished Faculty shall be 2000 positions. The UGC may annually select around 600 to 700 teachers for the Pool in the first and second years of the Scheme and will take care to ensure from the third year of the Scheme onwards that the membership of the Pool does not exceed 2000 at any given time.

A teacher selected for the Pool shall be a member of the Pool for a maximum period of three years or till the age of 65 years which ever is earlier.

The member of the Pool engaged by any institution shall submit a Self-Appraisal Report (on the Proforma prescribed by the UGC for the purpose) before the end of each year of the engagement through the Vice Chancellor to the UGC. The Report shall specify the work done by the member in the course of the year and shall be considered by the UGC Review Committee, along with the comments thereon of the Chairperson of the Departmental Council/Committee (in the case of a member engaged in a University Department/Institute) or of the Principal (in the case of a member engaged in a College) and of the Vice Chancellor of the University (in both cases). The Committee may recommend either the continuance of the engagement for a further period of one year or the termination thereof.

Honorarium, Other Benefits and Facilities

The member of the Pool shall be entitled, upon engagement by an institution covered by the Scheme, to an Honorarium from UGC funds. The quantum of the Honorarium shall depend on the position from which the member retired and shall be at the monthly rate of Rs.10,000/- for Lecturers/Assistant Professors, Rs.12,000/- for Readers/Associate Professors and Rs.15,000/- for Professors, in addition to their retirement benefits. One of the members was also of the opinion that keeping in view the present salary scale and other benefit given it may be fixed at Rs.15,000 for a Assistant Professor, Rs.18,000 for Associate Professor, and Rs.20,000 for Professor.

In order to attract and secure the services of eminent/talented members from the Pool, the engaging institution may provide, from its own funds, additional benefits, over and above the Honorarium, to the member of the Pool engaged by it.

The engaging institution shall, from its own resources, provide to the member of the Pool engaged by it, residential accommodation (or a suitable HRA component (*in lieu thereof*)), appropriate work space and other infrastructural /academic facilities consonant with the responsibilities assigned to the member by the institution.

Eligibility Criteria for Selection

To be eligible for membership of the Pool, the teacher should have served in one or more institutions covered by the Scheme for an overall period of not less than 20 years and should substantially fulfill the criteria set out below. Selection shall be based on the assessment of achievements/contributions of the teacher in respect of the following points, each of which may be given appropriate weightage on a 100-point Scale with a score of around 75 deemed essential for final selection for the Pool :-

- Academic qualifications over and above the minimum qualifications prescribed by the UGC for the position held by the teacher at the time of retirement.

- Evidence of contribution made in terms of innovations in teaching or development of instructional materials, contributions towards institution building and participation in extension activities.
- Evidence of quality research or analytical contributions, in the form of publications, reports, presentations at national and international Seminars, etc.
- Performance appraisal reports from the institutions(s) served, peers (including referees proposed by the teacher concerned), etc.
- Self-Appraisal Report of the teacher concerned, indicating the anticipated nature of contribution that the distinguished faculty shall be making during the contract period in the academic/institutional building and extension areas

Methodology for Selection

UGC shall :-

- Announce the scheme in the national dailies and its newsletter and there after shall similarly notify around the beginning of each financial year, the number of pool positions likely to be available under the scheme for the following financial year.
- Publish the list of selected candidates with their brief bio-data on the website
- Provide the guidelines to the university for:
 - selecting the candidates
 - appointment to be made by VC or relevant authority
 - Process the request for funding/reimbursing.

University Grants Commission shall make an announcement of available positions in the national dailies each year latest by the end of April.

Selection Process : The process of selection of members to the Pool will be in three successive stages or levels (as shown in the Flow-chart at *Annexure IV*) -

At the First Level, the names of the teachers who have retired in the current and the preceding year, or shall be retiring in the course of the current year, shall be compiled on the basis of invitations/nominations by the HOD/Chairman or members of the Departmental Council or the Dean/members of the Faculty Council (in the case of University teachers) or by the Principal (in the case of College teachers), or on the basis of applications by the teachers concerned, and shall be forwarded to the Vice Chancellor. (**Latest by November 30th**), along with the CV of the teachers concerned, the names of the referees proposed by the latter and their own account of the contributions they propose to make during their contract appointment under the Scheme.

At the Second Level, the Vice Chancellor shall place all the names so received, along with the documents submitted with them, before a Screening Committee consisting of the Vice Chancellor (who will be the Chairman), representative of the State Council of Higher Education (in case it has been constituted) or one senior academic and the senior most Dean of the University. The Screening Committee shall apply the prescribed **Eligibility Criteria for Selection** for drawing up a short list of the retired/retiring teachers up to the maximum limit of 10% of the number of retired/retiring teachers in the University inclusive of its Colleges in the current year. These shortlisted, names along with all the relevant documents and information, shall be forwarded to the UGC, **Latest by January 31st**.

At the Third Level, the UGC Review Committee, which may consist of the Chairman, UGC or his nominee, three academically reputed former Vice Chancellors, two senior academics, two members of the Council and a Member-Secretary from the UGC, shall finalise, **Latest by march 31st**, the names of teachers selected on the basis of the **Eligibility Criteria for Selection**, for inclusion in the Pool of Honorary Distinguished Faculty which would ensure representation from all levels of institutions,

from all regions and states and from all disciplines. These names of honorary distinguished faculty shall be announced in the national Dailies **latest by April 30th**, and shall be put on the UGC Website along with the specialisations/expertise of the members concerned.

Budget Estimate

The total allocation to be made by the UGC for the said program is around Rs.60 crores of which Rs.10 crores for the first year, Rs.20 crores for the second year and Rs.30 crores for the third year.

General

The Vice-chancellor shall submit the performance appraisal report of the member of the Pool engaged by it within a month after completion of the year and before claiming the continuation of the following years grant towards this. The **Honorarium** for the following year shall be released by UGC only after it has duly received the Report of the teacher concerned from the Vice Chancellor.

The committee at the UGC level is only a Review Committee, to limit the number of positions as available in the UGC pool and also ensure that the UGC Pool represents all the levels of institutions, regions, states, disciplines etc. Disciplinary action and check on anomalies, if any, to be ensured by the University Committee. Further transparency of the selection procedure may also be ensured by the UGC as well as the University Committee. The scheme would also provide a mechanism for inter-institutional (between the universities) and intra-institutional (from university to college and vice versa) mobility of the teachers as well as from more advantageous institutions to the less advantaged.

Teachers are to be assigned only the academic work and not any administrative responsibility.

The UGC to work out the details and disseminate the same to all the universities with regard to **who can** and **who can not** apply for this scheme;

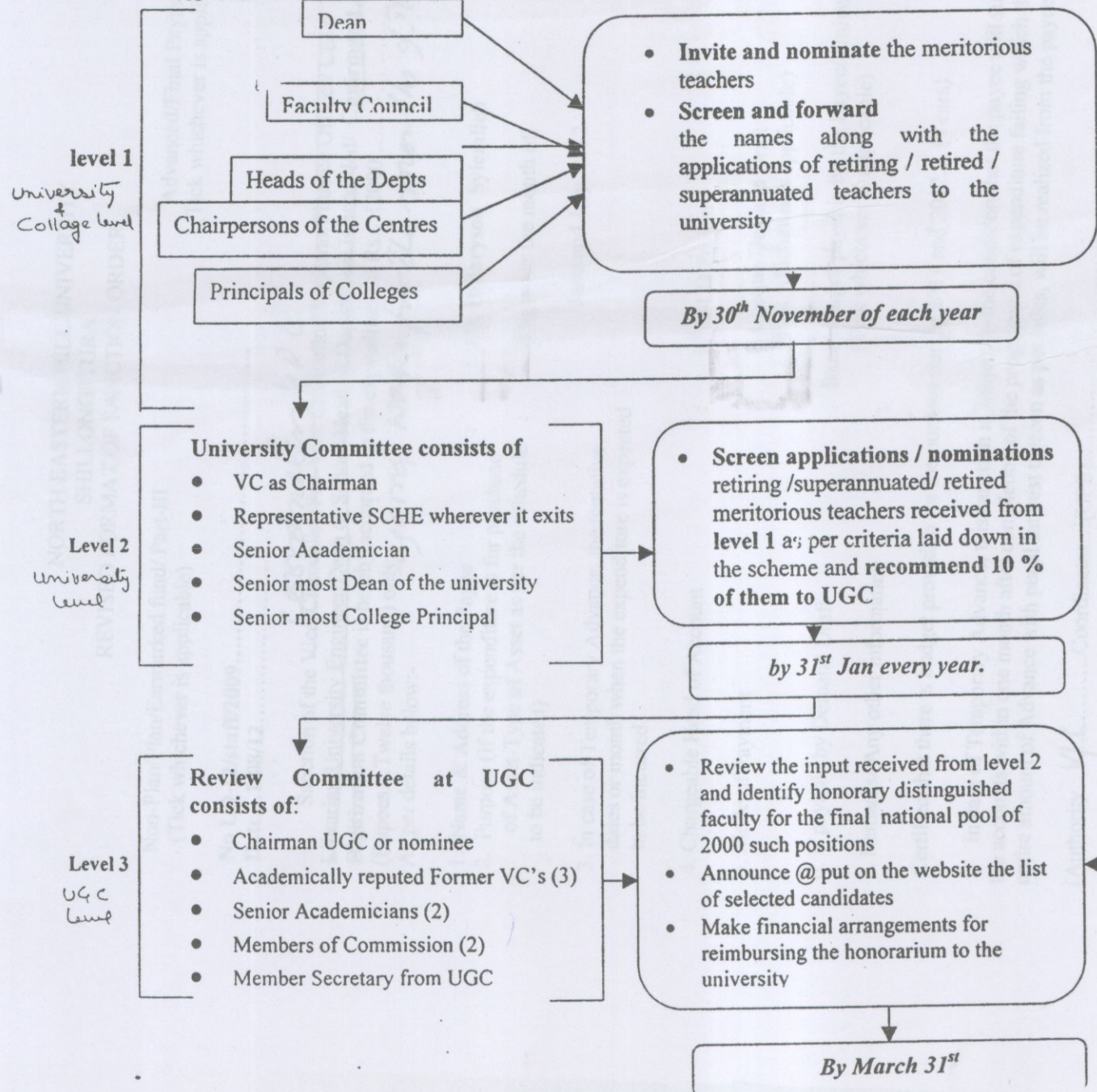
University shall make the payment of honorarium etc. to the hired teachers and UGC to reimburse the same to the university.

The UGC may create a National Data Base of retiring University and College teachers to facilitate the selection of teachers for the position available under the honorary distinguished faculty.

The UGC shall be publishing the list of the selected candidates and also put on its website.

UGC deve [i. Provide guidelines to all Universities]
 [vii. Make an announcement in the National Dailies by August]

Methodology for Selection of Honorary Distinguished Faculty



Broad parameters for UGC Selection of honorary distinguished professors

Institutional

- Number- 10% of the retiring / superannuated teachers of present and previous years
- Academic Merit and Meritorious Performance of the teacher
- Need established by the Institution with proper justification
- Profile of the teacher in terms of behavioral and attitudinal

Individual

- Vision submitted by the teacher regarding the expected role to be performed during the appointment
- Innovation
- Existing Programmes continuity and development

6:2:1(52)