

NORTH EASTERN HILL UNIVERSITY
PERMANENT CAMPUS: MAWKYNROH, UMSHING,
SHILLONG

NO:AC:70-2/CONF/2003- 322

Dated 28th November, 2003

To


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

Subject : Agenda papers for the 70th meeting of the Academic Council.

Sir/Madam,

I am directed to forward herewith a copy of the Agenda papers for the 70th meeting of the Academic Council scheduled to be held on 8th and 9th December, 2003 at 10:00 A.M in the Science Seminar Hall, Permanent Campus, NEHU, Shillong for favour of your perusal.

Yours faithfully,


(JN Nayak)

Deputy Registrar(Conf.)

Encl: a.a.

~~Dr. S. S. Kere
D. V. C.
Tura Campus, NEHU.~~

**AGENDA PAPERS FOR THE 70TH MEETING OF THE
ACADEMIC COUNCIL
TO BE HELD ON 8TH AND 9TH DECEMBER, 2003.**

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1:1(1)

Item I – Confirmation of the Minutes of the 69th meeting of the Academic Council held on 16th & 17th, June' 03.....

The Minutes of the 69th meeting of the Academic Council held on 16th & 17th June' 03 were circulated to all the members for information & comments. While confirming the Minutes, the comments received from Sri B.K.Gupta, Lecturer, Centre for Applied Statistics, NEHU on the item 'Revised Syllabus for BA/B.Sc. General & Honours' is placed as Annexure-'A'.

The matter is therefore placed before the Council for consideration.

1:1(2)

Annexure 'A'

NORTH EASTERN HILL UNIVERSITY
Bijni Complex, Shillong – 793003 (Meghalaya)

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

From
B.K.Gupt
Lecturer,
Centre for Applied Statistics

Dated : 20.11.2003

Sub: Minutes of the 69th Academic Council Meeting Comments

Ref: No. AC:69-3/Conf/2003-106 dated 24th June, 2003.

Sir,

May I draw your kind attention to the Resolution No.AC:69:2003:5:2:(i) which is reproduced below for your ready reference :

“The council considered the Revised Syllabus B.A/B.Sc.General and Honours in Statistics and RESOLVED to approve the same”.

2. The resolution was wrongly recorded in the minutes as mentioned above. After deliberations on the matter in the house, it was resolved that a committee will be constituted to look into the discrepancies in the Revised Syllabus. I, therefore request that the above resolution may kindly be corrected.

Thanking you,

Yours Sincerely
Sd/-
(B.K.Gupt)

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

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

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

<u>S1 No.</u>	<u>Name of the Candidates.</u>	<u>Department.</u>	<u>Degree</u>
1.	Easter Born Sutnga	Education	Ph.D
2.	Sravani Biswas	English	Ph.D
3.	Utpala Sewa	English	PH.D
4.	Dhira Bhowmick	English	Ph.D
5.	T.Jamedi Longkumer	Philosophy	Ph.D
6.	Sachinungla	Philosophy	Ph.D
7.	Basil Pohlong	Philosophy	Ph.D
8.	Lapynshai Syiem	Khasi	Ph.D
9.	Paramita Das	Philosophy	M.Phil
10.	Rollingstone Wankhar	Khasi	M.Phil
11.	Graceful Sohtun	Khasi	M.Phil
12.	Bimol Bora	Geography	Ph.D
13.	Bobby Beingachhi	Geography	Ph.D
14.	Sansing Kharkongngor	Geography	Ph.D
15.	Kiranmay Sarma	Geography	Ph.D
16.	N.Myanbemo Kikon	Anthropology	Ph.D
17.	Mr.Pynsakhiat Law	Botany	Ph.D
18.	Mr.Hiranjit Choudhury	Botany	Ph.D
19.	Ms.Arpaia Kharbangar	Zoology	Ph.D
20.	Mr.Nongthombam D.Singh	Botany	Ph.D
21.	Mr.Richard M.Lyngdoh	Zoology	Ph.D
22.	Ms.LaishramIndira Singh	Bio-Chemistry	Ph.D
23.	Mr.S.Suresh Kumar Singh	Botany	Ph.D
24.	Mr.Krisnha Upadhaya	Botany	Ph.D
25.	Mr.Pradip Kumar Kor	Zoology	Ph.D
26.	Mr.Omarlin Kyndiah	Bio-Chemistry	Ph.D
27.	Mr. Tamal Kumar Guha	Library & Information Science.	Ph.D
28.	Mr.Zumomo Ovung	Economics	Ph.D
29.	Mr.Emilius Nongbri	Economics	Ph.D
30.	Mr.Muhamed Mezbah-ul-Islam	Library & Information Science.	Ph.D
31.	Mr.Libanthung Ngullie	Economics	Ph.D
32.	Mr.T.Temjen	Library & Information Science	Ph.D

(ii).Panel of Examiners for Ph.D/M.Phil.

The respective School Board considered and approved the panel of Examiners in respect of the following Candidates.

<u>S1</u>	<u>No</u>	<u>Names of the Candidates.</u>	<u>Department.</u>	<u>Degree</u>
	1.	Esther Chinnelhing	Education	Ph.D
	2.	Mr.Rockyer L.Nonglait	Khasi	Ph.D
	3.	Joseph T.J	English	Ph.D
	4.	Soma Bhattachariya	English	Ph.D
	5.	Rita Gurung	English	Ph.D
	6.	Mr.Sunil Pio	Geography	Ph.D
	7.	Mr.D.G.Nongkhlaw	-do-	Ph.D
	8.	Ms.K.W.G Rekha Nianthi	-do-	Ph.D
	9.	Ms.Arati Yadav	-do-	Ph.D
	10.	Mr.Ambika Patti	-do-	Ph.D
	11.	Ms.Polly Vanqualine	-do-	Ph.D
	12.	Mr.Kalidas Sharma	-do-	Ph.D
	13.	Ms.B.G Pyngrope	-do-	M.Phil
	14.	Mr.Arduki C Khyriem mujat	-do-	Ph.D
	15.	Mr.Shivaraj Bhattarai	Zoology	Ph.D
	16.	Ms.Mumubai Lakiang	-do-	Ph.D
	17.	Mr.B Zoliana	Physics	Ph.D
	18.	Mr.N Jiban Singh	Mathematics	M.Phil
	19.	Mr. Sekhar Brahma	History	Ph.D
	20.	Mr.Surojit Sengupta	Sociology	Ph.D

5:1 – Statutes, Ordinances, Regulation & Rules.

- (i) Research publications to be assessed by the experts for promotion of Readers to Professors.

The Asstt. Registrar (Estt.II) vice U.O.F.5-1/Estt-II(B)/2000(Pt.File)-476 dt. 21.7.03 forwarded the copy of the letter D.o.No.F.3-3/2000(Ps) dt. 9.7.03 received from Joint Secretary, UGC which is placed as Annexure- 'A'.

The Joint Secretary, UGC vide letter as above inform that the research publication to be assessed by the experts for promotion of Readers to Professors shall pertain to the period between his/her appointment as Reader and the date he/she becomes eligible for promotion as Professor. If on the date of eligibility the candidate did not have required numbers of publications, his /her date of eligibility be sifted to the date he/she becomes eligible after fulfilling all requirements.

The matter is placed before the Council for consideration.

5:1:1(2)

ANNEXURE-'A'

Dr.(Mrs.) Pankaj Mittal
JOINT SECRETARY

PHONE OFF: 23232055
FAX:23319716
E-mail:pmittal@ugc.ac.in

UNIVERSITY GANAT COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110002

D.O.No.F.3-3/2000(PS)

8th July, 2003

Dear Sir/Madam,

I am directed to inform you that the research publications to be assessed by the experts for promotion of Readers to Professors shall pertain to the period between his/her appointment as Reader and the date he/she becomes eligible for promotion as Professor, if on the date of eligibility the candidate did not have required number of publications, his/her date of eligibility be shifted to the date he/she become eligible after fulfilling all requirements.

Yours sincerely,

Sd/-

(Pankaj Mittal)

Vice Chancellor
North Eastern Hill University
P.O.NEHU Campus
Mawkyntroh Umshing, Shillong – 793022

5:1:2(1)

- ii) Farming on Ordinance on guidelines for Award of Honorary Degree.

The earlier Committee appointed by the Chairman as per decision of the 67th meeting of the Academic Council vide its Resolution No: AC: 67:2002:4:(i) to frame an Ordinance for Guideline for Award of Honorary Degrees had in its meeting held on 10th September, 02 framed an Ordinance as per NEHU Guidelines & of which the same was placed in the 69th meeting of the Academic Council wherein, the Council resolved to approve the Committee's suggestions with the following modifications i.e the item (ii) (a) may be read as follows:

'Distinguished persons/Public Institution and Different Academic Bodies of NEHU'.

Further, the Committee appointed as per the decision of the Council in its 69th meeting under the Chairmanship of Prof. Kamal Kumar has submitted its report vide his letter placed as Annexure 'A' & the report as Annexure 'B'.

The matter is placed before the Council for consideration.

5:1:2(2)

NEHU NOTES

ANNEXURE-'A'

28TH October 28, 2003

Prof. Kamal Kumar
Chairman
Committee for farming
Guidelines of Award of Honorary Degree

A committee was constituted to frame the Guidelines for Award of Honorary Degree vide Notification No.DR:Conf/13-5/ORD/99(Vol.II)-150 dt. 22.7.2003. The Committee held its meeting on 29.9.2003 and 8.10.2003. The recommendations of the Committee is enclosed herewith. This may therefore, be placed before the Academic Council for consideration.

Sd/-

(Kamal Kumar)

D.R.(Conference)

MINUTES OF THE MEETING HELD BY THE COMMITTEE FOR AWARD OF HONORARY DEGREE ON 29.9.2003 AT 3.00 P.M. AND 8.10.2003 AT 2.30 P.M IN THE OFFICE CHAMBER OF THE DEPUTY REGISTRAR(CONFERENCE).

The following members were present

1. Prof. Kamal Kumar	Chairman
2. Prof. HK Mukerjee	Member
3. Prof. R Borgohain	Member
4. Dr. JN Nayak	Convenor

At the outset the Chairman welcomed all the members.

The following resolutions were taken.

1. The Degrees of Doctor of Letters (D.Litt.), Doctor of Science (D.Sc.) and Doctor of Law (LL.D.) Honoris causa can be conferred upon persons of proven exceptional merit.
2. There shall be a standing committee constituted by Academic Council which may invite and receive nominations for such awards from distinguished persons, public institutions and Academic bodies of NEHU. The standing committee may devise the criteria for inviting the nominations.
3. The persons nominated should not belong to any of the nominating institutions.
4. Such nominations, after consideration by a panel of experts to be nominated by the Vice-Chancellor, will be forwarded to the Academic Council
5. After consideration by the Academic Council every proposal for conferment of Honorary degree shall be forwarded to the Executive Council, the Chancellor and Visitor for approval.

The meeting ended with a vote of thanks from the Chair.

Sd/-
(Prof. HK Mukerjee)
Member

Sd/-
(Prof. R Borgohain)
Member

Sd/-
(Prof. Kamal Kumar)
Chairman

Sd/-
(Dr. J N Nayak)
Convenor

5:2:1(1)

5:2-Syllabus.

i) Revised B.A(Pass and Hons) Syllabus in Philosophy.

The Chairman BUGS in Philosophy vide his letter No.F.2/Phil/BUGS/2003-499 at. 20.9.03 placed as Annexure 'A' has forwarded the revised B.A(Pass and Honours) Syllabus in Philosophy approved in the meeting of the Board of Under-Graduate Studies in Philosophy on 26.9.03 which is placed as Annexure 'B' for favour of placing before the forthcoming Academic Council.

The matter is placed before the Council for consideration.

5:2:1(2)

SYLLABUS FOR B.A. (PASS) AND B.A. (HONS.)

- PHIL.(PH) 111 : EPISTEMOLOGY AND METAPHYSICS
- PHIL.(H) 122 : INDIAN PHILOSOPHY
- PHIL.(PH) 213 : ETHICS
- PHIL.(H) 224 : HISTORY OF MODERN WESTERN PHILOSOPHY
- PHIL.(H) 235 : PHILOSOPHY OF RELIGION
- PHIL.(PH) 316 : SOCIAL AND POLITICAL PHILOSOPHY
- PHIL.(H) 327 : LOGIC
- PHIL.(H) 3381 : GREEK AND MEDIEVAL PHILOSOPHY
- PHIL.(H) 3382 : EXISTENTIALISM
- PHIL.(H) 3383 : PHILOSOPHY OF MIND

N.B.: The Code: "H" stands for Hons paper. "PH" for Pass and Hons paper. The first digit indicates the year in which the paper is taught; the second digit, the number of paper in the concerned year; the third digit, the overall number of paper in the programme; the fourth digit, if any, the number of the optional papers, of which the students are expected to choose one paper. The common papers have the division of marks: 60 for descriptive part and 40 for objective part.

EPISTEMOLOGY AND METAPHYSICS

- Unit - I : Meaning and Method of Philosophy**
 (a) Meaning of Philosophy (Indian and Western)
 (b) Relation of Philosophy to Science and Religion
 (c) Methods of Philosophy (Plato, Samkara)
- Unit - II : Sources of Knowledge**
 (a) Western : Empiricism, Rationalism and Transcendental Idealism
 (b) Indian : Perception, Inference and Verbal Testimony
- Unit - III : Theories of Truth**
 (a) Coherence
 (b) Correspondence and Pragmatism
 (c) *Pramanyavada*
- Unit - IV : Theories of Reality**
 (a) Monism, Dualism and Pluralism
 (b) Realism and Idealism
- Unit - V : Metaphysical Categories**
 (a) Substance and Causality
 (b) Space and Time

Suggested Readings:

1. John Hospers, *An Introduction to Philosophical Analysis*, Allied Publishers, Delhi, 1980.
2. Bertrand Russell, *Problems of Philosophy*, Oxford University Press, Oxford, 1912.
3. M. Hiriyanna, *The Essentials of Indian Philosophy*, London: George Allen & Unwin, 1985.
4. N.K. Smith (Trans.) *Immanuel Kant's Critique of Pure Reason*, The Macmillan Press Ltd., London, 1973, pp.41-91.
5. K. Lehrer, *Knowledge*, Clarendon Press, Oxford, 1974.
6. J.N. Mohanty, *Classical Indian Philosophy*, New York : Rowman and Littlefield, 2000.
7. D.M. Datta, *Six Ways of Knowing*, Calcutta University Press, 1980 Edn.

5:2:1(4)

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INDIAN PHILOSOPHY

- Unit – I : Introduction**
- (a) Meaning of *Darshana*
 - (b) Distinctive features of Indian Philosophy
 - (c) The distinction between Epistemology and Metaphysics
 - (d) The Orthodox-Hetrodox distinction
- Unit – II : Carvaka, Buddhism and Jainism**
- (a) Materialism
 - (b) *Ksanikavada, Pratityasamutpada*
 - (c) *Anekantavada*
 - (d) *Syadvada*
- Unit – III : Sankhya and Yoga**
- (a) *Prakrti*
 - (b) *Purusa*
 - (c) Evolution
 - (d) *Citta Vrttis and Ashtanga yoga*
- Unit – IV : Nyaya, Vaisesika and Mimamsa**
- (a) *Pratyaksya and Anumana*
 - (b) *Sabda*
 - (c) *Karma and Dharma*
 - (d) Categories (*Padartha*)
- Unit – V : Vedanta of Samkara and Ramana**
- (a) *Brahman, Atman and Jiva*
 - (b) *Maya and Jagat*
 - (c) *Moksa*

Suggested Readings:

1. M. Hiriyana, *Outline of Indian Philosophy*, Blackie & Son Publication, Pvt. Ltd., Delhi, 1983.
2. Sharma, C.D., *Critical Survey of Indian Philosophy*, Motilal Banarasisdass, Delhi, 1975.
3. Raju, P.T., *Structural Depths of Indian Thought*, South Asian Publishers, New Delhi, 1985.
4. Dasgupta, S.N., *A History of Indian Philosophy*, Vol.I, Motilal Banarasisdass, Delhi, 1975.
5. Mahadevan, T.M.P., *Invitation to Indian Philosophy*, Arnold Heinemann Publishers (India) Pvt. Ltd., New Delhi, 1974.
6. Madhavacharya, *Sarvadarsana Samgraha*, translated by E.B. Cowell & A.E. Gough. Cosmos Publications, New Delhi, 1976.
7. Radhakrishnan, S., *Indian Philosophy*, Vol.I and Vol.II, Oxford University Press, Delhi, 1989.

5:2:1:(5)

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ETHICS

- Unit – I : Nature and Scope of Ethics**
(a) Nature of Moral Philosophy
(b) Nature of Moral Judgements
(c) Ethics and Meta-ethics
- Unit – II : Moral Concepts**
(a) Good
(b) Right and Duty
(c) Virtue
- Unit – III : Ethical Theories**
(a) Teleological: Hedonism, Utilitarianism and Perfectionism
(b) Deontological (Kant's Categorical Imperative)
- Unit – IV : Theories of Punishment**
(a) Preventive
(b) Reformative
(c) Retributive
- Unit – V : Indian Ethical Ideals**
(a) Purushartha
(b) Miskama Karma
(c) Ahimsa

Suggested Readings:

1. MacIntyre, Alasdair, *A Short History of Ethics*, Routledge and Kegan Paul, London, 1967.
2. Frankena, William, K., *Ethics*, Prentice Hall of India, New Delhi, 1982.
3. Mobbot, *Introduction to Ethics*, Hutchinson, London, 1969.
4. Sharma, I.C., *Ethical Philosophies of India*, George Allen & Unwin, London, 1965.
5. Kovesi, Julius, *Moral Notions*. Routledge & Kegan Paul, London, 1967.
6. Prasad, R., 'Purusharthas', *Journal of Indian Philosophy*, 1961.
7. Shaida, S.A., *Problems of Ethics*, Spectrum Publications, Guwahati: Delhi, 2003.
8. Mahadevan, T.M.P., *Outlines of Hinduism*, Chetana Limited, Bombay, 1956.
9. Iyer, Raghavan, N., *The Moral and Political Thought of Mahatma Gandhi*, Oxford University Press, 2000.
10. Norman, Richard, *The Moral Philosophers*, Oxford University Press, London, 1998.

PHIL.(H) 224
HISTORY OF MODERN WESTERN PHILOSOPHY

- Unit - I* : **Descartes, Spinoza and Leibnitz**
 (a) Descartes' Method of Doubt
 (b) *Cogito Ergo Sum*
 (c) Spinoza's Substance, Attributes and Modes
 (d) Leibnitz's Monadology
- Unit - II* : **Locke and Berkley**
 (a) Simple and Complex Ideas
 (b) Primary and Secondary Qualities
 (c) *Esse est percipi*
 (d) God and the world
- Unit - III* : **David Hume**
 (a) Impressions and Ideas
 (b) Judgements of Relations of Ideas and Matter of Facts
 (c) Causality
 (d) Rejection of Metaphysics
- Unit - IV* : **Immanuel Kant**
 (a) Conception of Critical Philosophy
 (b) Possibility of Synthetic *a priori* Judgements
 (c) Categories of Understanding
 (d) Phenomena and Noumena
- Unit - V* : **Hegel**
 (a) Hegel's Dialectical Method
 (b) Hegel's Absolutism
 (c) The Self and the Spirit

Suggested Readings:

1. Copleston, F., S.J. *A History of Philosophy*, Burns and Oates Limited, London, Vol.III (1966), Vol.IV (1971), Vol.V (1968), Vol.VI (1968).
2. O'Connor, D.J., *Critical History of Western Philosophy*, New York, The Free Press, 1964.
3. Russell, B., *History of Western Philosophy*, London, Allen & Unwin, 1963.
4. Falckenberg, Richard. *History of Modern Philosophy*, translated by A.C. Armstrong Jr. 'Kosha Publishing' House, Delhi, 1989.
5. Benneth Jonathan, *Locke, Berkeley, Hume; Central themes*, Oxford, 1971.
6. Masih, Y., *A Critical History of Western Philosophy*, Motilal Banarasisdass, Delhi, 1994.
7. Seruton Roger, *A Short History of Modern Philosophy*, Routledge Classics, London, 1995.
8. Errol Harris, *Fundamentals of Philosophy*, George Allen and Unwin Ltd., London, 1969.

PHILOSOPHY OF RELIGION

- Unit - I : Introduction**
 (a) Theology and Philosophy of Religion
 (b) Definition of Religion
 (c) Religion and Science
- Unit - II : Foundations of Religious Belief**
 (a) Reason
 (b) Faith
 (c) Revelation
 (d) Mystic Experience
- Unit - III : The Idea and Proofs for the Existence of God**
 (a) Christianity
 (b) Hinduism (Ishvara) and Buddhism
 (c) Tribal Religions
 (d) Proofs for the Existence of God
- Unit - IV : The Problem of Suffering and Liberation**
 (a) Christianity
 (b) Hinduism
 (c) Buddhism
 (d) Jainism
- Unit - V : Some Socio-Religious Issues**
 (a) Religious Tolerance
 (b) Religious Conversion
 (c) Secularism
 (d) Prayer and Bhakti

Suggested Readings:

1. John Hick, *Philosophy of Religion*, Englewood Cliffs, N.J., 1983.
2. Nielson, K., *Introduction to Philosophy of Religion*, MacMillan,
3. Smart, N., *Religious Experience of Mankind*, MacMillan, London, 1984.
4. S. Miri, "Introduction to the Study of Tribal Religion", in Mawrie, O., *Khasi Milieu*, Concept Publishing Company, Delhi, 1983.
5. W.D. Hudson, *A Philosophical Approach to Religion*, MacMillan, 1974.
6. R.C. Gandhi, *Availability of Religious Ideas*, MacMillan, 1976.
7. S. Miri, *Suffering*, Shimla, AIS, 1976.
8. T.M.P. Mahadevan, *Outlines of Hinduism*, Chetana Limited, Bombay, 1956.

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SOCIAL AND POLITICAL PHILOSOPHY

- Unit - I : Nature of Social and Political Philosophy**
(a) Nature and Scope of Social and Political Philosophy
(b) Social Philosophy and Sociology
(c) Political Philosophy and Political Science
- Unit - II : Major Concepts**
(a) Individual and Society
(b) State and Sovereignty
(c) Nation
- Unit - III : Social and Political Ideals**
(a) Liberty and Equality
(b) Fraternity
(c) Justice
- Unit - IV : Political Concepts**
(a) Democracy
(b) Socialism
(c) Fascism and Anarchism
- Unit - V : Nature of Transformation**
(a) Tradition and Reform
(b) Rebellion
(c) Change and Revolution

Suggested Readings:

1. D.D. Raphael, *Problem of Political Philosophy*, London, MacMillan, 1979.
2. A. Quinton, *Political Philosophy*, Oxford University Press, 1982.
3. P. Laslett, *Philosophy, Politics and Human Society*, Oxford, Basil Blackwell, 1972.
4. Bertrand Russell, *Authority and Individual*, London, Unwin Book Publishers, 1974.
5. M.K. Gandhi, *Hind Swaraj or Indian Home Rule*, Ahmedabad, Navajivan Publishing House, 1978.
6. Chattopadhyaya, D.P., *Societies and Culture*, Bharathia Vindhya Bhavan, Chapter-II.
7. De George Richard, T., 'The Pradox of Violence' *Ethics and Society*, MacMillan, 1968. Article : Marcuse, H., 'Ethics and Revolution'.
8. S. Miri, & J. Pal (Ed.), *Introduction to Social & Political Philosophy*, NEHU Publications, 2002.

5:2:1(9)

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LOGIC

- Unit - I** : **Basic Concepts**
(a) What is Logic?
(b) Sentences, Judgements, Statements and Propositions
(c) Arguments
(d) Truth, Validity and Soundness
- Unit - II** : **Definition**
(a) Kinds of Definition
(b) Concept of Denotation and Connotation
(c) Denotative, Connotative and Ostensive Definitions
(d) Rules for Definition by Genus and Difference
- Unit - III** : **Fallacies**
(a) Fallacy: Formal and Informal
(b) Fallacies of Relevance
(c) Fallacies of Presumption
(d) Fallacies of Ambiguity
- Unit - IV** : **Deduction**
(a) Classification of Propositions and Square of Opposition
(b) The Question of Existential Import
(c) Categorical Syllogism
(d) Laws of Thought : Modern Interpretation
- Unit - V** : **Symbolic Logic**
(a) Logical Constants and Variables
(b) Truth Functions : Negation, Conjunction, Disjunction, Implication, Equivalence
(c) Tautology, Contradictory and Contingent
(d) Techniques of Symbolization and Construction of Truth Tables

Suggested Readings:

1. Irving M. Copi and Carl Cohen, *Introduction to Logic* (Tenth Edition), Pearson Education Pvt. Ltd., Delhi, 2001.
2. L.S. Stebbing, *A Modern Introduction to Logic*, London, Methuen, (Sixth Edition) 1948.
3. M.R. Cohen and E. Nagel, *Introduction to Logic and Scientific Method*, Allied Publishers, Pvt. Limited, New Delhi, Second Edition, 1972.
4. O'Conner, D.J. and Basson, A.H., *Symbolic Logic*, Oxford University Press, Fourth Edition, 1981.
5. M.R. Cohen and E. Nagel, *Introduction to Logic*, Routledge & Kegan Paul Ltd., London, 1966.

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PHIL.(H.) 3381

GREEK AND MEDIEVAL PHILOSOPHY

- Unit - I* : **Early Greek Philosophy**
(a) Thales and Pythagoras
(b) Democritus and Anaximander
(c) Parmenides, Heraclitus and Zeno
(d) Protagoras and Socrates
- Unit - II* : **Plato**
(a) Theory of Knowledge
(b) Theory of Forms
(c) Theory of Soul
(d) Idea of the Good
- Unit - III* : **Aristotle**
(a) Refutation of Plato's Theory of Ideas
(b) Categories
(c) Causation
(d) Theory of the Soul
- Unit - IV* : **St. Augustine**
(a) Theory of Knowledge
(b) The Problem of Evil
(c) Freedom of the Will
(d) Beatitude
- Unit - V* : **St. Thomas Aquinas**
(a) Theory of Knowledge
(b) Essence and Existence
(c) Philosophy and Theology
(d) Creation and Causation

Suggested Readings:

1. F. Copleston, *History of Philosophy*, Vol II & IV, Burns and Oates Ltd., London, 1993 Edn.
2. Burnet, J., *Greek Philosophy from Thales to Plato*, London and New York : Macmillan, 1960.
3. Stace, W.T., *A Critical History of Greek Philosophy*, London, 1970 Edn.
4. Russell, B., *History of Western Philosophy*, London: George Allen & Unwin Ltd., 1957.
5. Windleband, *History of Philosophy*, Harper & Raw Publishing, New York, 1958.
6. Frank Thilly, *A History of Philosophy*, Central Publishing House, Allahabad, 1985.

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PHIL.(H) 3382

EXISTENTIALISM

- Unit - I** : **Salient Features**
(a) Theistic and Atheistic Existentialism
(b) Existence Precedes Essence
(c) Existentialism as a Movement
(d) Existentialism and Humanism
- Unit - II** : **Nietzsche**
(a) Transvaluation of Values
(b) Idea of the Superman
(c) Will and Power
- Unit - III** : **Kierkegaard**
(a) Faith, Subjectivity and Truth
(b) Dread
(c) Stages of Life
- Unit - IV** : **Heidegger**
(a) Being
(b) Dasein : Understanding and Truth
(c) Being-in-the-World
(d) Authenticity
- Unit - V** : **Sartre**
(a) Being-in-Itself and Being-for-Itself
(b) Freedom
(c) Authenticity
(d) Bad Faith

Suggested Readings:

1. Mary Warnock, *Existentialism*, Oxford University Press, 1970.
2. Blackham, H.J., *Six Existentialist Thinkers*, Routledge and Kegan Paul, London, 1952
3. Kierkegaard, *Philosophical Fragments*, Princeton University.
4. Copleston, F., *Existentialism and Modern Man*, Oxford Blackfriars, 1943.
5. Greene, Marjorie, *Dreadful Freedom : A Critique of Existentialism*, The Chicago University Press, 1948.
6. Badra, M.K., *A Critical Survey of Phenomenology and Existentialism*, Indian Council of Philosophical Research, 1990.
7. Nietzsche Friedrich, *The Will to Power*, Trans. W. Kaufman and R.G. Hollingdale, Edt. W. Kaufman, London, 1968.
8. Hollingdale, R., *Nietzsche, The Man and his Philosophy*, London, 1964.
9. Danto A.C., *Nietzsche as Philosopher*, New York, 1965.

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PHIL.(H) 3383
PHILOSOPHY OF MIND

- Unit - I* : **Introduction**
(a) The Problem of Mind
(b) Philosophy of Mind and Psychology
(c) Conscious and the Unconscious
- Unit - II* : **Theories of Mind**
(a) Mind-Body Dualism
(b) Behaviourism
(c) Brain-Mind Identity theory
(d) Functionalism
- Unit - III* : **Mind and Knowledge**
(a) Feelings and Sensations
(b) Emotions and Volitions
(c) Will
(d) Self-knowledge and Knowledge of Others
- Unit - IV* : **Indian Theories Consciousness**
(a) Carvaka
(b) Buddhism
(c) Jainism and Vaisesika
(d) Vedanta
- Unit - V* : **States of Consciousness**
(a) *Swapna*
(b) *Jagrata*
(c) *Susupti*
(d) *Turiya*

Suggested Readings:

1. Jerome A. Shaffer, *Philosophy of Mind*, Prentice Hall of India Private Limited, New Delhi, 1982.
2. Gilbert Ryle, *The Concept of Mind*, Penguin Books, Baltimore, 1949.
3. S. Radhakrishnan, *Indian Philosophy*, Vol.I & II, George Allen & Unwin Ltd., London, 1971.
4. P.T. Raju, *Structural Depths of Indian Thought*, South-Asian Publishers, New Delhi, 1985.
5. T.M.P. Mahadevan, *Invitation to Indian Philosophy*, Arnold Heinemann, New Delhi, 1974.
6. Colin McGinn, *The Problems of Consciousness : Essays towards a Resolution*, Blackwell, Oxford, 1991.
7. Paul Edwards (Ed.), *The Encyclopedia of Philosophy*, The Macmillan Company, New York, 1967. (Articles titled 'Behaviourism', 'Emotion and Feeling', 'Materialism', 'Mind-Body Problem', 'Other Minds', 'Personal Identity').
8. Alasdair C. MacIntyre, *The Unconscious : A Conceptual Analysis*, Humanities Press, New York, 1958.
9. *Eight Upantsads*, Vol.II, Trans. Swami Gambhirananda, Advaita Ashram, Pithoragarh, 1992.

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(ii) Revised Syllabus in Computer Application.

Prof. R N Sharan, Department of Bio-Chemistry vide letter dt. 14.10.03 placed as Annexure- 'A' has forwarded the Minutes of meeting of BUGS in Computer Application held on 8.4.03 which is placed as Annexure 'B' and the revised Syllabus in Computer Application is placed as Annexure 'C'.

The matter is therefore placed before the Council for consideration.

5:2:2(2)

Annexure-'A'

NORTH EASTERN HILL UNIVERSITY
NEHU Campus, Shillong- 793 022(Meghalaya)

Department of Biochemistry

R.N.SHARAN PH.D

Professor

Shillong

October 14, 2003

The Deputy Registrar (Conference)
NEHU, Shillong-22.

Sub: Minutes of BUGS-Computer application meeting and revised syllabus

Dear Mr. Nayak,

I am enclosing the minutes of the BUGS – CA meeting and a copy of the revised syllabus for your record and necessary action. The committee has approved the revised syllabus. The Principal, SEMC has sent me back the syllabus after incorporating the changes suggested by the committee only last week – hence the delay.

The following actions should be taken immediately:

1. Minutes be circulated to all members for the comments, if any.
2. The revised syllabus be placed in the forthcoming Academic Council meeting for its consideration and approval.
3. Agenda item 4(Any other matters) in the minutes needs special attention of the VC and Chairman, AC. Please place this perusal. If he desires, I can discuss the matter with him so that a decision can be arrived on whether or not this matter be placed in the forthcoming A.C.

Yours sincerely,

Sd/-

R.N.SHARAN

Enclosure :

1. Original minutes of the committee;
2. A copy of the revised syllabus approved by the BUGS.

ANNEXURE-'B'

NORTH EASTERN HILL UNIVERSITY, SHILLONG
Board of Under Graduate Studies –Computer Application

Minutes of meeting held on April 08, 2003

1. The following were present:
 - a. Prof. Gautam Brua, Director, IIT, Guwahati,
 - b. Prof. Karmeshu JNU, New Delhi.
 - c. Fr. Joseph Nellanatt, St. Anthony's College, Shillong.
 - d. Mr. B.Roychoudhury, - do -
 - e. Mr. S.Nagi, St.Edmund's College, Shillong.
 - f. Prof. P.K.Barua, Principal, SEMC, Shillong(special invitee)
 - g. Prof. R.N.Sharan, NEHU, Shillong, in the Chair.
2. The Chairman extended warm welcome to all members present. He extended special thanks to the two very distinguished external experts who were kind to spare time to attend the meeting despite their busy schedules.
3. **Agenda Item 1** – Revision of BCA syllabus : The Chairman informed the members that UGC did not prepare any national curriculum for BCA. Therefore, on his advice, the Principal, SEMC in consultation with his faculty members, prepared a draft –revised syllabus essentially based on the running syllabus and the experience gained during service of the course. The Principal, SEMC read out a brief report on the exercise done. Following this, the members deliberated at length over the syllabus. Due to dynamism in IT industry and keeping in view the emerging trends in the field and employment opportunity for the graduates, the external experts suggested major reorganization of papers in both pass and honours course as well as in the elective and core components in different years. The members accepted this arrangement of papers unanimously. The course content of each paper was carefully examined and a through revision was done in light of current IT scenario. The BUGS approved the revised syllabus. The final corrected syllabus shall be prepared by Principal, SEMC, in consultation with the Chairman, for onward transmission to AC. The syllabus approved by the BUGS – CA is enclosed as Annexure I.
4. **Agenda Item -2-** Panel of paper setter and examiners : The panel was approved with minor modifications(Annexure II).
5. **Agenda Item-3-** Review of conduct of course: The Principal, SEMC presented a report on the conduct of the BCA course. Prof. Karmeshu suggested holding of regular seminars during the course with a starting frequency of at least once every six months for the benefit of students. Attempts should be made to get experts in the field to deliver seminars and its frequency should be increased. The board accepted the suggestion. The Principal, SEMC shall implement to proposal suitably.

6. Agenda item-4- Any other matters:

(A) Bachelor examination: Both the external experts were of the opinion that marks obtained in two pass or subsidiary courses should also be considered along with the marks obtained in the honours papers for declaration of the final result. They opined that otherwise, students are indirectly encouraged to pay only limited attention to the two subsidiary courses in order to clear them. The Chairman explained that the pattern was based on the ordinances of NEHU and applies to all other subjects at the Bachelor level. Perhaps, the BUGS was not empowered to take a decision on it. However, the board recommended that this matter to be brought to the notice of higher academic bodies for a general discussion whether or not the total marks obtained by a candidate in honours+ two subsidiary courses should form the basis of the final result. This will encourage students to pay appropriate attention to all three courses at Bachelor's level. The external experts informed that many Universities in India followed this practice.

(B) Master in Computer Application: The question of MAC course not being available under NEHU came for a discussion. The Principal, SEMC pointed out that unavailability of the professional course of Master's level in NEHU is disadvantageous to BCA graduates of NEHU. Some members, including external experts, did not understand the rationale of colleges not being permitted by NEHU to offer Master level degrees such as, MCA. The Chairman again explained (a) the provisions of ordinances of NEHU, which restricts award of Masters' degree to University departments or constituent colleges only and (b) the fact that NEHU did not have a PG department yet. However, both Prof. Barua and Prof. Karmeshu cited several examples from other Universities where selected colleges have been allowed to offer Master's degrees in some subjects after a very thorough scrutiny by the concerned University (e.g., Cotton College, Guwahati under Guwahati University; Institute of Telecom and College of Military Engineering offering M.Tech. courses under JNU, etc.). The experts were of the view that NEHU should start appropriate department for MCA teaching to encourage IT development in the state. The Chairman informed the members that the issue of starting a department of IT was under consideration of NEHU. Since both these points involved discussion in higher academic bodies of NEHU, the Chairman agreed to bring the matter to the attention of University for further discussion.

7. The meeting ended with a vote of thanks from the chair.

Sd/-

(R.N.SHARAN)
Chairman

Shillong, the 10th April 2003

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Annexure 'C'

NORTH-EASTERN HILL UNIVERSITY (N.E.H.U.) : SHILLONG
(A Central University)

DRAFT
SYLLABI

for

BACHELOR OF COMPUTER APPLICATION (B.C.A.)

(A THREE YEAR DEGREE COURSE)

Effective from session 2004-2005

PREFACE

In today's world of Information Technology, the need for computer professionals is immense. The B.C.A. course has been designed to meet such requirement for professionals in computer applications in different sectors. The emphasis of the course is more on programming and software applications.

Practical Record Book: In the papers involving practicals, a standard set of problems have been listed. These and/or others similar to them are to be done as practical work and submitted by the student in a laboratory record book. For each problem, the following sections are to be recorded:

- Glossary of variables
- Pseudocode and/or flowchart
- Source code
- Sample input/output screens

Internal Assessment: The marks for internal assessment specified for each paper is to be given on the basis of :

- Tests held during the year(for both theory and practical)
- Assignments submitted and/or seminars given
- Laboratory record book in the papers applicable

A record of this may be maintained by the college.

Theory Examination: For the theory papers, the questions should be designed to test the candidates' ability to

- Understand a program segment and give a brief description of what it does
- Debug a small program containing logical /syntactical errors
- Write the output of a program given a set of input values
- Modify a small program
- Drawing/modifying flowcharts etc.

(If *state true or false* questions are given, the reasons for the choice should also be asked to prevent guess work)

Practical Examination: For the examination in practicals, the problems need not be restricted to those given in the syllabus. However, they should be of similar standard. For evaluation of practical examination, the following points may be considered:

- | | | |
|---|-----------|-----|
| • Logic (pseudocode and/or flowchart, sourcecode, syntax) | Weightage | 60% |
| • Screens | Weightage | 10% |
| • Completion | Weightage | 30% |

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B.C.A. COURSE STRUCTURE

The BCA (Bachelor of Computer Application) is a 3-year Integrated Course. The course is divided paper-wise as follows :

HONOURS COURSE

Electives of Honours Papers	Core Honours Paper
<u>First Year</u> Digital Computer Fundamentals	<u>First Year</u> Programming in C, Introduction to C++ & Object Oriented Programming
<u>Second Year</u> Database Management System	<u>Second Year</u> Data Structure Computer System Architecture
<u>Third Year</u> Financial Accounting and Business Software	<u>Third Year</u> Computer Networks Internet and Web Technology

Pass Course

The Following are the Pass Course Papers :

1. Mathematics – I
2. Basic Electronics
3. Statistical Techniques
4. English (as of B. Com. English Paper II)
5. Computer Oriented Numerical Methods
6. Operating System and Introduction to UNIX
7. Mathematics – II
8. System Analysis and Design
9. Man & Environment (as in other Undergraduate Courses)
10. Project

Year-wise distribution is given in the table that follows :

B.C.A. COURSE STRUCTURE (Year-Wise)**First year**

Paper	Name of Papers	Theory	Practical	Internal Assess.	Pattern of Examination
1.	Mathematics - I	80		20	
2.	Digital Computer Fundamentals	80		20	
3.	Programming in C, Introduction to C++ & Object oriented Programming	50	40	10	
4.	Basic Electronics	50	40	10	
5.	Statistical Technique	50	40	10	

Second Year

6.	English	100			Same as B.Com English Paper -II
7.	Database Management System	50	40	10	
8.	Data Structure	80		20	
9.	Operating System and Introduction to UNIX	70	20	10	
10.	Computer Oriented Numerical Methods	50	40	10	
11.	Computer System Architecture	80		20	
12.	Mathematics - II	80		20	

Third Year

13.	Financial Accounting & Business Software	80		20	
14.	System Analysis & Design	80		20	
15.	Computer Networks	80		20	
16.	Internet & Web Technology	50	40	10	Common to all Bachelor Degree Courses
17.	Man & Environment	100			
18.	Project		80	20	
Grand Total:		1210	340	250	= 1800

DETAILED SYLLABUS*First Year***PAPER 1: MATHEMATICS – I****Unit-1****Functions and graphs**

Functions and graphs: Real valued functions such as polynomials, rational functions, logarithmic functions, exponential functions, hyperbolic functions, limits $\varepsilon - \delta$ definition, standard theorems on limits, standard limits. Continuity intuitive idea, $\varepsilon - \delta$ definition, theorems on sum, difference, product, quotient and composite of continuous functions. Discussion on continuity of the functions mentioned earlier and their composites. Properties of continuous functions on closed, bounded intervals : (statements with illustration only of the following : Boundedness, Intermediate value theorem, Uniform continuity :

Unit-2**Differential Calculus**

Derivatives of real valued functions on intervals : definition; derivative as a rate measurer, derivative as the gradient of tangent. Theorems on sum, difference, product, quotient and composite of differentiable functions. Working out the derivatives of the common functions mentioned in Unit 1; Review of methods of differentiation. Differentials. Successive differentiation; Leibnitz's theorem. L. Hospital's Rule (statements only with applications).

Unit-3**Integral Calculus**

Antiderivatives : Review of the standard methods; integration by parts and by partial fractions. Integral of a continuous function as the limit of Riemann Sum (including sums arising out of unequal distribution of interval); examples of evaluation of integrals from the definition. Statements with illustration of the Properties of definite integral, evaluation of integrals using these properties.

Reduction formulae for $\int \sin^n x \, dx$, $\int \cos^n x \, dx$, $\int \tan^n x \, dx$, $\int e^{ax} \sin mx \, dx$, $\int \sin^n x \cos^m x \, dx$. Improper integrals, convergence and evaluation from definition.

Unit-4**Sequences of Real Numbers**

Sequences of real numbers : definitions of bounded sequences, convergent sequences, limit of a sequence, monotonic sequence; examples. Proof of monotonic and bounded sequence is convergent (using completeness of \mathbb{R} as an axiom). Cauchy sequence. Evaluation of limits of standard sequences by Riemann integrals, Infinite series of real numbers : partial sums, convergent series, comparison test, ratio test, root test. Absolute convergence. Leibnitz's theorem for alternating series. Power series. Radius of convergence (without the notion of limit superior).

Unit-5**Differential Equations**

Definition and formation of differential equations, Equations of first order and first degree : Separation of variables, homogenous equations, Linear equations, Bernoulli's equation, exact equation. Equation of first order but not of first degree : equation solvable for P, equation solvable for y or x, Clairaut's form. Linear equations with constant coefficients.

Distribution of Mark :

Theory	: 80 marks	Exam 3 hrs. Duration
Unit 1 to 5	: 16 marks each	
Internal Assessment	: 20 marks	

Instruction for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Book for study :

- 1) Ganguly & Chatterjee, *Text-Book of Engineering Mathematics*, 7th Edition, Kalyani Publishers, 2001.

Reference :

- 2) Das and Mukherjee, *Differential Calculus*, 15th Edition, U.N. Dhar & Co., 2002.
- 3) Das and Mukherjee, *Integral Calculus*, 14th Edition, U.N. Dhar & Co., 2001.
- 4) Shanti Narayan, *Differential Calculus*, 12th Edition, S. Chand & Co., 2000.
- 5) Shanti Narayan, *Integral Calculus*, 9th Edition, S. Chand & Co., 2002.
- 6) Raisinghania, M.D., *Differential Equations for B.Sc.*, 5th Edition, S. Chand & Co., 2000.

PAPER 2 : DIGITAL COMPUTER FUNDAMENTALS**Unit-1**

Number Systems: Bit, Byte, Nibble, Word, Binary Number, Binary Addition, Binary Subtraction, Use of complements to represent negative Numbers, conversion of binary fraction to a decimal fraction and vice versa, BCD, Hexadecimal number system, Octal number system, Conversion of numbers form one number system to another.

Unit-2

Digital Devices : Logic Gates (AND, OR, NOT, NAND, NOR, XOR and XNOR), Realization of other logic functions using NAND / NOR gates.

Logic Design : Boolean Algebra : AND, OR, NOT operations, Boolean variables, Operations and Functions, all Postulates and all Theorems of Boolean Algebra, Simplification of Boolean expressions by algebraic method, Dual and Complement of a Boolean expression, Sum Of Products And Product Of Sums Forms Of Logic expression, Canonical form of a logic expression, Conversion of Sum of Products Expressions into Canonical form, Conversion of Product of Sums Expressions into Canonical form.

Boolean Expression (in Some Of Product Form and Product of Sums Form) from a given truth table, Proof for obtaining expression in Products of Sums form from a given truth table, implementing logic expression with logic gates (logic expression in Sum of Product form and logic expression in products of Sums form).

Unit-3

Minimum Boolean Expression : Minimization using Karnaugh map for two, three and four variables, Prime Implicant, Labeling of Karnaugh map squares, Alternative way of representing Sum Of Products expression, Realisation of Sums expression from Karnaugh map, Karnaugh map for product of Sums expression, Don't Care Conditions, Quine, Mc Cluskey method.

Combinational and Sequential circuits : Arithmetic Circuits : Half - Adder , Full-Adder.

Flip -Flops : R-S flip flop, Clocked R-S flip flop, J-K flip flop, Preset and Clear, Triggerring of flip flops, Master - Slave J-K flip flop, D flip flop, T flip flop, Latches.

Unit-4

Registers : Shift Registers, Buffers / Drivers, and Encoders, Decoders.

Counters : Asynchronous or Ripple Counters, Synchronous or Parallel counters, Mod - 3 and Mod - 6 and Mod 12 counters, Mod - 5 and Mod - 10 (Decade BCD) Counters, Presettable, Upcounters, Downcounters, Up / Down Counters, Shift (Johnson or Amoebius) Counters.

Digital Multiplexer or Data Selectors, Digital Demultiplexers or Decoders.

Unit-5

Memory Devices: Main Memory, Secondary Memory, Backup Memory, Cache Memory. Semi conductor Memory RAM, ROM, PROM, EPROM, EEPROM, (non volatile flash memory), Non-Volatile RAM. Magnetic Memory-Floppy Disks (Cautions in handling, Working principle, Storing capacity, Formatting of Floppy Disks, Error Checking). Hard Disks, Magnetic Tapes (Numerical for Floppy Disks and Magnetic Tapes). RAM disks, Optical disks (CD-ROM, WORM & Erasable Optical Disks). Magnetic Bubble Memory, Direct Access Storage Devices, Destructive Non-Destructive Readout, Programme Data Memory.

Distribution of Marks :

Theory	: 80 marks	Exam 3 hrs. Duration
Unit 1 to 5	: 16 marks each	
Internal Assessment:	: 20 marks	

Instruction for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Book for study :

- 1) Mano, M. Morris, *Digital Logic and Computer Design*, 3rd Edition, Prentice Hall India, 2002.

Reference :

- 2) Malvino & Leach, *Digital Computer and Applications*, 4th Edition, Tata Mc-Graw Hill Company, 2001.
- 3) Hayes, J.P., *Computer Architecture and Organization*, 3rd Edition, Tata Mc-Graw Hill, 2002.
- 4) Hamacher, V. Carl, *Computer Organization*, 4th Edition, Tata Mc-Graw Hill Company, 2001.
- 5) Barte, Thomas C., *Digital Computer Fundamentals*, 6th Edition, Tata Mc-Graw Hill, 2002.
- 6) Nagpal, D.P., *Computer Fundamentals: Concepts, Systems & Applications*, Wheeler Publishing, 2001.

PAPER 3 : PROGRAMMING IN C, INTRODUCTION TO C++ AND OBJECT ORIENTED PROGRAMMING.**Unit 1**

C Fundamentals : The C character set, identifies and key words, Data types, constants, variables and arrays, declarations, expressions, statements, symbolic constants, Operators and Expressions, Arithmetic operators, unary operators, relational, logical and bitwise operators, assignment operators, library functions. I/O functions, preliminaries, getch, getche, getchar, putchar, scanf, printf, gets, puts. Control statements : Preliminaries, while, do .. while, for, if .. else, switch, break, continue, goto statements
The C Preprocessor : Macro Expansions, Macro with arguments and Macro Versus function, File Inclusion, Conditional Compilation, # if and # elif directives, Miscellaneous directives, #undef and #pragma directives.

Unit 2

Functions : A brief overview, defining a function, accessing a function, passing arguments to a function, specifying arguments data types, function prototypes, recursion, call by value, call by reference.

Program Structure : Storage classes, Automatic, register, External, Static Variables.

Arrays and Pointers : Defining an array, processing an array, passing array to a function multidimensional arrays, arrays and strings, pointer declarations, passing pointer to a function, pointer and one dimensional arrays, Operating on pointers, pointers and multidimensional arrays, arrays of pointers, passing functions to other functions, pointer to function, functions returning pointers.

Unit 3

Structure and Unions : Defining a structure, processing a structure, users defined data types, structures and arrays, structures and pointers, passing structures to a function, self referential structures, bit fields in structures, Union, Union of structures.

Data files : File opening modes, Formatted console I/O functions, unformatted console I/O functions, checking file opening error, closing data files; command line parameters, Enumerations, typedef.

Unit 4**Section (a):**

Object Oriented Programming : Objected Oriented Programming Approach : Objected Oriented paradigm, corporate paradigm, characteristics of Object Oriented Languages : Object, Classes, inheritance, reusability, creating new data types, polymorphism, and overloading. **C++ Programming basis** : Structure of the C++ program, comment statement; variable declaration, operators (arithmetic, relational and logical), header files, CIN, and COUT statements. **Manipulators** : setw and endl, basic statements (while, do .. while, for, if ... else, switch, break, continue and goto). Type conversion, Structures, **Functions** : function overloading and inline functions.

Section (b):

Objects and Classes : Class specifier, data hiding : private and public member variables, member functions : member functions with class specifier, scope resolution, member function defined outside the class, object as function arguments, returning objects from functions, constructors, destructors, overloaded constructors and destructors, copy constructors, structures and classes.

Unit 5**Section (a):**

Inheritance : Defining derived class, Access specifier : public, private and protected. **Derived class constructors**, public and private inheritance, access combination, class and structures, levels of inheritance, multiple inheritance, ambiguity in multiple inheritance, hieritcal inheritance, virtual base classes, abstract classes, classes within classes.

Section (b):

Operator overloading : defining operator overloading (OPERATOR keyword), overloading unary operator, operator arguments, operator return values, operator return objects, overloading binary operators, overloading with comparison and arithmetic assignment operators, manipulation of strings using operators.

Practical :**Unit 1 (For C)****Write a program**

1. for swapping the two numbers without using another variable.
2. for calculating simple interest.
3. for converting Fahrenheit into centigrade degree vice versa.
4. for calculating the sum of the digits of the given number.
5. for reversing the digits of a number and to determine whether the original and reversed numbers are equal or not.
6. for finding whether the given year is a leap year or not (use % modulus operator).
7. for generating prime numbers (use nested loops, break and continue).
8. for generating Fibonacci numbers.
9. for finding the factorial of the given number.
10. for finding the value of the SINE series.
11. for generating PASCAL triangle and mirror image of the triangle.

```

      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1

```

12. for sorting the elements of an array by using Bubble sort.
13. for finding the biggest and smallest number and its position in the given array.
14. for the addition, subtraction and multiplication of matrices using function.
15. for finding the sum of the row, column and diagonals of the given matrix.
16. for finding the largest number of the given matrix using function.
17. for sorting all the elements of a matrix using function.

Unit 2 (For C)

1. to read and display the text by using pointers and function.
2. to read the text and convert the case of the text.
3. to check whether the given string is palindrome or not.
4. for searching a pattern in a given text.
5. for writing a given number in words using function.
6. for displaying the text in a given file (TYPE command in DOS)
7. to copy the contents of one text to another text file.
8. to merge the two text file to another text file.
9. to count the number of characters, lines and words.
10. for pattern searching in a text file.
11. to copy a file by converting lower case text file to upper case text file using command line.
12. for sorting the given 10 names by using arrays of pointers.
13. to create records of students with marks.
14. display a particular record.
15. edit a particular record.
16. to clear the screen by using screen memory.
17. to generate a window by using screen memory and edit text within the window.
18. for scrolling the text file within the window.

19. to check the key status (insert, capslock, numlock, scroll lock, Alt pressed, Ctrl pressed, Left & Right Shift pressed).
20. for finding the memory size using call to ROM – BIOS function.

Unit 3 (For C++)

1. Simple program to test
 - (a) Function Prototype.
 - (b) Function Overloading.
 - (c) Defaults Arguments.
 - (d) Inline Functions.
2. Create an Object

Data member	
Member Function	integer variable. to set a data. to display a data.

Create an object with constructors and destructors to manipulate the string.

Data Member	
Member function	character array. Read the string. Display the string. Length of the string. Extract left n characters. Extract n characters from the m th position.
3. Pay Roll Processing using inheritance.

Distribution of Marks :

Theory	: 50 marks	Exam 2 hrs. Duration
Units 1 to 5	: 10 marks each	
Practical	: 40 marks	Exam. 3 hrs. Duration
C	: 25 marks	
C++	: 15 marks	
Internal Assessment	: 10 marks	

Instruction for the Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instruction for Paper Setter (Practical) :

There shall be two questions from "C" and "C++" and each to contain two sub-divisions.

Core Books for study :

- 1) Gottfried, Byron S., *Theory and Practice of Programming with C*, Schaum's Outline Series, 3rd Edition, McGraw-Hill, New Delhi, 2001 (for Unit 1, 2 & 3 Section(a)).
- 2) Lafore Robert, *Object Oriented Programming in Turbo C++*, 4th edition, Galgotia Publishing Co., New Delhi, 2002 (For Unit 3 Section (b)).
- 3) Lafore, Robert, *C Programming Using Turbo C++*, 5th Edition, BPB Publications, 2001.

Reference :

- 4) Balagurusamy, E., *Programming in ANSI C*, 2nd Edition, Tata McGraw-Hill, 2001.

- 5) Rajaraman, V., *Computer Programming in C*, 4th Edition, Prentice Hall India, 2002.
- 6) Balagurusamy, E., *Object Oriented Programming with C++*, 5th Edition, Tata McGraw-Hill, 2001.
- 7) Barkakati, *Object Oriented Programming*, 6th Edition, Prentice Hall India, 2002.
- 8) Kernighan, B., Ritchie, D., *The Programming Language(ANSI C Version)*, 4th Edition, Prentice Hall India, 2001.

PAPER 4 : BASIC ELECTRONICS

Unit 1

Structure of the atom: electron, proton and neutron. Flow of charge, Basic components (resistor, capacitors and inductors), conductors, semiconductors and insulators, Electric current and voltage, Linear circuits, resistance, reactance, impedance and admittance L-C-R circuits, T- and π -networks, ladder network, bridge network.

Unit 2

Semiconductors, energy band diagram in solid, Intrinsic semiconductors, carriers (electron-hole), concentrations in intrinsic semiconductor, Fermi level of intrinsic semiconductor, n- type and p-type semiconductors. Fermi level in extrinsic semiconductor .

Unit 3

Junction diode, unbiased p-n junction, biased p-n junction - forward and reverse biasing volt-ampere characteristics of p-n junction diode. Break down diode, Zener diode, light emitting diode (LED)

Unit 4

Junction transistors, mechanism of amplification in a transistor, gain in amplifier, modes of operation in transistors, Static characteristics of a transistor, α and β parameters, two part representation of a transistor and hybrid parameters, Field effect transistor (FET) and Junction field effect transistor (JFET)

Junction diode circuit, dynamic characteristic Half wave and Full wave rectifiers, Bridge rectifier, Ripple factor, efficiency, and filter circuit of rectifiers.

Unit 5

Transistor amplifier, Basic voltage and power amplifier, input & output characteristics, single stage amplifier, R-C coupled amplifier (qualitative), Transformer coupled class A power amplifier (qualitative). Feed back amplifier (General theory), Oscillators, principle of feed back oscillators, Tuned collector oscillator (qualitative), Crystal oscillator (qualitative), Modulation and Demodulation. Operational amplifier (OP Amplifier).

Practical :

1. Thevenin's and Norton's equivalent circuits.
2. L-C-R-Q measurement.
3. Draw voltage-current characteristic of a p-n junction diode and find the dynamic resistance of the junction diode at a certain d. c. voltage.
4. Draw input and output characteristics of a transistor in C-B mode.
5. Using a rectifier, compare the modes of simple power supply before and after the use of a filter.
6. Draw input and output characteristics of a transistor in C-E mode.
7. Draw the output characteristics of a transistor in C-E mode and find its current gain (h_{fe}).
8. Draw the output characteristics of a transistor in C-E mode and find the output admittance (h_{oe}).
9. Adder-subtractor using OP AMP.

Distribution of Marks :

Theory	: 50 marks	Exam. 2 hrs. Duration
Unit 1 to 5	: 10 marks each	
Practical	: 40 marks	Exam. 3 hrs.
Internal Assessment	: 10 marks	

Instruction for the Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instruction for Paper Setter (Practical) :

There shall be two questions from experiments and each to contain two sub-divisions.

Core Books for study:

- 1) Howe, R.T. & Sodini, C.G., *Microelectronics*, 4th Edition, Prentice Hall India, 2002.
- 2) Tayal, D.C., *Basic Electronics*, 3rd Edition, Himalaya Publishing House, 2001.

Reference :

- 3) Kakani, S.L. & Bhandari, K.C., *A Text Book of Electronics*, 3rd Edition, Wiley Eastern Ltd., 2001.
- 4) Chattopadhyay, D., Rakshit, P.C., Saha, B. & Purkait, N.N., *Foundations of Electronics*, 4th Edition, New Age International Publications, 2002.
- 5) Grob, B., *Basic Electronics*, 8th Edition, Tata McGraw-Hill, 2002.
- 6) Gray, Paul R. & Campbell L.S., *Electronic Principles : Physics, Models and Circuits*, 3rd Edition, Wiley Eastern Ltd., 2002.

PAPER 5 : STATISTICAL TECHNIQUE

Part A: Statistical Segment

Unit 1

Definition of Statistics, Nature and scope of Statistics : uses of statistics in business and industrial activities. Statistical Data- primary and secondary data. Collection of statistical data, representation of statistical data – bar charts, pie diagram, line graphs.

Tabulation of data- frequency distribution table. Graphical representation of frequency distribution – the histogram, frequency polygon, cumulative frequency distribution and the Ogive.

Unit 2

Probability: elementary concepts of probability. Probability density functions; distribution function; joint distribution; Moment generating and characteristic functions, Mathematical expectation. Special probability distribution : Normal, Exponential, Hyper Geometric distributions.

Unit 3

Measures of central tendency- mean, median, mode and their applications in business. Correlation: Karl Pearson's coefficient of correlation.

Unit 4

Dispersion- purpose of measuring dispersion, measures of dispersion- range, quartile deviation, mean deviation, standard deviation, coefficient of variation, uses of dispersion. Skewness and Kurtosis.

Unit 5

Index Numbers: meaning and uses of index numbers in business (The different types of index numbers and their methods of construction are not to be included).

Time Series: Definition of a time series, the four components of a time series, estimation of the trend by the method of moving averages (estimation of seasonal variation and other components are not to be included).

Part B: Practical only

Practical Paper aims to solve the statistical problems studied in Part A (Theory) using any statistical package. The following are representative problems :

- 1) Drawing line, bar, multiple bar, divided bar and pie diagrams.
- 2) Representation of frequency polygon, histogram and Ogive.
- 3) Calculation of measures of central tendency : A.M., median, mode and quartiles.
- 4) Calculation of measures of dispersion : Range, mean deviation, standard deviation and quartile deviation.
- 5) Measures of skewness.
- 6) Measures of kurtosis.
- 7) Calculation of index number by (a) Laspeyre's (b) Paasche's (c) Edgeworth-marshall (d) Fisher's formulae and by using value as weight.
- 8) Illustration of time and factor reversal tests.
- 9) Calculation of chain base index number.
- 10) Determination of trend by (a) moving average (b) Linear equation (c) Second degree parabola
- 11) Simple average
- 12) Ratio to moving average.
- 13) Random Number Generation.

Distribution of Marks :

Theory	: 50 marks	Exam 2 hrs. Duration
Unit 1 to 5	: 10 marks each	
Practical	: 40 marks	Exam 3 hrs. Duration
Internal assessment	: 10 marks	

Instruction for Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instruction for Paper Setter (Practical) :

There shall be two questions from each Unit of Part A (Theory) and one question from each Unit has to be answered.

Core Books for study:

- 1) Shukla & Gulshan, *Statistics*, 5th Edition, S. Chand & Company, New Delhi, 2002.
- 2) Sancheti, D.C. & Kapoor, V.K., *Business Mathematics*, 4th Edition, S. Chand & Company, New Delhi, 2001.

Reference :

- 3) Mehta, B.C. & Madani, G.M.K., *Mathematics for Economics*, 4th Edition, S. Chand & Sons, New Delhi, 2001.
- 4) Gupta, S.P., *Fundamentals of Statistics*, 6th Edition, Himalaya Publishing House, New Delhi, 2002.
- 5) Gillett, *Introduction to Operations Research*, 4th Edition, Tata McGraw-Hill, 2002.
- 6) Taha, Hamdy A., *Operations Research*, 5th Edition, Prentice Hall India, New Delhi, 2002.

Second Year

PAPER 6: ENGLISH (Common Paper for BBA/B.Com courses)

Objective :

The objective of the course is to develop the skills of communication.

Course Content:

Total : 100 marks Exam 3 hrs. duration

- | | |
|---|------------|
| a) Project Reports (How to write exercise) | : 30 marks |
| b) Commercial English Correspondence | : 20 marks |
| c) Comprehension | : 30 marks |
| d) Grammar (English Usage, fill in the blanks with appropriate articles, prepositions, adjectives). | : 20 marks |

Core Books for study:

- 1) Ghose, F.C., *Commercial English and Correspondence*, 5th Edition, Calcutta World Press, 2001.
- 2) Tickoo, Clampa & Sasi Kumar, Jaya, *Writing With a Purpose*, 6th Edition, Oxford University Press, 2001.

Reference :

- 3) Souther, J.W. & White, C.L., *Technical Report Writing*, 4th Edition, New York, John Wiley, 2002.
- 4) Gortside, L., *Modern Business Correspondence*, 6th Edition, Pitman, 2002.
- 5) Narayanaswamy, K.R., *Success with Grammar and Composition*, 3rd Edition, Orient Longman, 2001.

PAPER 7 : DATABASE MANAGEMENT SYSTEM

Part A : Database Management Systems and File Organization

Unit 1 Basic concepts of Database

Introduction, characteristics of database approach, Database administrator (DBA), Database designers, End users, system analysis and application programmes, intended uses of a DBMS, Implications of the Database Approach, Data models, Schemas, and Instances, The Three- Schema Architecture, Data Independence, DBMS languages, DBMS Interfaces, Database System Environment: DBMS component modules, Database system utilities, communication facilities; Classification of DBMS, E-R model concepts : Entities and Attributes, entity types, value sets, key attributes, Relationships, Roles, and structural constraints, weak entity types, Notation for E-R Relationship (ER) diagrams.

File Organization : Sequential file organizations, Types of single-level Ordered Indexes: Primary Indexes, Clustering Indexes; Multilevel Indexes, search trees and B-trees.

Unit 2 Relational Data Model and Relational Algebra

Relational Model Concepts: Domains, Tuples, Attributes, and Relations, Characteristics of Relations, Relational Model Notation; Relational Model constraints, update operations on Relations: Insert, Delete, Modify operations; Defining Relations, The Relational Algebra: SELECT, PROJECT, UNION, INTERSECTION, DIFFERENCE, JOIN, DIVISION operations; Structured Query Language (SQL): Data Definition and SQL, Queries in SQL, Update statements in SQL, Views in SQL.

Unit 3 Functional Dependency and Normalization

Definition of Functional dependency, Inference Rules for Functional Dependencies, equivalence of sets of Functional Dependencies, Minimal sets of Functional Dependencies. Introduction to Normalization, Definitions of 1NF, 2NF, 3NF, BCNF.

Unit 4 (a) Database Design Process

Role of Information systems in organizations, Requirement collection and Analysis, Conceptual database design, Choice of a DBMS, Data model mapping, Physical database design, Database system implementation.

(b) Introduction to DDBMS

Concepts of DDBMS, overview of Client-Server Architecture, Data fragmentation, Replication and allocation techniques for DDBMS design.

PART B : MS-ACCESS with Visual Basic Programming (Practical only)

Introduction : DBMS, RDBMS, Database, Record, Field, MS-Access as RDBMS.

Crating and maintaining a Data Table : Understanding Table Structure, Creating a Database Table using Wizard.

Open a Database.

Add/Edit relationship between tables.

Add/Move field in a table, Delete a field from a table.

Add a validation to a field, create a primary key, add an index. Sort/Filter records in a database view.

Creating queries : Crosstab, Make-table, update, append, delete, union.

Visual Basic Database Programming

Accessing MS-Access database using Data Control and Data Access object, Types of recordsets : Dynasets, Snapshots and Table.

Data Control Properties : Database Name, Record Source.

Properties of Databound Control : Data Source, Data Field, EOF, BOF, BOFAction, EOFAction, Record Set Type etc.

Datacontrol's Method : Move First, Move Last, Move Previous, Move Next, Find First, Find Last, Find Next, Find Previous.

Using with Visual Data Manager : Entering data in Ms-Access tables with Visual Data Manager working with the methods Add New, Delete, Update, Refresh etc.

Attaching queries to a Database.

Active Database Objects : The ADO objects – Connection, Command, Record Set.
 Connecting MS-Access database using ADO Data Control (ADODc). Querying through
 the connection object. Querying through the Recordset object.
 Adding new Records, Deleting Records, Updating Records – Searching records.

A Sample Assignment :

Create table : STUDENT

Fields are : ROLL_NO, NAME, CLASS, ADDRESS, PHONE-NO.

Create Table : TESTS

Fields are : ROLL_NO, TEST_NO, SUBJECT, MARKS.

Create table : EMPLOYEE

Fields are : EMP_NO, EMP_NAME, EMP_GRADE, EMP_ADD, DATE_OF_JOIN.

1. Using MS-Access wizard, Visdata Manager modify the structure of the above tables, append records, edit records, delete records.
2. Display the contents of the tables using Datacontrol.
3. Write Programs to enter data into the tables using Visdata Manager using AddNew Methods
 - Using delete method to delete records
 - Use update method to update records
4. Write Programs to find out the next record, previous record and last record of a table.
5. Write Programs to connect the above tables using ADO connection object. After connection modify the program for
 - entering new records
 - deleting existing records
 - updating a particular record
 - searching for a particular record
 Use appropriate SQL statements for updation and searching process.

Distribution of Marks :

Theory

: 50 marks

Exam 2 hrs. Duration

Unit 1 to 5

: 10 marks

Internal Assessment

: 10 marks

Practical

: 40 marks

Exam 3 hrs. Duration

Instructions for Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instructions for Paper Setter (Practical) :

There shall be two questions out of which one question is to be answered. Each question can however have subdivisions taken from any part of the syllabus.

Core Books for study:

- 1) Elmasri, R. & Navathe, S.B., *Fundamentals of Database Systems*, 5th Edition, Benjamin Cummings Publishing Company, 2001.
- 2) Wempen, *Access 2002*, 2nd Edition, Prentice Hall India, 2003.

Reference:

- 3) Date, C. J., *Systems An Introduction to Database*, 6th Edition, Addition-Wesley, 2002.
- 4) Korth Henry & Others, *Database System Concepts*, 3rd Edition, Addison-Wesley, 2001.
- 5) Hansen, G.W. & Hansen, J.V., *Database Management and Design*, 3rd Edition, Prentice Hall India, 2002.
- 6) Sadanandan, P., *Introduction to Database Management*, 4th Edition, BPB Publications, 2002.
- 7) Vine, *Visual Basic Programming*, 3rd Edition, Prentice Hall India, 2002.
- 8) McManus, *Database Access with VB 6*, 3rd Edition, BPB Publication, 2003.

PAPER 8 : DATA STRUCTURE**Unit 1 Introduction**

Definition of data structure, Data structure operations, Algorithms: Complexity, Time-space Trade off with examples; Rate of Growth: Big O Notation, Sub-algorithms, Variables, Data Types.

Unit 2 Arrays, Records, Pointers and Limited Lists

Introduction, Linear arrays, Representation of Linear arrays in memory, Traversing Linear arrays, Inserting and Deleting, Sorting, Bubble sort : Complexity of Bubble sort Algorithm; Searching : Linear search, Binary search with complexity; Multidimensional arrays, Pointers, Pointer arrays, Record: Record structure, Indexing items in a Record; Parallel arrays, Matrices, Sparse Matrices.

Linear Lists: Introduction, Representation of Linear Lists in memory, Traversing a Linked List, Searching a linked List, Memory allocation; Garbage collection, overflow and underflow; Insertion into a linked list with algorithm, Deletion from a limited list with algorithm, Header linked lists.

Unit 3 Stacks, Queues, Recursion.

Stacks: Definition, Array representation of stacks, Arithmetic expressions: Polish notation; Quicksort, Complexity of Quicksort algorithm, Recursion, Fibonacci sequence, Divide and Conquer Algorithm, Towers of Hanoi.

Queues: Definition, Representation of Queues, Deques, Priority Queues, Circular queues

Unit 4 Trees

Introduction, Binary trees, 2-trees, Representing Binary trees in memory, Traversing Binary trees, Pre-order, in-order and Post-order traversal, Traversal algorithms using stacks, Header Nodes: Threads, Binary Search Trees, Searching and Inserting in Binary Search trees, Complexity of searching algorithm, Deleting in a Binary search tree, General trees, AVL and B-Trees (definition only).

Unit 5 Graphs

Introduction, Graph theory terminology: Graphs and multigraphs, Directed Graphs; Sequential representation of graphs, Adjacent matrix, Path matrix, Warshall's Algorithm, Linked representation of a Graph, Operations on Graphs: Searching in a Graph, Inserting in a graph, Deleting from a graph; Traversing a graph: Breadth - First search; Depth-First search, Posets.

Unit 6 Sorting and Searching

Introduction, Sorting, Complexity of sorting algorithms, Bubble sort, Insertion sort, Complexity of Insertion sort, Quick Sort, Complexity of Quick Sort, Selection sort, Merging, Complexity of Merging algorithm, Merge-sort. Searching and Data Modification, Hashing, Hash functions.

Distribution of Marks :

Theory	: 80 Marks	Exam 3hrs Duration
Unit 1 to 5	: 16 Marks each	
Internal Assessment	: 20 marks	

Instructions for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Books for study :

- 1) Tremblay, J.P. & Sorenson, P.G., *An Introduction to Data Structures with Applications*, 4th Edition, Mc-Graw Hill Book Company, 2002.
- 2) Lipschutz Seymour: *Theory and Problems of Data Structures*, Schaum's Outline Series (International Edition), McGraw-Hill Book Company, 2002.

Reference:

- 3) Harowitz & Sahani, *Fundamentals of Data Structures*, 4th Edition, Galgotia Publications, 2002.
- 4) Lafore R., *Teach Yourself Data Structure & Algorithms*, 4th Edition, BPB Publications, 2001.
- 5) Aho, A.H., Hopcroft, J.E. and Ullman, J., *Data Structures and Algorithms*, 6th Edition, Addison-Wesley Longman, 2002.
- 6) Tanenbaum, A.S., Langsam, Y., Augenstein, M.J., *Data Structures Using C*, 4th Edition, Prentice hall of India, 2002.

PAPER 9 : OPERATING SYSTEM AND INTRODUCTION TO UNIX**Unit 1**

Overview of Operating Systems : Simple Batch Systems, Multiprogrammed Batch Systems, Time Sharing Systems, Personal-computer Systems, Parallel Systems, Distributed Systems, Real Time Systems.

Computer System Structures : Computer System operation, Input-output structure, Input-output Interrupts, DMA structure. Storage structure, storage hierarchy.

Operating System Structures : System Components and services, system calls, system programs, virtual machines.

Unit 2

Process Management : Process Concept, Process Scheduling, Operation on Processes, Cooperating Processes, Threads, Interprocess Communication.

CPU Scheduling : Basic concepts, scheduling criteria, scheduling algorithms, FCFS, SJF, RR, Priority scheduling, Multiple Processor Scheduling, Real Time Scheduling, Algorithm Evaluation.

Unit 3

Process Synchronisation : The critical section problem, Two process solution and multiple process solution.

Synchronisation hardware, Semaphores – implementation, some critical problems of synchronization : Readers and Writers problem, Dining philosophers problem.

Critical regions, Monitors.

Unit 4

Memory Management : Logical and physical address space, swapping, contiguous allocation – single partition allocation, multiple partition allocation, allocation algorithm, external/internal fragmentation.

Paging, page table structure, multilevel paging.

Demand Paging, Page replacement algorithms.

Unit 5

The UNIX system organization, File system, Process management, Types of shells : Bourne Shell, C Shell, Korn Shell.

Elementary UNIX commands : date, cal, banner, ls, mkdir, cd, pwd, cp, cat, mv etc.

Working with vi editor, elementary Shell programs.

Distribution of Marks :

Theory	: 70 marks	Exam 3 hrs. Duration
Unit 1 to 5	: 14 marks each	
Practical	: 20 marks	Exam 3 hrs. Duration
Internal Assessment:	: 10 marks	

Instruction for Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instruction for Paper Setter (Practical) :

There shall be five questions, each carrying 10 marks, and two questions are to be answered.

Core Books for study:

- 1) Das, Sumitabha, *UNIX : Concepts and Applications*, 4th Edition, Tata McGraw-Hill, 2002.
- 2) Silberschatz & Galvin, *Operating System Concepts*, 5th Edition, Addison-Wesley, 2001.

Reference :

- 3) Norton, Peter & Hahn, Harley, *Peter Norton's Guide to Unix*, 4th Edition, BPB Publications, New Delhi, 2002.
- 4) Kanetkar, Yashvant, *Unix Shell Programming*, 3rd Edition, BPB Publications, New Delhi, 2001.
- 5) Stalling, William, *Operating System*, 3rd Edition, Prentice Hall India, 2002.

PAPER 10 : COMPUTER ORIENTED NUMERICAL METHODS**Unit 1**

Computer Arithmetic : Normalised floating point representation of real numbers and operations using it; normalisation and its consequences.

Errors in Arithmetic Operations : Types and measurement, absolute and relative error, approximation and significant figures.

Solution of a Single Polynomial or Transcendental Equation : Rate of convergence of iterative methods (definition only), Method of bisection, false position, Newton-Raphson method, secant method, comparison of the methods.

Unit 2

Solution of simultaneous algebraic Equations: Gauss elimination method, pivotal condensation, illconditioned equations and iterative refinement, Gauss-Seidel iterative method

Polynomial Interpolation: Lagrange's interpolating polynomial, difference tables and Newton's divided difference interpolating polynomial, Newton-Gregory forward and backward difference interpolating polynomials.

Unit 3

Approximation of Functions using Taylor's series.

Numerical Differentiation and Integration : numerical differentiation, quadrature formulae, trapezoidal rule, Simpson's one-third rule, Simpson's one-eighth rule.

Solution of Differential Equations : Euler's method, second and fourth order Runge-Kutta methods, predictor-corrector method for solving first order, first degree differential equations.

Practical:

Computer implementation of all algorithms learned in the theoretical part using C/PASCAL.

Distribution of Marks :

Theory	: 50 marks	Exam 2 hrs. Duration
Unit 1 to 5	: 10 marks each	
Practical	: 40 marks	Exam 3 hrs. Duration
Internal Assessment	: 10 marks	

Instruction for Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit is to be answered.

Instruction for Paper Setter (Practical) :

There shall be five questions, each carrying 10 marks, and four questions are to be answered.

Core Books for study:

- 1) Rajaraman V., *Computer Oriented Numerical Methods*, 5th Edition, Prentice Hall India, New Delhi, 2002.

Reference :

- 2) Stoor, Bullrich, *Computer Oriented Numerical Methods*, 3rd Edition, Springer-Verlag, 2001.
- 3) Krishnamurthy, E.V., Sen, S.K., *Computer Based Numerical Algorithms*, 4th Edition, East West Press, 2001.
- 4) Jain, M.K., Iyengar, S.R.K., Jain R.K., *Numerical Methods for Scientific and Engineering Competition*, 4th edition, New Age Int. (P) Ltd., New Delhi, 2001.
- 5) Balagurusamy, E., *Numerical Methods*, 6th Edition, Tata McGraw-Hill, 2002.

PAPER 11 : COMPUTER SYSTEM ARCHITECTURE**Unit 1 Introduction and Addressing Methods and Machine Program Sequencing**

Functional units of a computer, Basic operational concepts, Bus structures, distributed computing, memory locations, Address and Encoding of Information, main memory operations, Instructions and Instruction sequencing: Instruction Execution and straight line sequencing, Branching, Addressing modes, Assembly Language: Assembler, Assembler commands, Assembly and execution of programs.

Unit 2 Microprogrammed Control

Control memory, Address sequencing: Routine, mapping, conditional Branching, mapping instruction, Design of control unit: Microprogram sequencer.

Unit 3 Input - Output organization

Accessing I/O Devices, Direct Memory Access (DMA), Interrupts, Interrupt Handling: Enabling and Disabling Interrupts, Handling multiple Devices, Device Identification, Vectored Interrupts, Interrupt Nesting, Simultaneous Requests, Controlling Device Request, PDP-11 Interrupt structure, I/O Interrupts: Control of Data transfer, Bus scheduling: IEEE-488 Bus, I/O channels.

Unit 4 Pipeline and Vector Processing

Four models of Computers (SISD, SIMD, MISD, MIMD), Parallel processing, pipelining, Arithmetic pipeline, Instruction pipeline, RISC pipeline, Vector processing: vector operations, Memory Interleaving, concept of Super computers, Array processors: Attached array processor, SIMD array processor.

Unit 5 Memory Organization

Memory Hierarchy: auxiliary memory, cache memory, multiprogramming; main memory, RAM, ROM, Bootstrap loader, computer start up, RAM and ROM chips, memory Address map, memory connection to CPU; auxiliary memory: magnetic disk, magnetic tape, Associative memory ; cache memory: Locality of reference, hit ratio, mapping, Associative mapping, Direct mapping, writing into cache; virtual memory: Address space and memory space, Address mapping using papers, Associative memory page table; memory management hardware, memory protection.

Unit 6 Introduction to multiprocessors

Characteristics of multiprocessor, Interconnection structures: Timely shared common bus, Multiport memory, Crossbar switch, multistage switching network, hypercube system; Interprocess or Arbitration: system bus, serial arbitration procedure, Parallel Arbitration Logic, Dynamic arbitration algorithms, Interprocessor communication and synchronization.

Distribution of Marks :

Theory : 80 marks Exam. 3 hrs. Duration

Unit 1 to 5 : 16 marks each

Internal Assessment : 20 marks

Instruction to the Paper Setter :

There shall be two questions from each Unit and one question from each Unit is to be answered.

Core Books for study :

- 1) Mano, M. Morris, *Computer System Architecture*, 4th Edition, Prentice Hall India, 2002.

Reference:

- 2) Stone, H., *Introduction to Computer Architecture*, 3rd Edition, Galgotia Publishing Ltd., 2001.
- 3) Pal Chaudhuri, P., *Computer Organization and Design*, 4th Edition, Prentice Hall India, 2002.
- 4) Bartee, Thomas C., *Computer Architecture and Logic Design*, Tata McGraw-Hill, International Edition, 2001.
- 5) Ram, B., *Computer Fundamentals, Architecture and Organization*, 3rd Edition, New Age International Publishers, 2002.

PAPER 12: MATHEMATICS - II**Unit 1 Mathematical Logic and Set Theory**

Connectives, Well Formed Formulas, Truth Tables, Tautology, Equivalence, Implication, Normal forms, Predicates, Free & Bound variables, Rules of inference, Consistency, Proof by contradiction.

Concept of Set, Set operations, Relations and Functions, Binary Relation, Compatibility, Partial Order Relations.

Unit 2 Matrices

Definitions, Addition, multiplication, Transpose of a matrix, Adjoint, Singular and Non singular matrix, Inverse of a matrix, Orthogonal matrix, Elementary transformation, Rank, Normal form.

Unit 3 Vectors

Space Co-ordinates : rectangular, Cartesian, cylindrical, spherical, polar. Vectors (in space) as directed line segments drawn from a fixed point; addition and scalar multiplication. Free vectors and localized vectors. Distance between two points in space; section formula for position vectors. Rectangular resolution, Dot product and cross product. Application of vectors in plane geometry and plane trigonometry.

Direction cosines of a line; magnitude and direction of a vector in terms of components. Dot product and cross product in terms of components; laws obeyed by dot product and cross product. Projection of a line segment angle between two directions. Triple scalar product, geometric significance. Triple vector product. Equation of planes and straight lines; co-planarity of two straight lines. Angle between two planes; perpendicular distance of a plane or a straight line. Bisectors of two planes. (All equations to be derived in both vector and Cartesian notations).

Gradient, Directional derivative, Normal to a level surface, Divergence.

Unit 4 Coordinate Geometry (2 Dimensional)

Coordinates of a point on a plane, distance between two points, division of a point from a line, Angle between two lines, bisector of angles between two lines, pair of straight lines, general equation of a circle, equation of a circle with a given diameter, intersection of a straight line and a circle condition of tangency, equation of a tangent and a normal at a point, introduction to ellipse, parabola and hyperbola.

Unit 5 Coordinate Geometry (3-Dimensional)

Different forms of the equation of a plane, distance of a point from a plane, angle between two planes, parallel and perpendicular planes, planes through the intersection of two planes.

Different forms of the equation of a straight line, Condition for a line to lie on a plane, Equation of any plane through a given line, the line of greatest slope, Condition for two lines to be co-planar, and the equation of the common plane, shortest distance between two skew lines.

Standard equation of a sphere, plane, section of sphere, centre and radius of the circle formed by plane section of a sphere through a given circle, tangent plane to a sphere.

Distribution of Marks :

Theory	: 80 marks	Exam. 3 hrs. Duration
Unit 1 to 5	: 16 marks each	
Internal Assessment	: 20 marks	

Instruction to the Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Books for study :

- 1) Trembly J.P. & Manohar, R. P., *Discrete Mathematical Structures with Applications to Computer Science*, McGraw-Hill International Edition, 2001.
- 2) Kreyszig, E., *Advanced Engineering Mathematics*, 6th Edition, Wiley International, 2002.

Reference:

- 3) Das, B., *Analytical Geometry and Vector Analysis*, 4th Edition, Orient Book Co., 2001.
- 4) Shanti Narayan, *A Text-book of Matrices*, 12th Edition, S. Chand and Company, 2002.
- 5) Grewal, B.S., *Higher Engineering Mathematics*, 5th Edition, Khanna Publishers, 2001.
- 6) Frank Ayres J.R., *Matrices, Schaum's Outline Series*, 5th Edition, 2002.

Third Year

PAPER 13 : FINANCIAL ACCOUNTING & BUSINESS SOFTWARE

Unit 1

Introduction:

Accounting- A financial information system, inputs and outputs of the accounting system, **Generally Accepted Accounting Principles**, conventions and postulates. The accounting equation, Mechanised system of accounting.

Unit 2

Business Income, Final Accounts, Depreciation and Reserves

- a) **Business Income-** measurement, Accounting concept of income; Analysis of changes in income.
- b) **Final Accounts and Statements-** Construction of trading, manufacturing, profit and loss accounts and balance sheet of single enterprises and partnership concerns.
- c) **Depreciation and Reserves-** Accounting for Depreciation Reserves, provision and funds.
- d) **Accounts of Non Trading Concerns and Accounts of incomplete accounts.**

Unit 3

Advanced study of Partnership Accounts:

Accounting problems related to admission, retirement, death of a partner, Dissolution, insolvency (including Garner Vs. Murray).

Advanced study of Company Accounts:

Accounting for shares (including forfeiture and re-issue); issue of debentures (simple problems), Final accounts (simple problems).

Unit 4

Financial Statement Analysis:

Reporting of Published Accounts and Statements: Modern trends, Analysis of financial statements Significance, Major user groups, Techniques with special reference to financial ratios, fund flow and cash flow statements.

Insurance : Definition & Nature, Evolution, Role & Importance of insurance, Insurance Contract, IRDA, Insurance Act, 1938.

Unit 5

What is a spreadsheet? Elements of excel screen, workbook, worksheet, row, column, cell.

Managing workbook files; Creating or opening workbooks, previewing workbooks, moving around in a sheet, moving around in a workbook, inserting and deleting sheets, renaming sheets, moving and copying sheets, opening, arranging and closing workbooks windows, saving and opening workspace files.

Selecting cells and moving within a selection, selection of sheets, choosing, repeating and undoing commands, working in a dialouge box, data entry, entering numbers, dates or times, text, filling adjacent cells and creating series.

Editing, copying and moving cells; Inserting, deleting and clearing cells, rows and columns, finding and replacing, changing column width and row heights, formatting fonts, adding borders, patterns, applying number and formats, copying, Formats quickly, applying formats automatically.

Creating embedded charts and chart sheets, activating a chart to modify it, selecting items of chart with / without mouse, adding data labels titles and other items to chart, chart types and autoformats, changing the chart type, combining multiple chart types in a chart, adding and deleting chart data, changing the range of data plotted in a chart. Changing chart text, linking chart text to worksheet cell, formatting the chart area and the plot area, formatting chart items (colours, patterns, text and numbers), formatting data markets, explode, smooth the angles in line and XY charts, sizing an embedded chart, Printing : selecting printer, setting up page, choosing what to print, print pre-view, controlling page breaks, page numbers, sizing and printing charts.

Using formulae, moving and copying formulae and references, naming references, using autosum, using function wizard, working with arrays.

Financial Functions : (FV, NPV, NPER, MIRP, IRR, IPMT, PMT, PPMT, PV, RATE, SYD, SLN)

Mathematical Functions : (ABS, COUNTIF, INT, LN, LOG, MOD, PI, LOGI(), RAND, RANDBETWEEN, ROUND, ROUNDUP, ROUNDDOWN, SIGN, SQRT, SUM, SUMIF, SUMSQ, TRUNC).

Statistical Function : (AVERAGE, COUNT, COUNTA, FREQUENCY, MIN, MAX, MEDIAN, LARGE, SMALL, VAR, STDEV, STDEVP).

Distribution of Marks :

Theory	: 80 marks	Exam 3 hrs. Duration
Unit 1 to 5	: 16 marks each	
Internal Assessment	: 20 marks	

Instruction for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Books for study:

- 1) Shukla & Grewal, *Advanced Accounts*, 5th Edition, S. Chand & Company, 2002.
- 2) Mishra, M.N., *Insurance : Principles and Practice*, 10th Edition, S. Chand & Company, 2002.
- 3) Mathur, *Learning EXCEL 2000 Step-by-Step*, BPB Publications, New Delhi, 2001.

Reference :

- 4) Jain & Narang, *Advanced Accountancy*, 5th Edition, Kalyani Publishers, Ludhiana, 2002.
- 5) Gupta, R.L., *Advanced Accountancy*, 6th Edition, S. Chand & Company, 2001.
- 6) Gillespie, *Accounting Systems, Procedures and Methods*, 4th Edition, Prentice Hall India, 2001.
- 7) Chester, *Mastering EXCEL 2000*, BPB Publications, New Delhi, 2002.

PAPER 14 : SYSTEM ANALYSIS AND DESIGN

Unit 1

System concepts: Definition , characteristics of a system: organization, interaction, independence, integration, central objective. Man made information system. Categories of information. The system development life cycle: Recognition of need, Feasibility study, Analysis, Design, Implementation, post implementation.

Consideration for candidate system: political consideration, planning and control for system success, Prototyping.

Academic and personal qualification of a System Analyst, The multifaceted role of the System Analyst: Change agent, Investigator and Motivator, Architect, Psychologist, Salesperson, Motivator, Politician. The analyst and user interface; Behavioural issues, Conflict resolution.

What is structured analysis ? Tools of structured analysis: data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table. Pros and cons of each tool. (small problems to be analyzed using these tools)

Unit 2

Cost benefit analysis: cost and benefits determination. The system proposal. File Structure, File organization: sequential organization, Indexed sequential organization, Inverted list organization, Direct access organization. Data base design. Objectives of database, Key terms, Logical and Physical views of data, Normalization and the role of database administrator.

Unit 3

The process of design; logical and physical design methodologies: Structured designs, structured walkthrough. major development activities: personnel allocation, Audit consideration, processing controls and data validation, Audit trail.

Importance of system testing. Unit testing, Benchmark testing, System testing: program testing, String testing, System testing, System documentation, User system acceptance testing, Special system test: peak load test. Storage test, Performance time test, Recovery testing, Procedure testing, Quality assurance: Quality assurance goals of the systems life cycle, Levels of quality assurance. Approaches to reliability: error avoidance , Error detection.

Unit 4

The computer industry. hardware suppliers, Service supplier. Type of software. Procedure for hardware, software and vendor selection. The evaluation process, Financial considerations in selection: rental option, Lease option, Purchase option. The used computer. Computer contract: the art of negotiation, Contract checklist.

Causes of system failure. System security: steps to ensure system security, Control measures, Disaster recovery planning.

Distribution of Marks :

Theory	: 80 marks	Exam 3 hrs. Duration
Unit 1 to5	: 16 marks each	
Internal Assessment:	: 20 marks	

Instruction for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Book for study :

- 1) Awad, Elias M., *Analysis and Design*, 5th Edition, Galgotia Publications Pvt. Ltd., 2002.

Reference :

- 2) James, A.S., *Analysis and Design of Information Systems*, 3rd Edition, McGraw-Hill, New York, 2001.
- 3) Leeson, M., *System Analysis and Design*, 4th Edition, Science and Research Association, 2002.
- 4) Sempriva, P.C., *System Analysis – Definition, Process and Design*, 3rd Edition, Prentice Hall India, 2001.
- 5) Venkata Rao, V., *System Analysis, Design & MIS*, 4th Edition, BPB Publications, 2002.

PAPER 15 : COMPUTER NETWORKS

Unit 1

Overview of Computer Networks, Network hardware and Network Software, Reference Models – OSI, TCP/IP Example Networks – Novell Networks, ARPANET, NSINET, Internet.

Unit 2

Physical Layer : Transmission Media – Magnetic media, Twisted pair, Base lead and Broadband coaxial cable, Fiber optics, wireless transmission : Radio transmission, Microwave transmission, Light wave transmission, Electromagnetic spectrum, ISDN – Series, Architecture, Interface. Broadband ISDN : Virtual Circuit, Virtual Circuit switching, Mobile Cellular communication system.
Cellular Radio : Cordless Telephones, Analog / Digital Telephones.

Unit 3

Data Link Layer : Design issues – Services provided to the Network layer, Framing, Error Control, Flow control Error Detector & correction – Error Detecting & correcting codes, Data link protocols : unrestricted simplex protocol, simplex protocol, simplex stop & wait protocol, simplex protocol for a noisy chain, sliding window protocol one – bit sliding window protocol,

Unit 4

Network Layer : Design issues, Routing Algorithms, Congestion control algorithms.
Transport layer : transport services, Elements of transport protocol, TCP/UDP.
Internetworking : Switch/Hub, Bridge, Routers, Gateways, Tunneling, Fragments, Firewalls.

Unit 5

Application Layer : Network Security, Principles of Cryptograph, Secret key and Public key algorithms, Authentication Protocols, Digital signature.

Domain Name System, SNMP.

E-mail : Architecture & Services, User Agent, Message Transfer Agent, E-mail Privacy, Message format.

Distribution of Marks :

Theory	: 80 marks	Exam. 3 hrs. Duration
Unit 1 to 5	: 16 marks each	
Internal Assessment	: 20 marks	

Instruction for Paper Setter :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Core Books for study :

- 1) Tanenbaum, Andrew S., *Computer Networks*, 4th Edition, Prentice Hall of India, New Delhi, 2002.

Reference :

- 2) Stallings, W., *Data and Computer Communications*, 6th Edition, Prentice Hall India, 2001.
- 3) Black, U.D., *Data Communications & Distributed Networks*, 3rd Edition, Prentice Hall India, 2002.
- 4) Martin James, *Computer Networks and Distributed Processing*, 4th Edition, Prentice Hall India, 2001.
- 5) Forouzan, Behrouz, *Introduction to Data Communication & Networking*, 3rd Edition, Tata McGraw-Hill, 2001.

PAPER16: INTERNET & WEB TECHNOLOGY

Part A: Internet

Unit 1

History of Internet, Internet Working, Connections, Internet Services, The World Wide Web(WWW), HTTP, Mosaic, Gopher, Tools for WWW: Web Servers, Web Browsers, Web page makers and Editors, Plug-Ins and delivery vehicles, HTML, VRML, Designing for the WWW- Working on the Web, Text for the Web, Images for the Web, Sound for the Web, Animation for the Web

Unit 2

Electronic Mail, architecture and services of MOTIS and X.400, the user agent, the Message Transfer agent, Virtual terminals: scroll mode terminals, page mode terminals, form mode terminals.

Part B: Web Technology (JAVA Programming)

Unit 3

Object Oriented Programming concept, comparing JAVA with C, JAVA programming language syntax, variables, data types, statements and expressions, control statements, if-else, for, while, and do-while loops, switch statement, named structures, functions, parameter passing, static modifier, console programming.

Unit 4

Features on JAVA : Classes and Interfaces, Threads and multithreaded programming. Synchronization of threads, dead locks, Exception handling, Introduction to packages, Math package, Lang package, Util package.

Unit 5

Applets programming: Events, Event driven programs, handling events, like buttons, mouse, keyboards etc., Applets and Applets package, Fonts, Colours, Graphics, Images, Sounds, AWT components, Layout managers, writing event driven programs using components. Streams I/O in JAVA, I/O Package, handling Files Random access files, Chaining streams.

Distribution of Marks:

Theory	: 50 marks	Exam 2hrs. Duration
Unit 1 to 5	: 10 marks each	
Practical	: 40 marks	
Internal Assessment	: 10 marks	

Instructions for Paper Setter (Theory) :

There shall be two questions from each Unit and one question from each Unit has to be answered.

Instruction for Paper Setter (Practical) :

There shall be five questions, each carrying 10 marks, and four questions are to be answered.

Core Books for study:

- 1) Daneal & Young, *Introduction to JAVA Programming*, 3rd Edition, Prentice Hall India, 2002.
- 2) Stems, C.I., *Internet : An Introduction*, 4th Edition, Tata McGraw-Hill, 2001.

Reference:

- 3) Balagurusamy, E., *Programming with JAVA : a Primer*, 4th Edition, Tata McGraw-Hill, 2001.
- 4) O'Neil, Joseph, *Teach Yourself JAVA*, 3rd Edition, Tata McGraw-Hill, 2001.
- 5) Naughton, *JAVA Handbook*, 4th Edition, Tata McGraw-Hill, 2002.
- 6) Kamin, Samuel N., Reingold, E.M. & Mickunas, M.D., *An Introduction to Computer Science using JAVA*, 3rd Edition, Tata McGraw-Hill, 2001.

PAPER 17: MAN AND ENVIRONMENT (Common Paper for all undergraduate courses)**Unit 1 (Conceptual Background)**

Meaning of Environment

Elements of Environment

Man's relationship with the environment and man-nature interdependence.

Need for environmental education.

Definitional Eco-system, ecology and habitat.

Unit 2 Relationship in Nature and Interrelated Nature of life on Earth

Energy Path

Energy Flow

Energy Budget

Trophic Level, Food Chain and Webs, Concept of 'Community'.

Unit 3 Population and Environment

(World's) Population numbers, density and growth.

Malthusian doctrine and the concept of a stable population (demographic transition)

Population growth in recent times and its impact on global environment.

Concept of carrying capacity of environment.

Unit 4 Pressure of Population of India's Environment

Trends in population Growth in India.

Identification of areas of high, medium and low density in India.

Impact of Population Pressure on India's food availability, water and natural resources.

Unit 5 Environment Consequences of Human Interventions- I

Global Warming and Green House effects, ozone holds.

Deforestation/

Desertification.

Unit 6 Environmental Consequences of Human Intervention-II Pollutions and Pollutants

(a) Air

(b) Water

(c) Soil

(d) Noise

(e) Radiation

(f) Toxicity in food chain.

Unit 7 Effects of Bio-Sphere

Species vulnerability

Endangered species

Genetic Resources

Concept of bio- diversity and bio- reserves

Unit 8 Environment as Resource

Concept of resource

Types of resources : Renewable and non- renewable resources

Shortages and over- Consumption

Conservation of Resources and Alternative Strategies.

Unit 9 Effects of Development

Predicament of man and sustainable development.

Peoples' movement in protecting environment. The case of Green movement, Chipko movement,

Bishnoi efforts

The Narmada debate.

Unit 10 Environment and North-East

Extent and type of forest in the N. E

Extent, Processes, Causes of Deforestation in N. E.

Flooding and causes of Flooding in N. E.

Shifting cultivation and its impact on Land – degradation

Forest Policy, conservation and afforestation

Concept of watershed management.

Books for study :

- 1) Arvil, *Man and Environment : Crisis and Strategy of Choice*. Penguin, Harmondsworth, 2000.
- 2) Odum, E. P., *Fundamentals of Ecology*, Prentice Hall India, 2001.
- 3) Thomas, W. L. (ed), *Man's Role in changing the Face of the Earth*, University of Chicago Press, Chicago, 2000.
- 4) Ehrlich, P. A. H. et al, *Eco - Science : Population Resource and Environment*, Freeman, San Francisco, 2000.
- 5) Meadows, D. L. & Meadows, D., *The Limits to Growth*, London, 2000.
- 6) A. C. Mohapatra et.al (ed), *Population Problems*, NEHU Foundation Course Series, Shillong, 2001.
- 7) Sinha, A.C., *Beyond the Trees, Tigers & Tribes : Historical Sociology of the Earth , Himala - Himalayan Forests (Chapter IV, V & VI)*, Har Anand Pub., Delhi, 2001.

PAPER 18: PROJECT**Objective:**

The purpose behind the inclusion of this is to consolidate the concepts and practices that were imparted during the course and to serve as record of competence. It should enable the student to apply concretely in a small package the concepts gained from system analysis and design.

Guidelines :

This project will be carried out over a duration of three months, involving about 150 hours. Every student should do a project individually and not in a group, under the guidance of at least one of the faculty members and / or expert / professional from an organization outside of the College. The selected project can be either of type Model 1 or Model 2. The Project Report should be submitted covering the aspects specified under Project Profile below. The Project Report should have a certificate from the College stating it to be a bonafide work of the student that has not been submitted for any other examination.

Project Profile :**Model 1**

1. The topic for the project can be any sub-system of a system software or tool or any scientific or a fairly complex algorithmic situation.
2. The aim of this type is to highlight the abilities of algorithmic formulation, program and data flow representation, modular programming, optimized code preparation, systematic documentation and other associated aspects of software engineering.
3. The assessment would be through the Project Report and Viva. The former should portray the following :
 Programming style, structured design, minimum coupling and high cohesion
 Good commenting and annotating of the code and flow of representation, such that meaningful code, with good readability and ease of maintenance, results.
 Design specifications, depicting the method adopted and giving a simple data dictionary, for each data, to cover name, type and validity aspects.
 Test case samples, enough in number, to adequately cover the possible chances of common errors
 User manual.

Model 2

1. This model can be of a typical business application. The aim of this type is to highlight the stages involved in a typical business oriented project development, though on a miniature scale and simulated environment. The appropriate use of DBMS/RDBMS towards any business application, along with adequate level system analysis and structured design and development of specific tools /products would be the underlying activity, in preparing this project.
2. The emphasis should be on selecting a system/ sub system which shows the DBMS and System Analysis aspects to a greater degree. Any small and simple business system may be selected, although candidates are advised to use their knowledge and creativity, to select typical and intelligent applications, rather than run-of-the-mill themes, such as simple Pay Roll calculation or Issue Return portion on an inventory scheme. The Evaluation stage would give due weightage for theme selection, problem analysis, fact finding techniques and initial design, which is as close to real life business situations as possible.
3. The assessment would be through the Project Report and Viva. The former should portray the following-
 - Requirements leading to the project, those which were the result of System Analysis.
 - The design aspect of DBMS oriented documentation which describes the structure and organization of the database well annotated source code, supplemental documentation, which can serve as a Data Analysis and Data Flow description.
 - A simple Data Dictionary of the elements, which form the structure. the number of tables/files which make up the DBMS, should not be less than three.
 - Details about I/O screens and facilities, for on screen query, printed oriented Reports and built in house keeping routines, which helps disk management and file integrity, are to be included to a limited extent.
 - Details of Acceptance Tests which , should be in adequate number and should include error messages.
 - User manual

Viva-Voce :

The viva-voce will be conducted by an external examiner appointed by the University and an internal examiner from the College. Other members of the faculty and students may be present. It will be of a duration of about 15 to 20 minutes. The logic, analysis and design aspects relevant to the project mentioned under assessment would be the main subject matter for the viva. However the general proficiency of the candidate should also be tested.

Documentation;

System Overview will have the following sections:

1. Application area : e.g., Production/ Inventory/Finance/Marketing/Human Resource Management/ Library/Training/Service sector/System Level Programming, etc.
2. System/Subsystem: e.g., Invoicing and Accounts Receivables, Purchase and Accounts Payables, Budget and Accounts Variance analysis, Production and Sales Monitoring, Material Requirement Planning, Hotel Management/ Hospital Management/ Specific Software utility.
3. End user (s): Finance Controller, Marketing Manager, Production Manager, Personnel Department, School or College or Hospital administrative staff, etc.
4. Analysis and description of the system, and the specific gains from computerization.
5. Description of the various modules.
6. Performance criteria for the proposed system: e.g., volume of transactions(Data handling), control aspects , timeliness, archival.
7. Need for the review : Deficiencies and future enhancements.

Data Dictionary :

1. This should give catalogue of the data elements used in the system/subsystem developed.
2. The following are the details required: Write NA where Not Applicable.
 - Data name
 - Aliases, if any.
 - Length (size)
 - Type(numeric, alpha, binary, etc.)
 - Validity criterion (minima, maxima, etc.)
 - Default value, if any.
 - Whether related to other data items.
 - Where used in the program; reference to data structure / file/ procedure/modules.

User Manual:

It may include chapters like the ones suggested below :

1. Installation
 2. Hardware requirements
 3. System requirements
 4. Installation procedure, including security aspects like passwords, protection, backups, controls, etc.
 5. Menu choices and their actions- screen formats
 6. Error Messages
 7. Output
 8. A sample test case
- Distribution of Marks :

Practical (Project Work) : 80 marks

Internal Assessment : 20 marks (To be assessed on the basis of two presentations on projects)

5:2:3(1)

- (iv) Revised M.A. Education Syllabus Optional B(i) : Value Education & Optional B (ii): Yoga Education.

Prof. A Henia vide letter No.F.69/EDN/2003/647 dt. 4.10.03 has forwarded the revised M.A. Education Syllabus Optional B (i): Value Education & Optional B (ii): Yoga Education for placing before the Academic Council.

The Syllabus for Optional B(i) is placed as Annexure 'A' and Optional B(ii) is placed as Annexure 'B'.

The matter is therefore placed before the Council for consideration

5:2:3(2)

Annexure 'A'

Optional B(i)

VALUE EDUCATION

UNIT 1 Concept of Value and Value Education

- Value as an axiological concept
- Meaning, nature, types and system of value
- Value education, moral education and religious instruction
- Need for value education.
- Objectives of value education.

Unit 2. Content of Education in Values.

- Cultural heritage,
- Fundamental duties,
- Social justice
- Gender equity
- Scientific temper

Unit 3. Value Development

- Socio-cultural basis of value development.
- Psychological basis of value development
- Piaget's moral judgment
- Kohlberg's cognitive moral development.

Unit 4. Models for Value Development

- Raths, Harmin's and Simon's Value Clarification.
- Rokeach's value change
- Gandhian approach to value.
- Radhakrishnan's approach to value

Unit 5 Intervention Strategies for Value Development

- Indoctrination: Didactic, dogmatic and forced choice.
- Inculcation: Role model, role playing and conditioning
- Internalization: Clarifying response, self confrontation and conflict resolution tasks.

SUGGESTED READINGS

1. Chilana and Dewan M.L. (1989). *The Human Values: A Task For All* Concept Publishing Company, New Delhi.
2. Dhokalia R.P.(2001). *Eternal Human Values and World relations*. New Delhi:NCERT.
3. Gupta N.L.(2000). *Human Values in Education*. New Delhi: Concept publishing Company.
4. Ghandhi M.K. (1927). *An Autobiography*. Navajivar publishing House, Ahmedabad.Khokalia R.P. (2001). *Eternal Human Values and World relations*. New Delhi: NCERT.
5. Jois Rama M.(1997). *Chuman Rights and Indian Values*. NCTE, New Delhi.
6. Kar N.N. (1999). *Value Education: A philosophical Study*, Ambala Kantt: The Associated publisher.
7. Kohlberg L, (1978). *The Cognitive Development approach to moral education in* P Scharf(ed). *Readings in mind education*. Minnea polis: Winston press Inc.
8. Paiget J. (1932). *The Moral Judgment of the Child* Chicago: The free press of Glencoo.....
9. Radhakrishnan S. (1979). *An idealist view of life*. Blackie & Son Ltd., Bombay.
10. Rokeach M. (1973). *The Nature of Human Values*. New York: The Free press.
11. Rath, L.E. Harmin.M and Simon S.B. (1978). *Values and Teachings*. London: Charles & Merril.
12. Seshadri C., Khader M.A. and Adhya G.L. (1992). *Education in Values: A source book*, New Delhi:NCERT.
13. Saraswati S.A.(2001). *Cultivating virtues and cultivating minds*. Ahmedabad.

5:2:3(4)

Annexure 'B'

Optional B(ii)

YOGA EDUCATION

UNIT 1 Yoga

- Meaning and Nature of Yoga
- Philosophical, psychological and physiological bases of yoga
- Raja yoga, bhakti yoga, karma yoga, and jnyana yoga

Unit 2. Yoga and Natural Living.

- Natural and Yoga
- Value of celibacy in yoga
- Food and eating habits for yogic exercises.

Unit 3. Yoga and Mental Health

- Importance of mental health in yoga
- Mental health and stress
- Yogic techniques for reduction of stress.

Unit 4. Yoga and world peace

- Peace and non-violence
- Need for world peace
- Role of Yoga in world peace.

Unit 5 Yoga Education and Value Education

- Meaning, aim and importance of yoga education,
- Distinction between yoga education and value education.
- Moral, ethical and spiritual implications of yoga (Yama, Niyam, dharana, dhyana, Samadhi) in Education

SUGGESTED READINGS

1. Bajpai, R.S. (2002). The Splendors and Dimensions of Yoga. Vol.I Atlantic Publishers and Distributors.
2. Bhattacharya, R.S. (1985). An Introduction to the Yogasutra. Bharatiya Vidya Prakasana, Delhi.
3. Criswell, E. (1989). How Yoga Works: an Introduction to Somentic Yoga. Freeperson press, Novato, California.
4. Datta, A.K. Bhaktiyoga (1981). Bharatiya Vidya Bhawan, Bombay.
5. Desikachan, T.K.V. (1995). The Heart of Yoga: Developing a personal practice. Inner traditions International, Rochester, Vt.
6. Desai M, (1980). Nature Cure, S. Chand and Co. Ltd. New Delhi.
7. Dynamics of Yoga (1989), Bihar School of Yoga, Monghur.
8. Feurstein G. (2002). The Yoga Tradition. Bhavana Books and prints, New Delhi.
9. Kapur C.L. (1982). Yoga and Education SCERT Himachal Pradesh, Simla Hills.
10. Krishna G. (1991). Higher Consciousness, D.L. Taraporaovade Sons and Co.Pvt. Ltd.
11. Yoga Asanas in theory and practice (1975), Bihar School of Yoga, Manghyr.
12. Yoga for health and peace (2001). Yoga Vidya niketan, Mumbai.
13. The Science of Yoga (1988), Bihar School of Yoga, Monghur.
14. Patanjalis, Yoga Sutra.

5:2:4(1)

(iv) Syllabus for paper PHIL. 3008, Philosophy of Social Science.

Prof. C.R. Agera, Head, Department of Philosophy vide his letter No.F.28/Phil/COS/2003-514 dt. 17.10.03 which is placed as Annexure 'A' has forwarded the Syllabus for paper PHIL, 3008, Philosophy of Social Science which is placed as Annexure 'B' and it is recommended by the School of Board on 16.10.2003.

The matter is placed before the Council for consideration.

5:2:4(2)

ANNEXURE 'A'

**DEPARTMENT OF PHILOSOPHY
NORTH-EASTERN HILL UNIVERSITY
SHILLONG-793 022**

**Prof. C.R.Agera,
Head.**

No.F.28/Phil/COS/2003-514

Dated October 17, 2003

To

The Deputy Registrar (Conference),
North-Eastern Hill University,
Shillong.

Sir,

Enclosed herewith please find a hard and a soft copy of the P.G. Syllabus for paper, PHIL. 3008, Philosophy of Social Science, for the favour of placing before the forthcoming Academic Council for approval. It is recommended by the School Board on 16.10.2003.

The M. A. Syllabus in Philosophy is already revised, approved and implemented. In deference to the wishes of the Academic Council, the new paper, PHIL. 3008, Philosophy of Social Science, is now framed, and it requires the approval of the Academic Council.

Thanking you,

Yours sincerely,

Enclo : a.a.

Sd/-

(C.R.Agera)

PHIL 3008

PHILOSOPHY OF SOCIAL SCIENCES

- UNIT-I** : **The Idea of Social Science**
 (a) Science: Natural and Social
 (b) Method and Truth
 (c) Theory of Social Phenomenon
 (d) Knowledge and Interest
- UNIT-II** : **Laws, Theories and Explanation**
 (a) Logical Characteristics of Laws
 (b) Logical Characteristics of Theories
 (c) Theory/Practice
 (d) Causal Explanation/Hermeneutic Understanding
- UNIT-III** : **Values in Social Sciences**
 (a) Fact/Value Dichotomy
 (b) Action and Agency
 (c) Rationality: Instrumental/Non-Instrumental and Others
 (d) Objectivity: Different Views
- UNIT-IV** : **Understanding Man**
 (a) Positivism
 (b) Functionalism
 (c) Structuralism
 (d) Phenomenology/Hermeneutic

Suggested Readings:

1. Habermas, Jurgen; Theory and Practice (Boston, 1973).
2. Habermas, Jurgen; Knowledge and Human Interests (Boston, 1971).
3. Gadamer, Hans-Georg; Reason in the Age of Science, Tr. Frederick G. Lawrence, The MIT Press, 1982.
4. Gadamer, Hans-Georg; Truth and Method, tr. William Glen-Doepel, Sheed & Ward, London, 1975.
5. Feyerabend, Paul K.; Problems of Empiricism, Cambridge, Cambridge University Press, 1981.
6. Benn, S.I. & Mortimore, G.W. (Eds.); Rationality and the Social Sciences, Routledge & Kegan Paul, London, Henley and Boston, 1976.
7. Rudner, Richard S.; Philosophy of Social Science, Prentice-Hall, Inc. Englewood Cliffs, N.J., 1966.
8. Winch, Peter; The Idea of a Social Science, New York: Humanities Press, 1978.
9. Ryan, A. (Ed.); The Philosophy of Social Explanation, Oxford University Press, 1973.
10. Weber, Max; "Objectivity" in Social Science and Social Policy," in on the Methodology of Social Sciences, Ed. & Trans. Shils, E.A. and Finch, H.A., New York: Free Press of Glencoe, Inc., 1949.

Additional Readings:

1. Benton, Ted & Craib, Ian; *Philosophy of Social Science: The Philosophical Foundations of Social Thought*, PALGRAVE, Houndmills, Basingstoke, Hampshire and New York, 2001.
2. Fay, Brian; *Contemporary Philosophy of Social Science: A Multicultural Approach*, Blackwell Publishers, 1996.
3. Rosenberg, Alexander; *Philosophy of Social Science*, Clarendon Press, Oxford, 1988.
4. Northrop, F.S.; *Logic of the Sciences and the Humanities*, Oxford Bowker 1983, (Greenwood 1979, Reprint of 1959 Ed.).
5. Hempel, Carl; "Logic of Functional Analysis," in *Symposium on Sociological Theory*, Ed. Cross, Llewellyn; Evanston: Ro, Peterson & Co., 1959.
6. Hempel, Carl; "Problems of Concept and Theory Formation in Social Sciences," *Science, Language, Human Rights*, Philadelphia: University of Pennsylvania Press, 1952.
7. Kluckhohn, Clyde; *Mirror for Man*, New York: Fweett World Library, 1957, Premier Edition.
8. Merton, Robert K; *Social Theory & Structure*, revised and enlarged edition: New York: Free Press of Glencoe, Inc., 1957.
9. Oakeshott, Michael; *Rationalism in Politics and Other Essays*, London: Methuen & Co.Ltd., 1962.
10. Radcliff-Brown, A.R.; "On the Concept of Function in Social Science," *American Anthropologist*, Vol.37(1935).
11. Rudner, Richard; "The Scientist Qua Scientist Makes Value Judgments," *Philosophy of Science*, Vol. XX (1953).

5:2- SYLLABUS

1. Revision of Under-Graduate Curriculum.
2. Representation of more college teachers in the Board of Under-Graduate Studies.

The Meghalaya College Teachers' association, Shillong vide their letter No.MCTA/02/NEHU/2003/03 OF 20th August, 03 has informed that in their Executive Committee meeting which met recently deliberated at length on the captioned subjects and it was of the opinion that there is scope for more co-operation & interaction between the University & the College Teachers in an endeavour to contribute positively towards quality higher education. The suggestions made by the college teachers with regards to revision of Syllabus at the Under-Graduate level for all streams as pointed out in their letter is placed before the Council for consideration.

Secondly, the Association is of the view that there is scope for more representation of teachers in the BUGS and a request has been made by them to the University to explore the possibility of raising the representation of College teachers in the BUGS to atleast 80% & that the meetings of the Boards to be held once in six months to get feedback on the curriculum. However, as per the Ordinance OA-9 under proviso(ii) only five college teachers from affiliated colleges engaged in teaching the subject concerned are nominated to the BUGS by the School of Studies.

The Association has further re-iterated that the college teachers are the major component in the fulfillment of the Under-Graduate Curriculum of the University and a more substantive role for them is called for in the functioning of the BUGS.

The letter received from the General Secretary, MCTA is place as Annexure 'A'.

The matter is place before the Council for consideration.

5:2:5(2)

ANNEXURE-'A'

MEGHALAYA COLLEGE TEACHERS' ASSOCIATION
SHILLONG

(Regn. No. RS/MCTA 65/72 of 1972)

Ref. No. MCTA/02NEHU/2003/03

Dated, Shillong
August 29, 2003

To

Prof. Mrinal Miri,
Vice-Chancellor,
North-Eastern Hill University,
Shillong.

Sub: Under-Graduate Curriculum of NEHU-Syllabus and BUGS.

Sir,

The Executive Committee of the Meghalaya College Teachers' Association (MCTA), which met recently deliberated at length on the captioned subject. The Committee was of the opinion that there is scope for more co-operation and interaction between the University and College Teachers in a endeavour to contribute positively towards quality higher education. Kindly allow us to place our humble suggestions on these matters for your consideration.

1. UNDER - GRADUATE SYLLABUS: We commend the University for taking up the task of revising the syllabus at the Under-Graduate level for all streams. But we feel that the revised syllabus should not be implemented in a piece-manner, i.e. different subjects at different times. This, we fear, will generate much confusion among the teachers as well as the students. It is our observation that the process of revision of syllabus in all streams is not a coordinated effort and obviously this will have a cascading effect on the examination system of the University.

We believe that the revision of syllabus is a continuous, vital but routine Process and should be taken up at regular intervals and be implemented uniformly and simultaneously for all subjects in all streams. We suggested that the University adopts a convention to revise the under-graduate syllabus every five to seven years with a view to update the contents of the curriculum of study in tune with the rapidly advancing society.

2. BOARD OF UNDER-GRADUATE STUDIES (BUGS): The Association is of the view that there is scope for more representation of teachers in the BUGS. The college teachers are the major component in the fulfillment of the under-graduate curriculum of the University and a more substantive role for them is called for in the functioning of BUGS. We would therefore request the University to explore the possibility of raising the representation of college teachers in the BUGS to at least 80% and that the BUGS meeting be held once in six months to get feedback on the curriculum.

5:2:5(3)

Membership of BUGS should be on a rotational basis with due weightage being given to expertise, experience and area of specialization of the teachers in the subjects concerned. It should not necessarily be confined to only Heads of the Departments in colleges or Ph.D. holders or a few colleges as has been the practice. The objectives of the curriculum should be clearly stated and understood and the topic/books are to be selected on the basis of their real utility, satisfying the demands of true knowledge and regional adaptability. Uninformed, perfunctory changes do more harm than good to the system. In the matter of revision of syllabus, BUGS as a body should involve a wider section of the college teachers to make the process more effective and democratic and representative in character.

Sir, you have been initiating a number of measures for the uplift of higher education in the State. We would like to believe that our humble suggestion are in keeping with those measures and hence we are confident that you will accord them due consideration.

Thanking you,

Yours faithfully

Sd/-

General Secretary, M.C.T.A.,
C/o St. Anthony's College, Shillong

5:2:6(1)

- vi) 1. M.A/M.Sc. Syllabus of Anthropology.
2. Panel of Examiners.

Prof. Surendra Singh, Dean, School of Human and Environmental Sciences Vide letter No.F.10(B)/SB/SHES/2003/153 dt. 28.10.03 which is placed as Annexure 'A' Minutes of the 16th meeting of th School Board , School of Human & Environmental Sciences which held on 16.10.03 along with the following papers to be placed to the Academic Council.

The Minutes of the 16th meeting of the School Board of Human & Environmental Sciences is placed as Annexure 'B'.

The matter is therefore place before the Council for consideration.

5:2:6(2)

ANNEXURE 'A'

NORTH EASTERN HILL UNIVERSITY
Mayurbhanja Complex, Shillong-793041 (Meghalaya)

Prof. Surendra Singh
Dean
School of Human and Environmental Sciences

No.F.10(B)/SB/SHES/2003/153
Dated 28th October, 2003.

To

The Deputy Registrar
(Conference)
NEHU, Shillong.

Sir,

Enclosed please find the Minutes of the 16th meeting of the School Board, School of Human & Environmental Science, NEHU, Shillong held on 16.10.2003 along with the following papers to be placed in the forthcoming meeting of the Academic Council:

- 1) M.A/M.Sc. Syllabus of Anthropology Department as recommended by School Board in Item No.7 of the Minutes. One copy Syllabus and a floppy.
- 2) Panel of Examiners for the following candidates as approved by School Board in Item No.8(a) of the Minutes:

<u>Name</u>		<u>Department</u>
a) Mr. Sumil Pio	Ph.D.	Geography
b) Mr. D.G.Nongkhlaw	-do-	-do-
c) Ms. KWG Rekha Nianthi	-do-	-do-
d) Ms. Arti Yadav	-do-	-do-
e) Ms.Polly Vauqualine	-do-	-do-
f) Mr. Kalidas Sharma	-do-	-do-
g) Ms. BG Pyngrope	M.Phil	-do-
h) Mr. Arduki C.Khyriumjat	-do-	-do-

Thanking you

Sincerely yours
Sd/-
(Surendra Singh)

Encl: As stated above

ANNEXURE 'B'

Minutes of the 16th meeting of the School Board of Human and Environmental Sciences (Full) held on 16-10-2003 at 11 a.m (Venue: Seminar Hall, Mayurbhanj Complex), Shillong -793 014)

Member present :

1. Professor A.C.Mohapatra
2. Professor D.K.Nayak
3. Professor B.S.Mipun
4. Professor B.K.Tiwari
5. Professor T.B.Subba
6. Professor H.Lamin
7. Professor R.K.Kar
8. Professor S.K.Aggarwal
9. Professor J.P.Gaur
10. Dr. Z.H.Qureshi
11. Dr. R.Khongsdier
12. Dr.O.P.Singh
13. Dr.H.J. Syiemlieh
14. Dr. L.R.Saha
15. Dr. S. S. Chaturvedi
16. Professor Surendra Singh - in the Chair

1. The Chairman welcomed the members to the 16th meeting of the School Board.
2. The Chairman informed the members that Prof. N.Srivastava, Prof. DR Syiemlieh and Prof. KS Singh sent regret letters that they could not attend the meeting due to prior commitments.
3. The minutes of the 14th and 15th meeting of the Board were confirmed.
4. Action taken by the Dean, SHES, towards early notification of the results of the following candidates was ratified :

5:2:6(4)

(a) Ph.D. Degree

Name	Department	Supervisor	Title
i) Bimal Barah	Geography	Prof. Surendra Singh	'Population Characteristics and Agricultural Development in Jorhat District of Assam'
ii) Bobby Beingachhi	-do-	Dr. Ali Ahmad	'Spread of Education and levels of literacy in Mizoram: A Spatio-Temporal Analysis'
iii) Sansing Kharkongor	-do-	Prof. R. Gopalakrishnan	'Sustainable Development in Meghalaya: A Geographical Appraisal'
iv) Kiranmay Sarma	-do-	Prof. R.K.Rai and Dr.S.K.Barik	Coal mining and its impact on Environmental Nokrek Biosphere Reserve, Meghalaya'
v) N.Myanbemo Kikon	Anthropology	Prof. H.Lamin	'Culture change among the Lotha Nagas: A case Study of Wokha and Akuk Village in Nagaland'

(b) The Board noted the change of Supervisor of Ms. Subrata Chakraborty, Department of Geography whose work will now be supervised by Prof. BS Mipun.

5. The Board approved the inclusion of graduate students with Honours in Bio-chemistry, Biotechnology and Home Science in addition to the existing subjects for the admission to Master Course in Anthropology.
6. Ph.D. registration of Anthropology, Geography Department s and Centre for Environmental Studies :

(a) Ph.D. synopses of Anthropology Department

- (i) Barikor C. Warji: 'Growth and Nutritional Status of Khasi children in the West Khasi Hills District of Meghalaya', Supervisor – Dr.R.Kkhongsdier.

Comments- 1) the age group may be too large and may be restricted to the age group of 2-12 years,

2) Sample design is to be revised restricting samples upto 50% of the total children population,

3) that ICMR method may be considered for finding the results.

- (ii) Rv. Khanchuila : 'Gender relations among the Tangkhuls of Manipur : An Anthropology study', Supervisor – Dr. Lucy Zehol.

Comments – 1) Objective No.2 must be replaced by the following objective 'to examine the changes in gender values in socialization process'.

(iii) Rumeena suting: 'Ethnomedical practices among the Jaintias of Meghalaya', Supervisor – Prof. Henry Lamin.

Comments – 1) the sub-title may be dropped,

2) the objectives are to be incorporated and the following to be included in the objectives: 'to examine the various forces influencing the various ethnomedical practics'.

(b) Ph.D. synopsis of Geography Department

(i) Surajit Barman: 'Fluvio-Morphological Impact of Pagladia-Morapaglanid rivers on rural settlements, supervisor-Dr. H.J.Syiemlich.

Comments- 1) Methodology is too shallow, needs specification,

2) to add objective on the identification of safe areas of habitation,

3) the references are to be updated.

(ii) Mahasweta Satapti: 'Demographic consequences of conflict on Santhal women in Bodo areas of Assam- A study of Kokrajhar District', Supervisor – Prof. D.K.Nayak.

Comment - 1) In title, the word 'Ethnic' is to be added before conflict,

2) objective 2-the word 'relative' should be replaced and consequences be reviewed,

3) word 'as far as' to be replaced by 'of' in objective,

4) Chapters are to be more defined.

(iii) Synsharlang Kharshing : 'Ethnic Diversity and Social Insteraction: critical enquiry into the social space in Shillong' Supervisor – Prof. D.K.Nayak.

- Comment -
- 1) the word critical enquiry should be dropped,
 - 2) the spelling errors are to be corrected,
 - 3) inclusion of Le Febre's ideas in literature survey.

(iv) Kamleshwar Kalita – 'Geo-environment of Gangtok, Sikkim with special reference to Geo-hazards', Supervisors – Dr. Z.H.Hussain Qureshi.

- Comments -
- 1) Title should be 'Geo-environment of Gangtok with special reference to Geo-hazards',
 - 2) objective 1 to be reframed.

(c) Ph.D. Synopses of Centre for Environmental Studies

(i) Pabitra Chutia : 'Ethno-zoological study of Nyishi, Nonpa and Apatani tribes of Arunachal Pradesh', Supervisor – Dr. O.P.Singh.

Comments - No modification, approved.

7. The Board recommended the revised M.A/M.Sc. Syllabus of Anthropology Department for the consideration and approval of the Academic Council.

8. (a) The panel of examiners for the following candidates were approved :

Geography Department

Ph.D.

- i) Mr. Sunil Pio
- ii) Mr. D.G.Nongkhilaw
- iii) Ms. KWG Rekha Nianthi
- iv) Ms. Arati Yadav
- v) Mr. Ambika Patti
- vi) Ms. Polly Vauqualine
- vii) Mr. Kalidas Sharma

M.Phil

- i) Ms. BG Pyngrope
- ii) Mr. Arduki C.Khyriumjat

5:2:6(8)

(b) Extension cases of the following candidates were approved :

Geography Department

Ph.D.

i) Mr. Sunil Pio - 1 year upto 27-10-2004

M.Phil

i) Mr. R. Vanlalvena - 6 months upto 26-5-2004

ii) Mr. T.N.Haokip - 6 months upto 26-5-2004

iii) Mr. R.Ralte - 6 months upto 26-5-2004

9. The meeting ended with a vote of thanks from the Chair.

Sd/-
Surendra Singh
Chairman

5:2:7(1)

vii. Revised syllabus for the Under Graduate Studies in Economics.

Dr. N. Srivastav, Prof & Head, Deptt. of Economics vide letter No.Econ:9-1/2003-2957 dt.14.11.03 has forwarded the revised syllabus in Economics for B.A. (Pass & Honours) as recommended by the Board of undergraduate Studies in Economics which held in its meeting on 16.10.03 for placing the same to the Academic Council.

The revised syllabus is placed as Annexure 'A'.

The matter is therefore placed before the Council for consideration.

5:2:7(2)

ANNEXURE 'A'

**SYLLABUS
FOR
BACHELOR OF ARTS
(PASS & HONOURS)
ECONOMICS**

**Recommended by the
BOARD OF UNDERGRADUATE STUDIES IN
ECONOMICS**

**In Its Meeting Held On October 16, 2003
For the Approval of the Forthcoming Meeting of the
ACADEMIC COUNCIL**

REVISED DRAFT SYLLABUS IN ECONOMICS FOR B.A. (Pass & Honours)

The Board of Undergraduate Studies (BUGS) in Economics, NEHU, Shillong proposed to introduce a few changes in the syllabus in Economics for the B.A. (Pass & Honours) students in order to revise and update the contents of the courses. These courses are revised in the light of the proposed UGC Model Curriculum (Economics) 2001 circulated by the University Grants Commission, New Delhi.

There have been several changes in the world economy in general and Indian economy in particular which significantly affects the economic theory and policy in recent time. Keeping this in mind, the Department of Economics has already revised the post-graduate syllabus in Economics and has implemented it from the first semester beginning August 2003. All these necessitate undertaking this exercise and calling for reorganization of the under graduate curricula. Therefore, attempt has been made to revise the content of the courses in order to include the recent developments in respective fields and bridge the gap between under graduate syllabus and post graduate revised syllabus.

While carrying out this exercise, the basic course structure and number of papers to be offered at post graduate and under graduate level are kept unchanged. This draft syllabus is prepared in consultation with many subject experts from the various colleges and within the Department of Economics, NEHU, Shillong and the Model Curriculum prepared by the UGC for both under graduate and post graduate levels. The proposed syllabus also, takes into account of the requisite topics for various competitive examinations.

Proposed Course Structure

The proposed course structure is as follows:

Compulsory Papers

- | | |
|------------|---|
| Paper-I: | Micro-Economics (First year) |
| Paper-II: | Macro-Economics (Second year) |
| Paper-III: | Indian Economy |
| Paper-IV: | Money, Banking and Public Finance: |
| | Part-I: Money and Banking |
| | Part-II: Public Finance |
| Paper-V: | Advanced Economy Theory: |
| | Part-I: Advanced Microeconomic Theory |
| | Part-II: Advanced Macroeconomic Theory |
| | Part-III: International Trade |
| Paper-VI: | Quantitative Techniques: |
| | Part-I: Mathematics |
| | Part-II: Statistics |
| Paper-VII: | Development and Environmental Economics |

Optional Papers**Paper-VIII (Third year):**

History of Economic Development of UK., USSR and India
 Part-I: The U.K. (from Industrial Revolution to 1939)
 Part-II: The USSR (1855-1950)
 Part-III: India (1857 to 1956)

Mathematics for Economists

Advanced Statistical Methods

Advanced Monetary Theory

Mathematical Economics

History of Economic Thought

Salient Features

The Salient features of the proposed Revised Syllabus are as follows:

- i. In this revised syllabus, new and current topics have been incorporated wherever the need is felt. For example, the course on Environmental Economics, which was not in the curriculum before, has been incorporated as a part of Paper VII which is a compulsory paper. This has been done keeping in mind the importance of spreading environmental awareness.
- ii. The general Papers, viz. Paper I, II and III, have been kept mathematical-free as far as possible. This is done keeping in mind that there are students taking Economics as an optional but not as an Honours Paper. Advanced economic theories and deeper analyses of various branches of Economics have been incorporated in the Honours Paper (i.e. Papers IV to VIII).
- iii. In Paper III (Indian Economy) an entire unit has been incorporated on the Economy of the North-Eastern Region. This is necessary as it is felt that students should be made aware of the economic situations with in the north-eastern region of India.
- iv. In Paper VIII, a completely new paper has been incorporated, viz., History of Economic Thought. This is to make available the students an important branch of Economics at Honours level as an additional optional paper.
- v. Paper VIII has got a number of optionals. The choice of these optionals has been arranged keeping in mind the interests of those students who are mathematically inclined and those who are not. Accordingly, an attempt has been made to strike a balance between these two groups of students.

PAPER-I

(First Year)

MICRO-ECONOMICS

1. **Definition and Scope of Economics:** Definitions by A. Smith, A. Marshall and L. Robbins, P. Samuelson and their critical examination. Nature and scope of Economics. Micro-economics in relation to other branches of Economics.
2. **Consumer's Behaviour:** Law of Demand, Elasticity of demand - price, income and cross, concepts and measurement. Marshallian theory of consumers' behaviour and its critical examination. Indifference curve analysis. Price, income and substitution effects. Giffen goods. Engel curve.
3. **Theory of Production and Cost:** Concept of Production Function. Isoquants. Law of variable proportions. The concepts of firm and industry. Revenue and cost curves - short and long run. Equilibrium of the firm.
4. **Market Structure:** Definition of market. Concepts of product and factor markets. Different types of market (e.g. perfect competition, monopoly, imperfect competition, monopolistic competition and oligopoly). Demand and Supply schedules. Expansion, contraction and shift in these schedules. Price determination under perfect competition in long and short run. Price determination under monopoly. Discriminating monopoly.
5. **Factor Pricing:** Theories of rent - Ricardian and modern. Concept of Quasi-rent. Rent and price. Theories of Wages - Subsistence, Wage fund and Marginal productivity theory. Theories of interest - Abstinence theory, loanable fund theory, liquidity theory and marginal productivity theory of interest. Theories of profit - risk-taking and uncertainty bearing. Justification of profit.
6. **International Trade:** Why nations trade, concepts of absolute and comparative advantages.

Basic Reading List

1. Baumol, W.J. (1982). *Economic Theory and Operations Analysis*, 3rd edition, Prentice Hall of India, New Delhi.
2. Boulding, K.E. (1955). *Economic Analysis*, Harper & Brothers, New York.
3. Henderson J.M. and R.E. Quandt (1980), *Microeconomic Theory: A Mathematical Approach*, McGraw Hill, New Delhi.
4. Koutsoyiannis, A. (1990). *Modern Microeconomics*, Macmillan, London.
5. Lancaster, K.J. (1969). *Introduction to Modern Microeconomics*, Rand McNally & Co., Chicago.
6. Lipsey, R.G. and K.A. Chrystal (1999). *Principles of Economics*, 9th Edition, Oxford University Press, Oxford.
7. Marshall, A. (1961). *Principles of Economics*, 8th edition, ELBS & Macmillan, London.
8. Samuelson, P.A. and W.D. Nordhaus (1998), *Economics*, Tata McGraw Hill, New Delhi.
9. Stonier, A.W. and D.C. Hague (1972). *Text Book of Economic Theory*, ELBS & Longman Group, London.
10. Varian, H.R. (2000). *Intermediate Microeconomics: A Modern Approach*, 5th Edition, East-West Press, New Delhi.

PAPER II

(Second Year)

MACRO ECONOMICS

Part-I

1. **Macro-economics:** Meaning, Macro-economic Policy and Its Objectives and Instruments.
2. **National Income and Social Accounting:** Concepts, components, and measurement. Basic circular flow of income model. National Income identities with Government expenditure and International Trade. Incorporation of Environmental Concerns in National Accounts.
3. **Pre-Keynesian income and employment theory:** The classical economics. Quantity theory of money, Fisher and Cambridge equations. Saving, investment and the rate of interest in the pre-Keynesian framework.
4. **Keynesian income and employment theory:** Keynesian Economics of consumption, savings and investment. Theory of Multiplier.
5. **National income fluctuations:** features of the trade cycle. Theories of trade cycles (Hawtrey's & Hayek's Interaction Models). Stabilization Policy.
6. **Inflation:** causes, types, effects and control.

Part-II

7. **Money and Banking:** Commercial and Central Banks, Credit creation, monetary policy and tools
8. **Public finance:** Public and private finance, sources of public finance. Public debt: concept, causes, burden and redemption of public debt. Public expenditure: concept, causes of increase in public expenditure.
9. **Balance of payments:** Items in the balance of payments account, equilibrium in the balance of payments. Adjustment process

Note: Part I will have four questions and Part II will have two questions. In all three questions have to be answered at least one from each part.

Basic Reading List

1. Ackley, G. (1978). *Macroeconomics: Theory and Policy*, Macmillan Publishing Company, New York.
2. Gupta, S.B. (1994). *Monetary Economics*, S. Chand & Co., New Delhi.
3. Heijdra, B.J. and F.V. Ploeg (2001). *Foundations of Modern Macroeconomics*, Oxford University Press, Oxford.
4. Kindleberger, C.P. (1973). *International Economics*, R.D. Irwin, Home Wood.
5. Lewis, M.K. and P.D. Mizan (2000). *Monetary Economics*, Oxford University Press, New Delhi.
6. Lipsey, R.G. (1971). *An Introduction to Positive Economic Analysis*, English Language Book Society, London.
7. Mukherjee, Sampat (1990). *Modern Economic Theory*, Wiley Eastern Ltd., New Delhi.
8. Musgrave, R.A. and P.B. Musgrave (1976). *Public Finance in Theory and Practice*, McGraw-Hill, Kogakusha, Tokyo.
9. Samuelson, P.A. and W.D. Nordhaus (1998). *Economics*, Tata McGraw Hill, New Delhi.
10. Shaniro, F. (1996). *Macroeconomic Analysis*, Galgotia Publications, New Delhi.

11. Stonier, A.W. and D.C. Hague (1972). *A Textbook of Economic Theory*, ELBS and Longman Group, London.

PAPER-III

INDIAN ECONOMY

1. **Basic feature of Indian economy during British period and at the time of Independence:** National income — trends and compositions. Sources of capital formation and savings. Sectoral growth. Demographic trends in India and its effect on economic development. Occupational structure of the labour force.
2. **Agriculture:** Problems of agricultural development — trends in products and productivity of food and non-food crops. Land reforms, agricultural finance and marketing. Green revolution, its features and economic implications. Public distribution of food-grains. Co-operation — its role in Indian economy, its achievements and weaknesses.
3. **Industry:** Industrial development during the planning period. Industrial policy of 1948, 1956, 1977 and 1991. Industrial licensing policy — MRTP Act, FERA and FEMA. Growth and problems of small-scale industries. Role of Public sector enterprises in India's industrialization. Impact of economic reforms on Indian industrial sector after 1991.
4. **External Sector:** Role of foreign trade. Trends in exports and imports. Composition and direction of India's foreign trade. Balance of payments crisis and the New economic reforms — Export promotion measures and the new trade policies. Foreign capital — FDI, aid; Multinational corporations (MNCs).
5. **Important Areas of Concern:** Poverty and inequality. Unemployment. Rising prices. Industrial relations.
6. **Economy of NER:** Basic characteristics of the economy of North Eastern Region. Major agricultural practices, cropping pattern and problems of agriculture. Industrial structure and causes of industrial backwardness.

Basic Reading List

1. Agrawal, A.N. *Indian Economy — Problems of Developmental Planning*, Wiley Eastern Ltd., Calcutta (latest edition).
2. Ahluwalia, I.J. and I.M.D. Little (eds) (1999). *India's Economic Reforms and Development: Essays in honour of Manmohan Singh*, Oxford University Press, New Delhi.
3. Alam, K. (ed.) (1993). *Agricultural Development in North East India: Constraints and Prospects*, Deep & Deep Publications, New Delhi.
4. Choudhuri, Primit (1975). *Aspects of Indian Economic Development*, Lord George Allen & Unwin Ltd., London.
5. Dutt, R.C. (1950). *The Economic History of India Under Early British Rule*, Low Price Publications, Delhi.
6. Dutt, Ruddar and K.P.M. Sundaram (2001). *Indian Economy*, S. Chand & Co. Ltd., New Delhi.
7. *Economic and Political Weekly*, Bombay (Relevant Issues).
8. Gadgil, D.R. (1971). *The Industrial Evolution in India in Recent Times, 1860-1939*, Oxford University Press, Bombay.
9. Gopalakrishnan, R. (1995). *The North East India: Land Economy and People*, Har Anand Publications, Delhi.
10. Government of India, *Economic Survey (Annual)*. Economic Division, Ministry of Finance, New Delhi.
11. Jalan, B. (1992). *The Indian Economy, Problems and Prospects*. Viking, New Delhi.

12. Misra, S.K. and V.K. Puri (2001). *Indian Economy – Its Development Experience*, Himalaya Publishing House, Mumbai.
13. North-Eastern Council (2000). *Basic Statistics of North-Eastern Region*.
14. Shetty, S.L. (1978). "Structure Retrogression of Indian Economy Since Mid Sixties", *Economic and Political Weekly*, Annual No. Feb.
15. Singh, V.B. (ed.) (1965). *Economic History of India, 1857-1956*, Allied Publishers Private Limited, Bombay.
16. Wadhwa, C.D. (ed.), *Some Problems of Indian Economic Policy*, Tata McGraw Hill, New Delhi (latest edition).

PAPER IV

MONEY, BANKING AND PUBLIC FINANCE

Total Marks 100

PART I

Money and Banking

Marks: 50

1. **Basic Concepts:** Money, Functions and Classifications. Role of money in capitalist, socialist and mixed economies. Monetary standards – Metallic and Paper System of Note Issue.
2. **Value of Money and Inflation:** Quantity Theory of Money – Cash transaction and Cash balance approaches, the Keynesian Approach. Inflation, Deflation and Reflation – Definition, Types Demand pull and Cost push inflation. Measures to control inflation. Trade off between Inflation and Unemployment.
3. **Commercial Banks:** Functions of Commercial Banks. The process of credit creation – purpose and limitations, Liabilities and assets of Banks. A Critical Appraisal of the Progress of Commercial Banking after Nationalisation. Recent Reforms in Banking Sector in India.
4. **Central Banking:** Functions, Instruments of Monetary and Credit Control – Quantitative and Qualitative. Objectives and Limitations of Monetary Policy with special reference to India.

PART II

Public Finance

Marks: 50

1. **Nature and Scope of Public Finance:** Meaning and Scope of Public Finance. Public goods vs. Private goods. The Principle of maximum social advantage. Market failure. Role of the Government.
2. **Public Expenditure:** Meaning. Classification and Principle of Public Expenditure. Canons and Effects of Public Expenditure.
3. **Taxation:** Sources of Public Revenue. Taxation – Meaning. Canons and Classification of Taxes. The benefit and ability to pay approaches. Impact and incidence of taxes. Taxable capacity. Effects of taxation.
4. **Public Debt and Financial Administration:** Sources of public borrowing. Effects of public debt. Methods of debt redemption. Growth of India's public debt. The public budget – kinds of budget. Economic and functional classification of the budget. Preparation and passing of budget in India.

Basic Reading List

1. Ackley, G. (1978). *Macroeconomics: Theory and Policy*, Macmillan Publishing Co., New York.

2. Bhargava, R.N. (1971). *The Theory and Working of Union Finance in India*, Chaitanya Publishing House, Allahabad.
3. Government of India, *Economic Survey (Annual)*, New Delhi.
4. Gupta, S.B. (1994). *Monetary Economics*, S. Chand & Company, New Delhi.
5. Houghton, E.W. (ed.) (1988). *Public Finance*, Penguin, Baltimore.
6. Jha, R. (1998). *Modern Public Economics*, Routledge, London.
7. Mithani, D.M. (1981). *Macroeconomic Analysis and Policy*, Oxford & IBH, New Delhi.
8. Mithani, D.M. (1998). *Modern Public Finance*, Himalaya Publishing House, Mumbai.
9. Musgrave, R.A. and P.B. Musgrave (1976). *Public Finance in Theory and Practice*, McGraw Hill, Kogakusha, Tokyo.
10. Reserve Bank of India (1983). *The Reserve Bank of India: Functions and Working*, Bombay.
11. Reserve Bank of India, *Report on Trend and Progress of Banking in India* (various years), Mumbai.
12. Reserve Bank of India. *Report on Currency and Finance (Annual)*, Mumbai.
13. Shapiro, E. (1996). *Macroeconomic Analysis*, Galgotia Publications, New Delhi.

PAPER-V

ADVANCED ECONOMIC THEORY

Total Marks 100

40 + 20 + 40

PART I

Advanced Microeconomic Theory

Marks 40

1. **Economics of Consumption:** Slutsky theorem; derivation of law of demand; Slutsky and Hicks on decomposition of price effect; Revealed preference Analysis
2. **Economics of Production:** Concept of factor substitution, Isoquants and price opportunity line. Concept of Production function, Cobb-Douglas Production function. Derivation of cost functions from production functions.
3. **Welfare Economics:** Problems of measuring welfare. Classical welfare Economics. Pareto Criteria. Value Judgement. Concept of a Social Welfare Function. Compensation Principle of Kaldor and Hicks

PART II

Advanced Macroeconomic Theory

Marks 20

1. **Investment function:** Investment function, Marginal efficiency of capital and its determinations. Relationship of interest. Concept of acceleration.
2. **Saving and Investment:** Equilibrium of saving and investment. General equilibrium IS and LM curves. Income determination explanation of underemployment equilibrium.
3. **Theories of Trade cycle:** Samuelson-Hicks Interaction model.

PART III
International Trade

Marks: 40

1. **Heckscher-Ohlin Theory of Trade** – Its main features, assumptions and limitations, Leontief's Paradox.
2. **Gains from Trade:** Gains from trade – their measurement and distribution. Trade as an engine of economic growth. Concepts of terms of trade and their importance in the theory of trade. Doctrine of reciprocal demand – Its importance and limitations in the theory of trade.
3. **Tariffs and Quotas:** Types of tariffs and quotas: their impact in partial equilibrium analysis. Free trade and policy of tariffs in relation to economic growth with special reference to India. Concept of optimum tariff.
4. **Devaluation, Financial and Trade Organizations:** Relative merits, demerits and limitations of devaluation. Concept and implications of foreign trade multiplier. Functions of IMF, World Bank and GATT/WTO; Reform of the international monetary system and India.

Note: Part I and Part III will have four questions each and Part II will have 2 questions. In all five questions have to be attempted two each from Parts I & III and one from Part II.

Basic Reading List

1. Ackley, G. (1978). *Macroeconomics: Theory and Policy*, Macmillan Publishing Company, New York.
2. Baumol, W.J. (1982). *Economic Theory and Operations Analysis*, 3rd edition, Prentice Hall, New Delhi.
3. Hanson, A.H. (1953). *A Guide to Keynes*, McGraw Hill, New York.
4. Henderson, J.M. and R.E. Quandt (1980). *Microeconomic Theory: A Mathematical Approach*, McGraw Hill, New Delhi.
5. Kenan, P.B. (1994). *The International Economy*, Cambridge University Press, London.
6. Kindleberger, C.P. (1972). *International Economics*, D.B.T. Sons & Co. Pvt. Ltd., Bombay.
7. Koutsoyiannis, A. (1990). *Modern Microeconomics*, Macmillan, London.
8. Krugman, P.R. and M. Obstfeld (1994). *International Economics: Theory and Policy*, Glenview, Foresman.
9. Lancaster, K.J. (1972). *Consumer Demand: A New Approach*, Columbia University Press, New York.
10. Lipsey, R.G. and K.A. Chrystal (1999). *Principles of Economics* (9th Edition), Oxford University Press.
11. Marshall, A. (1961). *Principles of Economics*, 8th edition ELBS & Macmillan, London.
12. Salvatore, D.L. (1997). *International Economics*, Prentice Hall, Upper Saddle River, N.J.
13. Samuelson, P.A. and W.D. Nordhaus (1998), *Economics*, Tata McGraw Hill, New Delhi.
14. Shapiro, E. (1996). *Macroeconomic Analysis*, Galgotia Publications, New Delhi.
15. Sodersten, B. (1991). *International Economics*, Macmillan Press Ltd., London.
16. Stonier, A.W. and D.C. Hague (1972). *Text Book of Economic Theory*, ELBS & Longman Group, London.
17. Varian, H.R. (2000). *Intermediate Microeconomics: A Modern Approach* (5th Edition), East-West Press, New Delhi.

PAPER-VI**QUANTITATIVE TECHNIQUES**

Total Marks 50+50 = 100

The course has been designed to give an idea to the undergraduate students of Economics about the application of quantitative techniques to economic problems

PART-I**MATHEMATICS**

Marks 50

1. **Basic Concepts:** Variables, Sets, Functions, Equations, Identities, Systems of Equations, Application of Straight line System, Slope of the Line, Homogeneous function.
2. **Calculus:** Concepts of Limit and Continuity and Derivative Rules of Differentiation, Maxima and Minima, Elasticities, Equilibrium of a firm and consumer, Inter-relationships among total, marginal and average costs and revenues, Integration of a function (introduction only).
3. **Matrix and Determinants:** Various types of Matrices, Determinants, Inverse of a Matrix, Cramer's Rule.

PART-II**STATISTICS**

Marks 50

1. **Basic Concepts:** Population, Sample, Parameter, Frequency Distribution, Cumulative Frequency, Graphic and Diagrammatic Representation of Data, Techniques of Data Collection, Sampling vs. census, Primary and Secondary Data.
2. **Central Tendency and Dispersion:** Measures of central tendency, Mean, Median, Mode, Geometric mean and harmonic mean, Measures of dispersion, Range, Mean Deviation, Standard Deviation, Coefficient of Variation, Quartile deviation, Lorenz curve, Skewness and Kurtosis.
3. **Correlation and Regression:** Correlation – scattered diagram, Coefficient of correlation – Karl Pearson and Rank Correlation, Regression analysis – Least Squares method, Interpretation of regression coefficients (two variables only).
4. **Time Series and Index Numbers:** Time series analysis – Concept and Components – determination of regular trend, Index numbers – Concept, price relative, quantity relative, value relative, Laspeyres's, Paasche's and Fisher's indices, Family budget method, Problems in the construction and limitations of index numbers, Tests for ideal index number.
5. **Probability and Probability Distributions:** Probability: Concept, Rules of Probability (Addition and Multiplication); Random variables, Mathematical expectation, Theoretical distributions – Binomial, Poisson and Normal: their properties and uses.

Basic Reading List:

1. Allen, R.G.D. (1974). *Mathematical Analysis for Economists*, Macmillan Press, London.
2. Black, J. and J.F. Bradley (1973). *Essential Mathematics for Economists*, John Wiley and Sons.
3. Chiang, A.C. (1986). *Fundamental Methods of Mathematical Economics* (3rd Edition), McGraw Hill, New Delhi.
4. Croxton, F.E., D.J. Cowden and S. Klein (1973). *Applied General Statistics*, Prentice Hall, New Delhi.
5. Gupta, S.C. and V.K. Kapoor (1993). *Fundamentals of Applied Statistics*, S. Chand and Sons, New Delhi.
6. Mehta, B.C. and G.M.F. Madhani (1992). *Mathematics for Economists*, S. Chand and Co., New Delhi.
7. Monga, G.S. (1996). *Mathematics for Management and Economics*, Vikas Publishing House Pvt. Ltd., New Delhi.
8. Nagar, A.L. and R.K. Das (1976). *Basic Statistics*, Oxford University Press, Bombay.
9. Speigal, M.R. (1992). *Theory and Problems of Statistics*, McGraw Hill Book, London.
10. Taro, Yamane (1999). *Mathematics for Economists. An Elementary Survey* (Second Edition), Prentice Hall of India, New Delhi.

PAPER VII**DEVELOPMENT AND ENVIRONMENTAL ECONOMICS**

1. **Economic Development:** Meaning, measurement, characteristics of less developed countries. Measures of Development Human Development Index and Physical Quality of Life Index.
2. **Theories of Economic Development:** Theories of Development: Karl Marx and Schumpeter.
3. **Approaches to Economic Development:** Partial theories of growth and development. Theory of unlimited supply and labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis; Low income equilibrium trap – Dualism: Technical, behavioural and social, circular causation theory.
4. **Planning and Development:** Need for planning – Democratic, decentralized and indicative planning. Micro level Planning. Review of Indian plan models.
5. **Environment and Ecology:** Environment-economy linkage. Environment as a necessity and luxury. Population-environment linkage. Environmental use and environmental disruption as an allocation problem. Market failure for environmental goods. Environment as a public good. The commons problem. Property right approach to environmental problem. Valuation of environmental damages: Land water, air and forest.
6. **Pollution Control:** Prevention, control and abatement of pollution. Choice of policy instruments in developing countries. Concept of indicators of sustainable development.

Basic Reading List

1. Adelman, L. (1961). *Theories of Economic Growth and Development*, Stanford University Press, Stanford.
2. Behrman, S. and T.N. Srinivasan (1995). *Handbook of Development Economics*, Vol.1 to 3, Elsevier, Amsterdam.
3. Bhagwati, J. and P. Desai (1970). *India: Planning for Industrialisation*, Oxford University Press, London.
4. Boseup, E. (1991). *Population and Technological Change: A Study of Long Term Change*, Chicago University Press, Chicago.
5. Chakravarty, S. (1987). *Development Planning: The Indian Experience*, Clarendon Press, Oxford.
6. Chenery, H.B. et al. (eds.) (1974). *Redistribution with Growth*, Oxford University Press, New York.
7. Ehrlich, P., A. Ehrlich and J. Holden (1997). *Economics, Population, Resources, Environment*, W.H. Freeman, San Francisco.
8. Ghatak, S. (1986). *An Introduction to Development Economics*, Allen and Unwin, London.
9. GOI (2000). *India 2000*, Ministry of Information and Broadcasting, New Delhi.
10. Hayam, Y. (1997). *Development Economics*, Oxford University Press, New York.
11. Higgens, B. (1959). *Economic Development*, Norton, New York.
12. Kindeberger, C.P. (1977). *Economic Development*, 3rd edition, McGraw Hill, New York.
13. Kolstad, C.D. (1999). *Environmental Economics*, Oxford University Press, New Delhi.
14. Little, I.M.D. (1982). *Economic Development: Theory and International Relations*, Basic Books, New York.
15. Meier, G.M. (1995). *Leading Issues in Economic Development*, 6th edition, Oxford University Press, New Delhi.
16. Myint, Hla (1965). *The Economics of Underdeveloped Countries*, Preager, New York.
17. Pearce, D.W. and R. Turner (1991). *Economics of Natural Resource Use and Environment*, John Hopkins Press, Baltimore.
18. Shankar, U. (ed.) (2001). *Environmental Economics*, Oxford University Press, New Delhi.
19. Thirwal, A.P. (1999). *Growth and Development*, 6th Edition, Macmillan, London.

PAPER VIII (3rd YEAR)**(OPTIONAL)****HISTORY OF ECONOMIC DEVELOPMENT OF UK., USSR, INDIA****PART I****The U.K. (from Industrial Revolution to 1939)**

1. **Industrial Revolution: Agriculture** — The Growth of Capitalism in Agriculture; Enclosure System; The History of Agriculture during the period; Com.Law and its Effect.
2. **Commercial Revolution & Commercial Policy**: Event leading to the rise of Laissez Faire and Free Trade; Reaction against Free Trade and Protectionist Revival.
3. **Labour conditions in England**: Factory Legislation and Trade Union Movement Problems and Inter-war period (1918-39).
4. **International Trade, Finance & Currency**.

PART II**The USSR (1855-1950)**

1. **Economic Condition of Russia before 1917: The institution of Serfdom — Emancipation of the peasants.**
2. **The Industrialisation Debate: War Communism (1918-21); The New Economic Policy (1921-28); The Five Year Plans; Soviet Economy during War and Reconstruction; Organisation and Technique of Economic Planning; Soviet Financial and Budgetary Systems — The Turnover tax; Trade Unionism.**

PART III**India (1857 to 1956)**

1. **British Colonialism and Its Impact on the Indian Economy.**
2. **Agriculture — Trends in output and productivity; Government Policies with regard to Irrigation; Famine and Credit Rural Indebtedness.**
3. **Population Growth and occupational structure; Decline of Handicrafts and de-industrialisation process.**
4. **Pattern of industrialization with special reference to tea, cotton, jute and steel.**
5. **Industrial Policy after Independence.**
6. **Infrastructure — Transport & Communication and Its Impact on Industrialisation Process.**

Basic Reading List

1. Alex Nove (1972). *An Economic History of the USSR*, Penguin, London.
2. Ashorth, A. (1960). *An Economic History of England, 1700-1970*, Methuen, London.
3. Baykov, A. (1970). *The Development of the Soviet Economic System and Essay on the Experience of Planning in USSR*, Cambridge University Press, Cambridge.
4. Bimie, A. (1930). *An Economic History of Europe (1760-1939)*, Methuen, London.
5. Blyhin, G. *Agricultural Trends in India 1891-1947, Availability and Productivity*.
6. Dobb, M. (1966). *Soviet Economic Development since 1917*, Routledge & Kegan Paul Ltd., London.
7. Gadgil, D.R. (1971). *Industrial Evolution in India 1960-1939*, Oxford University Press, Delhi.
8. Kuznets, S. (1973). *Modern Economic Growth; Rate, Structure and Spread*, Yale University Press, New Haven.
9. Levkovsky, A.L. (1966). *Capitalism in India: Basic Trend in its Development*, People's Publishing House, Bombay, 1966.
10. Southgate, G.W. (1970). *English Economic History*, J.M. Dent and Sons London.
11. Vinod Mehta (1978). *Soviet Economic Development and Structure*, Sterling Publishers Private Ltd., New Delhi.

PAPER VIII**(OPTIONAL)****MATHEMATICS FOR ECONOMISTS**

1. **Number system:** Real and complex Numbers, Properties, Graphical Representation of Complex numbers, Argand Diagram.
2. **Elements of Trigonometry and Analytical Geometry:** Trigonometric Functions and numerical values, Functions of sums and difference of angles, Co-ordinates of Points, Lines and Circles, Conic sections
3. **Linear Algebra:** Real and vector spaces, Vectors and Matrices, Matrix operation, Rank of Matrix, Inverse of Matrix, Solution of simultaneous Equations, Linear and Orthogonal transformations.
4. **Differential calculus:** Rules of Differentiation, Partial and Total Differentiation, Maximization and Minimization of functions of more than one variable.
5. **Integration:** Rules of Integration, Methods of Integration, Integration by parts and Definite integrals
6. **Difference and Differential Equations:** Nature, Solution of First and Second Order Equations

Basic Reading List

1. Allen, R.G.D. (1980). *Mathematical Analysis for Economists*, McMillan, London.
2. Chiang, A.C. (1974). *Fundamental Methods of Mathematical Economics*, McGraw Hill, Tokyo.
3. Hadley, G. (1973). *Linear Algebra*, Addison-Wesley Pub. Co., Tokyo.
4. Lewis, J.P. (1978). *Introduction to Mathematics for Students of Economics*, Macmillan, London.
5. Madley, G. (1974). *Linear Algebra*, Addison—Wesley, Reading, Mass.
6. Mehta, B.C. and Madhani, G.M.K. (1992). *Mathematics for Economists*, Sultanchand and Sons, N. Delhi.
7. Monga, G.S. (1972). *Mathematics and Statistics for Economists*, Vikas Publishing House, New Delhi.
8. Yamane, Taro (1975). *Mathematics for Economists*, Prentice Hall of India, New Delhi.

PAPER VIII
(OPTIONAL)

ADVANCED STATISTICAL METHODS

1. **Probability:** Classical, axiomatic and empirical approach; Theorems of probability; Multiplicative, additive, conditional, total and compound probability, concept of sample space, density function, distribution function.
2. **Probability distributions:** Binomial, Poisson, Normal, Multinomial and Hyper geometric distribution, Mathematical Expectation, Moment Generating functions.
3. **Correlation and regression:** Bi-variate and multi-variate, fitting of regression by OLS Method, Partial and Multiple Correlation, Correlation ratios, Estimates of Variances of parameters (Non-linear equations and the estimation of the parameters), Growth curves, Logistic curves and their fitting.
4. **Sampling Distribution:** Distribution of sample mean, and variances, t-distribution, F-distribution and X^2 -distribution and their uses.
5. **Testing of hypothesis:** types of hypotheses, types of errors, Power of a test, application of t, F and X^2 —tests. Analysis of covariance, two-factor and three-factor analysis.
6. **Theory of sampling:** Simple Random Sampling (SRS), Stratified SRS, Systematic Sampling and Cluster Sampling estimation of totals. Means, variances of the study variables.
7. **Design and Analysis of Variances:** R.B.D., R.B.D. with replications, L.S. design and ANOVA tests.

Basic Reading List

1. Bez, K. (1989). *Quantitative Techniques in Economics*, Kalyani publications, Ludhiana.
2. Chou, Y. (1975). *Statistical Analysis*, Holt, Reinhart, Winston, New York.
3. Cramer, H. (1970). *Mathematical Methods of Statistics*, Princeton.
4. Croxton, Crowden and Klein (1971). *Applied General Statistics*, Prentice Hall of India, New Delhi.
5. Goon, A.M., M.K. Gupta and B. Dasgupta (1993). *Fundamentals of Statistics*, Vol.I, The World Press Ltd., Calcutta.
6. Gupta, S.C. and V.K. Kapoor (1993). *Fundamentals of Applied Statistics*, S. Chand & Sons, New Delhi.
7. Hoel, P.G. (1968). *Introduction to Mathematical Statistics*, Wiley & Sons.
8. Kamel, P.H. (1970). *Applied Statistics for Economists*, Pitman Publ.
9. Kendall, M.G. et al. *The Advanced Theory of Statistics*, Vol.I, II, III Griffin (latest edition).
10. Medhi, J. (1992). *Statistical Methods: An Introductory Text*, Wiley Eastern Ltd., New Delhi.
11. Nagar, A.L. and R.K. Das (1993). *Basic Statistics*, Oxford University Press, New Delhi.
12. Rao, C.R. (1965). *Linear Statistical Inference*, Wiley & Sons.

**PAPER VIII
(OPTIONAL)**

ADVANCED MONETARY THEORY

1. **Monetary Theory:** The nature and scope of Monetary Theory. Linkage between the Real and Monetary sectors; Dichotomy-Neutrality of money and Real Balance effect.
2. **Quantity Theory of Money:** The relation between Money, Nominal Income and Prices; Classical and Keynesian approach towards Quantity Theory of Money.
3. **Demand of Money:** Neo-Keynesian Portfolio Approach – Capital Theory applied to transaction demand for Money (Boumol-Tobin Model). Friedman's Demand for Money, function.
4. **Supply of Money:** Definitions; Liquidity-creation of Money by Bank. Endogeneity and Exogeneity of Money Supply.
5. **Monetary Planning & Policy with reference to India:** Objectives of monetary planning; planned control of money supply; Conflicts and Limitations.
6. **Credit:** Role in production and investment; Sources of Credit in India; Aggregate Supply of Bank Credit; Reserve Bank of India and Credit Planning.

Basic Reading List

1. **Bairi, S.K. (1976).** *A Review of current Banking Theory and Practices*, Macmillan, New Delhi.
2. **Clwer, R.M. (ed.) (1973).** *Monetary Theory*, Penguin Modern Economic Readings, Harmondsworth.
3. **Coats, Warren and Khafkate, Deena (1991).** Money and Monetary Policy in Less Developing Countries in the 1990s, *Economic and Political Weekly*, June 22.
4. **Friedman, M. (1973).** Quantity Theory of Money – A Restatement, in Walters, A. (ed.), *Money and Banking*, Penguin Modern Economic Readings, Harmondsworth.
5. **Gupta, Suraj B. (1981).** *Monetary Planning in India*, Oxford University Press, New Delhi.
6. **Johnson, Harry, G. (1978).** *Selected Essays in Monetary Economics*, George Allen & Unwin, London.
7. **Laidler, D.E.W. (1972).** *The Demand for Money: Theories and Evidence*, Allied Publishers, Bombay.
8. **Patinkin, Don (1965).** *Money, Interests and Prices*, Harper & Row, New York.
9. **Patinkin, Don (1972).** *Studies in Monetary Economics*, Harper & Row, New York.
10. **Prasad, K. (1969).** *The Role of Money Supply in a Developing Economy*, Allied Publishers, New Delhi.

PAPER VIII

(OPTIONAL)

MATHEMATICAL ECONOMICS

1. Role of Mathematics in Economics Analysis, Introduction to Static, Comparative Static and Dynamic Models.
2. Theory of Consumers Behaviour: Preference ordering, Axioms & Utility function, Revealed Preference Hypothesis.
3. Existence and Maximisation of Utility: Separative and Additive Homogeneous and Homothetic Utility Function, Demand Function, Substitution and Income Effects— Slutsky Equations, Revealed Preference—Axioms, Substitution Effects
4. Theory of Firm: Production Function, Properties Product Curves and Isoquants, Substitution Elasticities, Optimizing Behaviour, Cost Function — Short run and Long run.
5. Linear Programming: Basic concepts, solution of L.P. Problems — Graphic and Simplex, Duality.
6. Applications of Linear Programming to Economic Analysis: Marginal Analysis vs. Linear Programming of the Firms, Input-Output Analysis. (Static open models only)
7. Period Analysis: Cobweb and other simple Dynamic Models — Features, models with stock. Stability of Equilibrium.
8. Multiplier and Accelerator: Static and Dynamic Multiple Models. Harrod-Domar Growth Theory.

Basic Reading List

1. Allen, R.G.D. (1973). *Mathematical Economics*, Macmillan, London.
2. Baumol, W.D. (1970). *Economic Dynamics*, Macmillan, N.Y.
3. Baumol, W.J. (1985). *Economic Theory and Operations Analysis*, Prentice Hall, New Delhi.
4. Chiang, A.C. (1974). *Fundamental Method of Mathematical Economics*, McGraw Hill, N.Y.
5. Handerson, J.M. and Quandt, R.E. (1980). *Microeconomic Theory: A Mathematical Approach*, McGraw Hill, Tokyo.
6. Mukherji, B. and V. Pandit (1982). *Mathematical Method of Economic Analysis*, Allied Publishers, New Delhi.
7. Samuelson, P.A. (1971). *Foundations of Economic Analysis*, HYP, Cambridge.
8. Varian, H. (2000). *Intermediate Microeconomics: A Modern Approach* (5th Edn.). Affiliated East-West Press Pvt. Ltd., New Delhi.

**PAPER VIII
(OPTIONAL)**

HISTORY OF ECONOMIC THOUGHT

1. **Early Period:** Economic thought of Plato and Aristotle – Doctrines of Just cost and Just price – Mercantilism: main characteristics Thomas Mun – Physiocracy. Natural order, primary of agriculture, social classes. Tableau Economique, taxation, Turgot – Economic ideas of Petty, Locke and Hume.
2. **Classical Period:** Adam Smith – division of labour, theory of value, capital accumulation, distribution, views on trade, economic progress, David Ricardo – value, theory of rent, distribution, ideas on economic development and international trade. Karl Marx – dynamics of social change. Economic ideas of J.B. Say, J.S. Mill; Historical School – Senior, List.
3. **Marginalists:** The precursors of marginalism – Cournot, Thunen, Gossen – The marginalist revolution. Jevons, Walras and Menger – Fisher: the rate of interest – Wicksteed and Weiser. Distribution – Marshall as a great synthesizer. role of time in price determination, economic methods. Organization as a factor of production, nature of profits.
4. **Keynesian Ideas:** The aggregate economy, Liquidity Preference Theory and Liquidity trap. Marginal Efficiency of Capital and Marginal Efficiency of Investment. Wage rigidities, underemployment equilibrium, role of fiscal policy: deficit spending and public works. Multiplier principle, cyclical behaviour of the economy. uncertainty and role of expectations, impetus to economic modeling.
5. **Indian Economic Thought:** Early economic ideas: Kautilya, Valluvar. Modern economic ideas: Naoroji, Ranade, R.C. Dutt and M.N. Roy; Economic ideas of Gandhi: Village, Swadeshi, place of machine and labour, cottage industries, trusteeship. Early approaches to planning (the national planning committee); Gadgil: co-operation as a way of life and strategy of development; J.K. Mehta: Wantlessness.

Note: Emphasis has to be given on economic thought rather than on theories.

Basic Reading List

1. Blackhouse, R. (1985). *A History of Modern Economic Analysis*, Basil Blackwell, Oxford.
2. Blaug, M. (1997). *Economic Theory in Retrospect: A History of Economic Thought from Adam Smith to J.M. Keynes*, (5th edition), Cambridge University Press, Cambridge.
3. Dasgupta, A.K. (1985). *Epochs of Economic Theory*, Oxford University Press, New Delhi.
4. Ganguli, B.N. (1977). *Indian Economic Thought: A 19th Century Perspective*, Tata McGraw Hill, New Delhi.
5. Gide, C. and G. Rist (1956). *A History of Economic Doctrine* (2nd Edition), George Harrop & Co., London.
6. Grey, A. and A.E. Thomson (1980). *The Development of Economic Doctrine* (2nd Edition), Longman Group, London.
7. Kautilya (1992). *The Arthashastra*, Edited, Rearranged, Translated and Introduced by L.N. Rangarajan, Penguin Books, New Delhi.
8. Roll, E. (1973). *A History of Economic Thought*, Faber, London.
9. Schumpeter, J.A. (1954). *History of Economic Analysis*, Oxford University Press, New York.
10. Seshadri, G.B. (1997). *Economic Doctrines*, B.R. Publishing Corporation, Delhi.

5:3 - Research.

- i) Recognition of Omeo Kumar Das Institute of Social Change and Development by the University.

In pursuance of the Academic Council resolution No: AC:68:2002:5:3(i), the Council considered the request for recognition of Omeo Kumar Das Institute and RESOLVED that the proposal should be routed through the School Board of Social Science.

Accordingly, the matter was taken up by the School Board in its meeting held on 3rd November 2003 and its decision is reproduced below:

"Recognition of OKD Institute of Social Change & Development:

The board decided that as no rules for recognition of Institute exist in NEHU, the institute cannot be recognized. But the faculty of the institute may be recognized by the board as supervisors. The research proposals of the candidate of the OKD may be routed through a relevant NEHU department. The department will appoint a supervisor from its faculty and a joint supervisor from OKD."

The matter is placed before the Council for consideration.

5:5 ← Examination Matters.

- i) For making evaluation works as matters of 'institutional obligation.'

An agenda on 'Matter relating to early publication of results received from the Controller of Examinations vide his letter No.F.DR/Ex/Court Case/2000-6197 of 4th November, 03 is placed as Annexure -'A'.

The matter is therefore placed before the Council for consideration.

Item : Matters relating to early publication of results

In the recent meeting of the Heads of Departments, which inter decided that semester results ~~pertain~~ing to the 4th Semester should be declared within 30(thirty) days and the end Semester results pertaining to 1st, 2nd and 3rd semesters should be declared within 45(forty five) days.

Further, it is also a demand of NEHU that all semester results should be declared within 30(thirty) days.

In spite of our all out efforts for the early publication of results of the last 2nd and 4th semesters Examinations which include despatch of scripts within 2 days rather than 3 days, our experience has it that we were successful only to the extent of about 50% in respect of the last 4th Semester results, and about 25% in respect of the last 2nd Semester results.

We are of the view that under the existing provisions which does not make the task of evaluation mandatory, it is not logistically possible to bring out the 1st, 2nd, and 4th Semester results as desired.

In our opinion, early publication of result is only ~~xxx~~ feasible by changing the existing evaluation system and by incorporating the following in the Ordinance :

1. Making evaluation works as an "Institutional obligation".
2. Making evaluation totally internal with provisions that,
 - (a) "Ordinarily, a teacher shall be required to complete the task
 - (b), "Ordinarily, a teacher shall be required to complete the task of evaluation of 10(ten) UG scripts within a day".

It may also be noted that the Expert Committee on the PIL No. 1(SH) in 1997 constituted by the UGC, among others, had recommended as follows:

4.9.(ii) "The evaluated answer sheets are not returned in time by the examiners. The Committee is of the view that at this by the time when a large number of experts and committees all over the world including India are of the opinion that examination and assessment is the part and parcel of the profession of teaching, it is hardly necessary for it to emphasize that NEHU should take urgent steps towards making it mandatory for all teachers to perform the the examination duties whether as paper sellers, evaluators or invigilators as part of their duty. The plea very often put forth by the teachers that since the examination work is a "paid work", therefore, they have the option to not to undertake it " has no meaning". If the logic is taken to its conclusion then the teaching itself is a paid job as undoubtedly the teachers get their salaries. Therefore, if the extra remuneration is a problem, it may be done away with. NEHU may consider amending its relevant Ordinances to provide for mandatory examination work to be performed by the teachers as necessary part of their duty".

If the above is approved in principle by the AC/EC, a suitable instruction could be given to the Conference Section for incorporating the amendments of the concerned Ordinances.

5: 6: 1(1)

- 1) Opening of the Department of Rehabilitation Sciences – Letter dated 7th August, 2003 of Major H P S Ahluwalia addressed to the President of India

A letter dated 15th September, 2003 from P.M.Nair, IAS, Secretary to the President of India, Rashtrapati Bhavan, New Delhi concerning Major H P S Ahluwalia's proposal for opening of a Department of Rehabilitation Sciences is placed at (Annexure – 'A') for consideration of the Academic Council/ Executive Council as desired by the Deans Committee. Interim reply has been sent to the Rashtrapati Bhavan that ^{The matter} will be placed before the Academic Council.

The matter is placed before the Council for consideration.

5: 6: 1(2)

Annexure 'A'

August 7, 2003

Respected Rashtrapati Ji,

I am happy to note from the press advertisement that as a Visitor of the Central Universities you have invited the Vice Chancellor and other officials of the Ministry of Human Resource Development to interact on various issues related to education.

You are aware of the activities of the Rehabilitation Council of India(RCI), which is looking after training programmes in the field of disability sector with the cooperation of non-governmental organization and other institutions including the Universities. RCI is presently working with more than 150 institutions (NGOs and National Institutes) and is actively collaborating with 24 Universities in the areas of Human Resource Development in disability sector. Due to the lack of empathy by the Universities towards disability, the training programmes to create a pool of qualified rehabilitation professionals are lacking. University Grants Commission has taken a lead by encouraging Universities to start B.Ed. Special Education programme but this is not an end in itself.

There is a great need for increasing the number of professionals for looking after the disabled people in the country. RCI estimate (1995) had mentioned that there were more than 3,00,000 professionals needed, whereas in 2003 the total number of professionals working for disabled people will work out to be about 30,000 resulting in an acute shortage, specifically for the children privileged disabled who are located in rural areas. Since 98% of the disabled children cannot get minimal educational coverage, India's vision for 'Education to All by 2020' will remain a distant dream.

During my meetings with various Vice Chancellor of the Universities I tried to encourage them to open a separate department of Rehabilitation Sciences and also to start specialized courses in the field of rehabilitation in collaboration with RCI. The process seems to be very slow. I am aware of your keen interest in the rehabilitation of children with disabilities by even developing calipers and low weight artificial limbs and therefore take the opportunity to requesting you to kindly have the Vice Chancellors interested in opening an independent Department of Rehabilitation Sciences and to have collaborative programmes with RCI and NGOs both face to face and on distance mode using the latest information technology.

With regards,

Yours sincerely,

Sd/-

(Major H P S Ahluwalia)

Dr. A P J Abdul Kalam
H.E President of India
Rashtrapati Bhavan

Copy to: Shri. P S Baswan,
Secretary,
Ministry of Social Justice & Empowerment,
Shastri Bhavan, New Delhi

5:7:1(1)

5:7 -Affiliation cases.

i)Affiliation cases of various colleges.

The Director CDC vide letter No: CDC.A.56/2002-Vol.II 1174 dated 17-11-03 has forwarded the affiliation cases of eighteen Colleges together with the inspection Reports which is placed as Annexure -'A'

The matter is placed before the Council for consideration.

5:7: AFFILIATION ETC.

<u>S1 No.</u>	<u>NAME OF THE COLLEGE.</u>	<u>SUBJECT.</u>
1.	Tikrikilla College, Garo Hills.	Renewal of Provisional Affiliation for B.A.(Pass)course and Honours.
2.	Alpine College, Shillong.	Renewal of Provisional Affiliation for B.A.(Pass) course .
3.	St. Mary's College of Teacher's Education,	Renewal of Provisional Affiliation in B.Ed.
4.	Jaintia Eastern College, Khliehriat, Jaintia Hills.	Renewal of Provisional Affiliation for B.A.(Pass)course.
5.	Ri-bhoi College, Nongpoh - Meghalaya.	Renewal of Provisional Affiliation for B.A.(Pass)course & Honours.
6.	Thomas Jones Synod College, Jowai.	Renewal of Provisional Affiliation for B.A.(Pass)course.
7.	St. Dominic's College, Shillong.	Renewal of Provisional Affiliation for B.A.(Pass)course.
8.	Umshyrpi College, Laban, Shillong.	Opening of Honours in Philosophy & Opening of B-Commerce(Honours)
9.	Mendipathar College, Garo Hills.	Opening of Honours in English, Economics, and Garo.
10.	Jaintia Eastern College, Khliehriat, Jaintia Hills.	Introduction of Honours course in History.
11.	Sohra College, Cherrapunjee, East Khasi Hills.	Opening of Alternative English (Pass)course.
12.	Alpine College Shillong.	Opening of B-Commerce(Pass)course.
13.	St. Mary's College, Shillong.	Opening of B.C.A(Pass) and Honours.
14.	Shillong College, Shillong.	Opening of B.Sc. Computer Science.
15.	Thomas Jones Synod College, Jowai.	Introduction of Elective English.
16.	Shillong College, Shillong.	Opening of B.C.A. course (Honours)
17.	Tikrikilla College, Garo Hills.	Permanent Affiliation.
18.	<u>Miscellaneous items:</u>	
	1. Letter No. SEMC/NEHU/VC/2003/154 dated 14.11.2003 received from C.M. Jha, Director, Shillong Engineering & Management College, Laitumkhrah, Shillong.	

REPORTS
INSPECTION/OF VARIOUS COLLEGES::

Sl. No.	Name of the College.	Subject.	Recommendation of the Inspection team.	Recommendation of the Affiliation Committee Meeting.
I.	i) Tikrikilla College, Garo Hills.	a) Renewal of Provisional Affiliation for B.A. (Pass) course in English, Economics, Political Science, Philosophy, Garo, History & Assamese (MIL).	The Inspection team recommends the Extension of affiliation for a period of 3 years in the subjects asked for.	The Committee recommends that Renewal of Provisional Affiliation for three years, be granted as per Inspection team report, for the following subjects:- <u>B.A. (Pass) course in English, Economics, Political Science, Philosophy, Garo, History and Assamese (MIL). B.A. (Honours) in Political Science and Philosophy.</u>
		b) Honours in Political Science, and Philosophy.	Sd/- Prof. C.R. Marak.	The College should appoint one more teacher for MIL and one more for Economics.
			Sd/- Prof. P.K. Ganguly,	
			Sd/- Dr. B.D. Chinara	
			Sd/- Prof. S. Ganguly.	
	ii) Alpine College,	a) Renewal of B.A. (pass) Course in English, Economics, Geography, Khasi, Sociology, Political Science, History, Education, Alternative English, & MIL (Garo).	Earlier Inspection teams visited the College on 10th May, 1999, 5th April, 2000 and 11th April 2001 and laid down certain conditions for the College to be fulfilled for the continuation of the affiliation of the College. The present Inspection team visited the College on 20th May 2003, at 3.00 P.M. and made following observations: The College has not yet acquired land for Permanent housing of the Academic Activities.	The Committee fully accepted the report of the Inspection team and recommends that the Affiliation to this College <u>should not be renewed.</u>
			- The College has still not	

Contd Page

P.T.O.

SL NO. 0 NAME OF THE COLLEGE. 0 SUBJECT. 0 RECOMMENDATION OF THE INSPECTION TEAM 0

Continuing Sheet.....

Alpine College.

equipped the Library as desired by three previous Inspection committees. There is no reference collection in the Library. Library does not subscribe to any newspaper or journal. There is no reading room facilities available for the students and a marginal addition has been made to the text book collection since the last Inspection team visited the college. There is no Librarian in the College.

- However, the College has requisite number of teachers to service B.A. Pass courses only.
- On the day of the visit, the College was found to be headed by a Principal who did not have requisite qualification as laid down in NEHU Ordinance.
- The College has not fulfilled any of the conditions laid down by the previous three Inspection teams within the stipulated period of three years.

Taking into consideration above observations, the Inspection team recommends that no renewal of affiliation may be granted.

Sd/- Prof. D.R. Syiemlieh. Sd/- Prof. N. Srivastava. Sd/- Dr. Veena Saraf. Sd/- Dr. M.M. Das.
Sd/- Dr. N.M. Panda.

iii) St. Mary's College, A) Renewal of Provisional
of Teacher's Educa- Affiliation in B.Ed.
tion, Shillong.

The College has improved its infrastructure. It is functioning from its own building located in a suitable siteContd Page

SL NO	NAME OF THE COLLEGE.	SUBJECT.	RECOMMENDATION OF THE INSPECTION TEAM.	RECOMMENDATION OF THE AFFILIATION COMMITTEE MEETING.
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Continuing sheet:;:;.

St. Mary's College of
Teacher's Education,
Shillong.

Renewal of Provisional
Affiliation in B.Ed.

with adequate facilities. It has the requisite number of full time Lecturers as per NCTE requirements. Majority of the full time lecturers are however, with P.G. Degree in Education. Most of the method subjects are taught by Part time lecturers.

The Inspection team recommends renewal of affiliation for a period of three years with effect from the current session(20030. The College is however, required to recruit at least two full time lecturers qualified to teach method subject, within this period.

The Committee recommends Renewal of Provisional Affiliation for a period of three years. The College is however, required to appoint regular teachers qualified to teach method subject.

Sd/-
R. Bhattacharjee.

Sd/-
V. Saraf.

Sd/-
S.M. Sungoh.

SL NO.	NAME OF THE COLLEGE.	SUBJECT.	RECOMMENDATION OF THE INSPECTION TEAM.	RECOMMENDATION OF THE AFFILIATION COMMITTEE MEETING
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iv)

Jaintia Eastern College,
Jaintia Hills.

Renewal of B.A.(Pass)
course in English,
Khasi(
Economics, Political
Science, Education.

Renewal of Affiliation for B.A(pass)
course is recommended w.e.f. 2003,
for a period of three years. Library
facilities need to be enhanced as
per the University norms.

Sd/-
N. Hassan.

Sd/-
C.R. Agera.

Sd/-
O.J. Khar puri.

Sd/-
B.K. Mohapatra.

The Committee
recommends renewal
of Provisional
Affiliation for a
period of three years
for B.A.(Pass) Course
in English, Khasi,
History, Economics,
Political Science and
Education.

The College must
However, improve and
enhance the Library holdings
as per University norms.

Sl No.	Name of the College.	Subject.	Recommendation of the Inspection	Recommendation of the Affiliation Committee.
5)	Ri-Bhol College, Nongpoh.	a) Renewal of B.A. (Pass) Course in English, Khasi (MIL & BL), Economics, Political Science, Education, History. b) Honours in Political Sc, Economics, Education & Khasi.	The Team recommends renewal of Affiliation for B.A. (Pass) Course in English, Khasi, Economics, Political Science, Education and History and Honours in Political Science, Economics, Education and Khasi for a period of three years subject to the fulfillment of the following conditions: 1. The College needs to procure adequate of number of Books, in terms of number and also in terms of text books prescribed in the Syllabus. The College needs to appoint more teachers, especially in subject with Honours. In English, Economics, Political Sc, History and Khasi, Teachers below the norms set by the University have been appointed by the Colleg. This needs to be rectified. Signature of the Inspection member.	The Committee recommends renewal of Provisional Affiliation for 3 years for B.A. (Pass) course in English, Khasi (MIL & BL) Economics, Political Science, Education & History and Honours in Political Science, Economics, Education and Khasi subject to the fulfilment of the following conditions: 1. The College needs to appoint two more teachers in English, One in Khasi, One in Education, One in Political Science, One In Economics, and One more in History. 2. The College needs to Procure more text books prescribed in the Syllabus and also to procure more books for the Library as per University norms; 3. Teachers below the norms set by the University have been appointed by the College. This needs to be rectified.
			Sd/- Prof. B. War.	Sd/- Dr. S.N. Singh.
			Sd/- Prof. B. Mishra.	Dr. H. Srikanth

SL NO.	NAME OF THE COLLEGE.	SUBJECT.	RECOMMENDATION OF THE INSPECTION TEAM.	RECOMMENDATION OF THE AFFILIATION COMMITTEE MEETING.
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2. vt)	Thomas Jones Synod College, Jowai.	Renewal of B.A.(Pass) Course in English, Khasi MIL, G.F.C.(Man & Envi- ronment), Philosophy, Education, Economics, Political Science, History & Elective Khasi.	The Visiting team inspected the College on 24th June, 2003. It had access to its records. The College has carried out the suggestion made by the previous visiting team. The team recommends Renewal of the Affiliation for a period of 2(two) years w.e.f. July 2003 to June 2005.	The Committee recommends renewal of Affiliation for 3(three) years for B.A. (Pass) course in English, Khasi(MIL), G.F.C. (Man & Environment), Philosophy, Education, Economics, Political Sc, History and Elective Khasi.
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Sd/- N. Hassan. Sd/- C.R. Agera.

Sd/- B.k. Mohapatra. Sd/- Moses M. Naga.

Sd/- C.J. Kharpurk.

Sl.No.	NAME OF THE COLLEGE	SUBJECT	RECOMMENDATION OF THE INSPECTION TEAM	RECOMMENDATION OF THE AFFILIATION COMMITTEE MEETING
Vii	St.Dominic's College	Renewal of Provisional Affiliation for B.A. (Pass) course in English, Political Science, History, Education, Economics, Philosophy, Sociology.	<p>On 29.8.03, we inspected the St.Dominic College in the presence of :-</p> <ol style="list-style-type: none"> 1. Prof. V.Saraf, Libray Science. 2. Dr.(Mrs) S. Sungoh, Education Deptt. 3. Dr. Gurudas Das, Economics, Deptt. 4. Prof(Mrs) B. Jyrwa, Physics Deptt. who represented NEHU and Mrs. C.W.M Momin from the Education Deptt. of the Govt of Meghalaya. <p>The College represented by the sponsoring authority Mrs.J.E.Street, the Principal, and Prof. R. Bhattacharjee, and a few teachers and non teaching staff.</p> <p>Our findings are as follows:-</p> <ol style="list-style-type: none"> 1. The infrastructure was found to be in a good 	<p>In the light of the Inspection report, the University would like to make the following comments:-</p> <ol style="list-style-type: none"> 1. What Selection procedure is being followed in the appointment of Lecturer/Principal in the College. 2. The University procedure for the Selection of Lecturer/Principal should be followed. If this procedure has not been followed, all the teachers serving in the College should go through the procedure. 3. All appointments should be approved by the Governing Body.

1. 2. 3. 4.
St. Dominic College.

5. The Distribution of teachers subject wise is as follow:

(a) English.....5. (b) History.....4.

(c) Political Science ..3.

(a) Economics.....3. (b) Education.....3.

(c) Philosophy.....2. (d) Sociology.....2.

Moreover three full time Lecturers in a particular subject should be appointed to run a Pass course level.

6. With respect to the location of the College, there appears to be a dispute regarding jurisdiction in between two localities, that is LAW-U-SIB, and pohkseh.

The alleged NOC given by the headman of LAW-U-SIB is not clear. on one hand the NOC was granted in "Principle " whereas on the other hand " the NOC alongwith the terms and conditions of the Local Dorbar for setting up the college cum hostel will be given before you start the work as stated".

The alleged letter seeking for NOC from the local Dorbar appears to be of recent in nature, since it was dated only on 30.8.03, which creates suspicion.

However as per the letter 18.10.03, of the Secretary Pchkseh local Dorbar Shri.W.L. Lyngdoh IAS (DC of Ri-Bhoi District) it appears that the NOC has not been issued as the same is yet to be taken up in the forthcoming EC of the Local Dorbar Pchkseh to be held sometime in November '03. The Secretary in the said letter confirmed that the St.Dominic College is located in Pchkseh and no other Dorbar is authorized to issue NOC to the said College.

B.F.

4. The University expects that the dispute regarding permission from the local Dorbar is sorted out between

the College authority and the Dorbar.

The University should be kept informed about this.

In view of the fact that the Inspection team finds the infrastructure, Library and the teaching staff adequate, it recommends that the College be Provisionally affiliated for the year 2003-2004. However, affiliation beyond 2004, will depend on the recommendation of the Inspection team which will be sent much in advance of the 2004-05 session.

Contd P.T.C

Continuing sheet.....

1. _ _ 2. _ _ _ _ 3. _ _ _ _ 4. _ _ _ _

St. Dominic College.

Regarding appointments:-

- (a) There is no mention of any duly constituted Selection Committee or its members, for example no documentary evidence of subject experts.
- (b) Therefore neither the principal's nor the Lecturers' appointment letter contains the list of experts who recommended their appointment.
- (c) Further the above appointments were not ratified by the G.B.
- (d) Except for the Principal, there is no copy of marksheet or degree certificate of any of the lecturers.
- (e) From the list of teaching staff submitted before us, it appears that out of 21 (twenty one) teachers, 18 (eighteen) are full time employed. Whereas from the the appointment orders it is obvious that out of 21 (twenty one) teachers, 18 are parttimers and for 3 (three) lecturers it is not clear whether they are full timers or partimers. There is a contradiction between the list of teaching staff 2003 with that of the appointment orders.
- (f) On scrutinizing the appointment orders it is obvious that the appointment was conveyed to the teachers concerned on 30.6.03 only against their applications for the various posts dated 6.12.'97, 20.7.00, 8.7.'01, 3.3.'03, 15.6.'03, 21.7.'99, 19.7.'03, 5.8.'96, 11.7.'97, 20.8.'02, 13.7.'03, 15.6.'03, 30.4.'03, 21.1.'97, 22.7.'02, 30.4.'03, 16.8.'01, 10.7.'02, and 16.5.'02 respectively.

Basing from the above facts of appointment of teachers we have no hesitation to conclude that Prior to Inspection of the college the appointment has been made on part time basis only.

Sl_No / Name of the College. / Subject. / Recommendation of the Inspection team.

St.Dominic College.

- The matter for issuing NOC of the said College is the disputed subject.

From the facts stated above the Inspection team is not in a position to recommend for affiliation as this will lead to a controversy between the Traditional Institutions and NEHU authorities on one hand, and the insufficiency of documents submitted before us on the other hand.

Moreover, the authenticity of the documents placed before us is doubtful.

Before parting with the reports we would like to state that the Inspection team visited the College on 29.8.03. As the documents required were not shown, we had advised the Secretary of the College to file the proper documents so that appropriate reports could be submitted.

After a few days a file was submitted before the convener and after checking it was discovered that the necessary documents were not in order, accordingly the bearer of the file was advised to comply with the requirements.

On 22.9.2003, the file was handed over at my residence. On going through the documents I found that the insufficiency of documents mentioned above were not rectified.

1. ----- 2. ----- 3. ----- 4. -----

St. Dominic College.

It may be mentioned that on 29.8.2003, the NOC for running a College was not produced before the Visiting team. It appears that the said NOC was issued only on 8.9.2003, by the concerned headman.

As the documents discussed above, has not been furnished till today, the report of the committee could not be submitted in time, hence the delay.

The file in question alongwith the letter dated 18.9.03 from the Secretary Dorbar Shnong Pohkseh is placed herewith .

Thanking you,

Yours sincerely.

Signature of the Inspection members:-

- | | |
|--|---|
| Prof.(Mrs) B. Jyrwa.
Convener.
21.10.03. | Physics Department. |
| Prof(Mrs) V. Saraf.
Member.
21.10.03. | Library Science. |
| Dr.(Mrs) S. Sungah.
Member.
21.10.03. | Education Department. |
| Dr.Gurudas Das
Member
21.10.03. | Economics Department. |
| Mrs.C.W. Momin
21.10.03. | Education Department Govt of Meghalaya. |

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<u>SL. NO.</u>	<u>NAME OF THE COLLEGE.</u>	<u>SUBJECT.</u>	<u>RECOMMENDATION OF THE INSPECTION TEAM.</u>	<u>RECOMMENDATION OF THE AFFILIATION COMMITTEE MEETING.</u>
<u>INTRODUCTION OF HONOURS COURSE:</u>				
II. i)	Umshyrpi College, Shillong.	a) Opening of Honours in Philosophy.	The visiting team, comprising of Prof. A.S. Chandel, Dr. N.M. Panda, Dr. M.K. Das, Dr. Vanlalngnak, and Prof. Jagat Pal (convenor) inspected the Umshyrpi College, Shillong at 3.00 p.m. on 24th June, 2003 in connection with the application of the College for opening of honours subjects in Philosophy and Commerce. The team recommends that the College may be granted Provisional affiliation to open honours in Philosophy and Commerce for a period of two years subject to the fulfillment of the following conditions (a) One more teachers in Philosophy should be appointed immediately in addition to the existing faculty. (b) One more representative from the teaching staff should be nominated to the Governing Body of College. (c) The College should procure at least 500 books for each of the honours subjects.	The Committee recommends Provisional Affiliation for a Period of 3 (three) yrs for Opening of Honours in Philosophy and B. Commerce.
		b) Opening of Honours in B-Commerce.		

Dr. ^{Sd/}Vanlalngnak. A.S. ^{Sd/}Chandel. Dr. ^{Sd/}N.M. Panda. Dr. ^{Sd/}M.K. Das.
 Sd/-
 Jagat Pal.

SLNO	NAME OF THE COLLEGE.	SUBJECT.	RECOMMENDATION OF THE INSPECTION TEAM.	Recommendation of the Affiliation Committee meeting.
ii)	Mendipathar College, Garo Hills.	Opening of Honours in English, Economics & Garo.	<p>The Inspection Committee visited the College and after a thorough inspection of the Infrastructure and the teaching staff in the College decided to recommend the Upgradation of the College for teaching Honours in English, Economics and Garo subject to the fulfillment of the following conditions:</p> <ol style="list-style-type: none"> 1. One additional lecturer is appointed in Economics and English within August 2003, and the appointment is reported to the Director, CDC. 2. The Library needs to be strengthened particularly with reference to text books on quantitative Techniques. 	<p>The Committee recommends Provisional Affiliation for a period of 3(three) years for Opening of Honours in English, Economics and Garo.</p> <p>The College should appoint one additional lecturer each for Economics and English.</p> <p>The Library needs to be strengthened particularly with reference to text books on quantitative techniques.</p>

Sd/-
Prof. E. D. Thomas.

Sd/-
Prof. C. R. Marak.

Sd/-
Prof. S. Ganguly.

Sl. No.	Name of the College.	Subject.	Recommendation of the inspection team.	Recommendation of the Affiliation Committee.
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INTRODUCTION OF HONOUR COURSE:

(iii)	Jaintia Eastern College, Khliehriat, Jaintia Hills.	Introduction of Honour course in <u>History.</u>	In view of the Physical facilities and qualified teachers available, the visiting team feels that the permission for Opening of History Honour may be granted to the College. But it shall be conditional as present by the College has only four teachers, however, it may appoint one more teachers in the meanwhile.	Put up to Academic Council for decision as per the approval of the V.C. on 18.11.2003.
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SL NO. NAME OF THE COLLEGE SUBJECT. RECOMMENDATION OF THE INSPECTION TEAM.

Continuing sheet:;:;.

St.Mary's College.

St.Mary's College has a computer Lab consisting of 18 computers as detailed in the enclosed document, and have two appointed lecturers for this course. They have ordered latest edition of the requisite number of books for the BCA course and have also promised to procure more computers for the Laboratory. Also they have promised to appoint more teachers as per U.G.C. Norms before the commencement of the course.

In the light of the above we recommend that St.Mary's College, Shillong may be allowed to start B.C.C. programme from 2004 academic session. However, before they do so another Inspection team may visit the College to confirm whether they have fulfilled their commitments made to the present Inspection team.

Signature of the members of the Inspection team.

Sd/-
Prof. H.K. Mukherjee. Sd/-
Dr. M.K. Das.
10.07.03.

Sd/-
Dr. T.K. Sinha. Sd/-
Mr. P.P. Dey.
10.07.03.

The Committee re-
commends Provisional
Affiliation for a
period of three years
to start B.C.A(Pass)
and Honours programme
from the 2004 Acad-
mic session. However,
another Inspection
team may be sent
again to confirm
whether they have
fulfilled the
Commitments made.

19. Shillong College,
(vt) Shillong

Opening of B.C.A.
Course (Honours)

Report of the Inspection Team

The Inspection team comprising of the following members :-

1. Prof. B.M. Jyrwa, Deptt. of Physics, NEHU
2. Dr. N.M. Panda, Deptt. of Commerce, NEHU
3. Dr. Veena Saraf, Lib & Information Sc.,
4. Dr. T.K. Sinha, Computer Centre, NEHU
5. Prof. S.K. Srivastava, Deptt. of Maths, NEHU

Convenor, inspected the college on 18th Oct, 2003 at 10.30 a.m.

Director, DHTE, Govt. of Meghalaya or his representative could not turn up for the aforesaid inspection.

The inspection team found the following records of the college.

- (i) The pass out percentage of students in B.A., B.SC, & B-Com (Gen & Hons) courses are appreciable.
- (ii) The Fixed Deposit of the college is Rs. 17,30,260/- including updated interest in I.O.B. Shillong
- (iii) The working fund of the college is Rs. 107.73,224/- . This account is also being maintained in I.C.B. Shillong
- (iv) The college has its own building and some construction work is going on for increasing more accommodation.
- (v) As area of ground is not much, they are making double storied buildings. This is a good decision.
- (vi) The college has 12 rooms and 10 halls
- (vii) The college has a very nice Laboratory (Computer), having 30 computers there in working order and a Dot-Matrix printer.

continuing sheet-

Recommendation of the Inspection Teams.

Recommendation of the Affiliation Committee Meeting.

Shillong College, Shillong

(viii) The Library is being maintained properly with an efficient Librarian, who is able to keep library record in the computer. One can locate availability of the required books from there.

(ix) The college has already recruited 3 teachers for BCA course.

(x) The college has purchased books also for the computer course and some more books are in the pipeline. The available books are good & are according to the NEHU syllabi.

Thus the Inspection team observed that the college has adequate funds and infra-structure to start the B.C.A. (Hons) course. Computer Laboratory and Library facilities are impressive. The College management is planning to admit 50 students in the first year to start with. With 30 computers in the Lab, in working order, practical training for computer programs can be managed nicely dividing students in two batches. The teaching as well as other staff of the college are taking adequate interest in its development, under the leadership of the Principal, who is a very active lady.

At present, the College is ready to admit students for B.C.A(Hons) Ist year, In the subsequent years, they have planned to recruit more teachers for this course, and increase Library and computer facilities. It is possible, because they are getting funds from NEC and Meghalaya Government. So, seeing these records and devoted efforts of the College, the Inspection teams recommends its affiliation to NEHU for B.C.A. (Hons) course.

The Committee recommends Provisional Affiliation for a period of 3(three) years to start B.C.A.(Honours) course.

Signature of the Inspection team Members.

Sd/-
S.K. Srivastava
Convenor.

Sd/-
B.M. Jyrwa.

Sd/-
N.M. Panda.

Sd/-
Venna Saraf.

Sd/-
T.K. Sinha.

SL. NO. 0 NAME OF THE COLLEGE. 0 SUBJECT. 0 RECOMMENDATION OF THE INSPECTION TEAM. 0 RECOMMENDATION OF THE AFFILIATION COMMITTEE.

IV. PERMANENT AFFILIATION:

Tikrikilla College,
Tikrikilla, West Garo Hills.

Permanent Affiliation
for B.A. (Pass) course
in English, Assamese (MIL),
Garo (MIL), Political
Science, Economics,
Math & Environment,
History, Elective Garo
& Assamese & Philosophy.
&
Honours in Philosophy
& Political Science.

Permanent Affiliation may be
granted.

1. The College has completed 10 years of existence and has been doing quite well as can be seen from the results and their self-assessment.
2. It has been able to create a very good Library for its students. We may add that it is perhaps one of the better libraries in this region. It has good reading room and open access system of books.
3. The College has appointed qualified teachers in all the subjects that are offered.
4. It has an attractive plan for future development and we are certain that they would be able to implement it. They also have lots of land and therefore future expansion should not be a problem.
5. We are also impressed by the existing assets like the buildings etc.

Put up
to Academic
Council
for decision
as per V.C.'s
approval
dated 17.11.
2003.

In the light of these we recommend that the College
may be given Permanent Affiliation.

Sd/-
S. Ganguly.

Sd/-
P.A. Gupta.

Sd/-
J.R. Marak.

5:7:2(1)

ii) This is regarding the grant of Affiliation to the Shillong Engineering/Management College, Shillong.

The 69th Academic Council Vide Resolution NO.AC:69:5:7(i) has resolved Grant of Affiliation to the Shillong Engineering & Management College for a period 6(six)months only w.e.f. 14.12.2002 to 13.6.2003 for the following courses:-

1. Bachelor on Business Administration.
2. Bachelor on Computer Application.
3. B.E. in Computer Science & Engineering.
4. B.E. in Electronics & Communication Engineering.

and decided that no fresh admission (June 2003) onwards should take place untill further affiliation is granted to the College by the University.

The above decision was conveyed to the College Vide letter NO.CDC.A.179/2002-03/Vol.2/1071 dated 13.08.03 (Annexure 'A').

Recently, the Shillong Engineering & Management College, Vide letter No.SEMC/NEHU/VC/2003/154 dated 14.11.02 (Annexure 'B') addressed to V.C. has informed that the College has already admitted students for the session 2003-04 in the month of May, and requested their University to permit their students to give examination for the said session 2003-04.

Further, the AICTE Vide letter No.750-75-101(E)/ET/2000 dated 27.6.2003 (Annexure 'C') has given approval to the following courses:-

1. Electronics & Telecom. Engineering.
2. Computer Science & Engineering.
3. Information Technology and the approval accorded was subject to fulfillment of the conditions as at (Annexure 'C').

However, the University has granted affiliation to Computer science & Engineering only out of the above 3(three)courses.

As regards the course in Information Technology the affiliation granted by the University ends in 12/2001 and the extension could not be considered as the College has not fulfilled the conditions as per the AICTE norms, inspite of 4(four) reminders issued by the Office.

The matter is placed before the Academic council for decision.

Sd/-
Minal Miri.
Vice-Chancellor.
18.11.2003

Sd/-
B. Lyndem Loso.
Director- CDC.
18.11.2003.

(Copy) 5:7:2(2)

ANNEXURE 'A'.

Shillong Engineering & Management College
Laitumkhrach, Shillong-793003
(Recognised by AICTE, Govt of India and Affiliated to
NEHU - a Central University)

Ref: No: SEMC/NEHU/V.C/2003/154

Dated 14.11.2003.

To

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

Sub: B.E. First Semester Examination.

Dear Sir,

The University has issued the Examination program for B.E. Ist 3rd, 5th and 6th Semesters scheduled during November/December 2003 vide letter No. EX/PG/2003/6200 dated 5.11.2003. As per this examination program the Ist Semester Examination is for CSE/ECE/IT Repeater candidates only and not for new students admitted into 2003-04 session.

We had applied for 3(three) years affiliation with the University vide our letter No. NTD/NEHU/R/2002/53 dated 12.04.2002, and we assumed that we will get affiliation from the University as a normal course. A.I.C.T.E. has also given its approval for 2003-04 a copy of which was sent by them to the Registrar of the University(copy enclosed).

As a normal practice we had taken admissions into the B.E. Courses for 2003-04, in the month of may, 2003 but thereafter we received a letter from the Director, College Development Council, NEHU that no fresh admission (June 2003 onwards) should take place until further affiliation is granted to the College by the University.

In this connection kindly permit our students to give their examinations in this session on time so that their future will not be hampered.

Thanking You,
Yours sincerely,

Sd/-
C.M. Jha
Director.

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
(A Statutory Body of the Govt of India)

F.No: 750-75-101(E)/ET/200/-

Dated 27th June, 2003.

To

Secretary & Commissioner
Education Department,
Govt of Meghalaya,
Shillong-793001
Meghalaya.

The Secretary.

SUB: Extension of approval of AICTE to Shillong Engineering & Management College, Shillong 793 003, Meghalaya for the Academic Year 2003-04.

Sir/madam,

Kindly refer to the Council's earlier letter /Notice(s) advising you to shift to the permanent site on or before 30th June, 2003 or in exceptional cases up to the current Academic year.

However, keeping in view the interests of the students, the Council has taken a conscious decision to grant the Institutions yet another opportunity for shifting to permanent site before the commencement of the next Academic session i.e. 2004-05. This is the last and final chance given to the Institutions and no further appeal in the matter will be entertained. A monitoring visit shall be conducted during the Academic year 2003-04, on the temporary site.

Please note that Institutions failing to comply with this direction will be liable for punitive action.

In the light of the above decision of the Council and as per the laid down procedure, Guidelines, Norms & Standard of AICTE, I am directed to state that AICTE hereby grants of approval of extension SHILLONG ENGINEERING & MANAGEMENT COLLEGE, SHILLONG - 793003, MEGHALAYA for conducting the following undergraduate/degree level course in Engineering and technology with the annual intake against each course as indicated below:-

FULL TIME COURSES(S)	EXISTING	REVISED	ENTRY	DURATION	PERIOD
	ANNUAL INTAKE	APPROVED INTAKE	LEVEL		
ELECTRONICS & TELECOMM. ENGG.	45	45	10+2	4	2003-04
COMPUTER SCIENCE & ENGG.	45	45	10+2	4	2003-04
INFORMATION TECHNOLOGY	45	45	10+2	4	2003-04
TOTAL	135	135			

Indira Gandhi Sports complex, I.P. Estate New-Delhi-110 002

Phone: 23392506, 63-65-68, 71, 73-75/Fax: 011 23392554
Website: www.aicte-ernetin.

The approval accorded above is subject to fulfillment of the following conditions:

1. All full time faculty members as per AICTE NORMS MUST BE RECRUITED before making admissions.
2. The Institution must have Affiliation to a University for the above courses before making admissions. In the absence such affiliation, this letter of approval shall be treated as withdrawn (Order of the High Court of Madras in W.P.No.33256 of 2002 and other Batch of Petitions).
3. All the required Laboratories/Workshops/Machineries/Equipment, as per approved syllabi of the affiliating University, must be operational before making admissions.
4. The approved course(s) shall commence as per the Academic calendar of the Affiliating University.
5. If this letter of approval is received by you after the closing date of State/National Level Central Counselling for admissions in the concerned state/Union Territory, this letter of approval will not be valid for making any admission during the above specified academic year, and shall be treated as withdrawn.
6. No excess admission shall be made by the Institution during any Academic year.
7. The approval is valid only for the Academic Year 2003-04. If no further extension of AICTE approval is received beyond the Academic year 2003-2004, this Approval letter will not be valid for making any admission for the subsequent years.
8. Name of the Institution, Name of the Society/Trust, are not allowed to be changed without prior approval of AICTE. The name and title of the Institution should be such that "The Emblems and Names (Prevention of improper use) Act 12 (1950) of Government of India, is not violated in any manner.
The use of work "Indian" and /or "National" and/or "All India" and/or " All India Council" and/or Commission" in any part of the name of a Technical Institution and/or any name whose abbreviated form leads to "IIT" /"IIT"/"IISC"/"IIIT"/ "AICTE"/"UGC" shall not be permitted. These restrictions will not be applicable for those Institutions which are established with the name approved by the Govt of India.
9. In exercise of Power conferred under 10 (p) of the AICTE Act, AICTE, may inspect the Institution any time it may deem fit to verify the progress/compliance or for any other purpose.
10. Any other conditions(s) as may be specified by AICTE from time to time.

P.T.O.

In the event of infringement/contravention or non-compliance of the above conditions and /or the Provision of AICTE Act and Regulations/Guidelines/Norms & Standards as prescribed by AICTE, further actions leading to 'Reduced Intake' or "No admission or withdrawal of Approval, may be taken by AICTE and the liability arising out of such actions will be solely that of the Management of the Institution.

Yours faithfully,

Sd/-
(Prof. R.S. Gaud)
Adviser (UG)

Copy to:

1. The Regional Officer, Eastern Regional Office, AICTE.
College of Leather Technology Campus,
Salt Lake City, Sector-III, Kolkata-700098.
2. Registrar, NORTH EASTERN HILL UNIVERSITY, SHILLONG.
3. Principal,
SHILLONG ENGINEERING & MANAGEMENT COLLEGE,
SHILLONG - 793 003, MEGHALAYA.
4. Joint Director, Higher Technical Education,
Govt of Meghalaya, Shillong - 793001.
5. Guard File Bureau (UG).

5:7:2(6)

ANNEXURE 'C'

NO.:CDC.A.179/2002-03/Vol.I/1071 Dated the 13th August 2003.

(Copy)

To

The Principal,
Shillong Engineering and Management College,
Laitumkhrak,
Shillong.

Sub: Affiliation.

Sir,

I am to convey the decision of the 69th Academic Council meeting vide resolution No.AC:69:5:7: and resolved to grant Renewal of Provisional Affiliation for a period of 6(six) months only w.d.f. 14.12.2002 to 13.06.2003, on the following courses only:

1. Bachelor on Business Administration.
2. Bachelor on Computer Application.
3. B.E. in Computer Science and Engineering.
4. B.E. in Electronics and Communication Engineering.

Further, no fresh admission (June 2003 onwards) should take place until further Affiliation is granted to the College by the University.

Yours faithfully,

Sd/-
(Prof. B. Lyndem Laso)
Director,
C.D.C. NEHU, Shillong.

Copy to:-

1. The Controller of Examination, NEHU, Shillong.
2. The Deputy Registrar(Examination), NEHU, Shillong
3. The Section Officer(Confidential)Section,Examination, NEHU, Shillong.
4. The Store Incharge(Examination) Deptt, NEHU, Shillong

For infor-
mation &
necessary
action.

Sd/-
Director.

5:8:1(1)

5:8- OTHERS

- (i) Nomination of NEHU Representatives to the Governing Body of Affiliated Colleges.

The Deputy Registrar (Acad) vide letter No.F.1-3/Acad/D.Cttee/2000(Vol.II)- 8108 dt.12.9.03 inform that the Deans Committee in its meeting held on 1.7.03 has approved the following names for nomination as NEHU Representatives to the Governing Body of the Affiliated Colleges, the same is placed at Annexure 'A'

The matter is placed before the Council for consideration.

5:8:1(2)

ANNEXURE-'A'

**NORTH EASTERN HILL UNIVERSITY
SHILLONG.**

No.F.1-3/Acad/D.Cttee/2000(Vol.II)-3108

12th September, 2003.

To

The Director,
College Development Council,
NEHU, Shillong.

Sub: Nomination of NEHU Representatives to the Governing Body
of affiliated colleges.

Ref: Your letter No.CDC/C-56/Dean-Comm/2002/889 dated 10.4.03
and No.CDC/C-56/Dean-Comm/2003/924 dated 19.5.2003.

Madam,

With reference to the above, I am to inform you that the Dens Committee, in its meeting held on 1st July, 2003 has approved the following names for nomination as NEHU Representatives to the Governing Body of the affiliated college mentioned against each:

Prof. K Ismail, Department of Chemistry & - Thomas Jones Synod
Prof. MN Karna, Department of Sociology College, Jowai

Prof. RN Sharan, Department of Biochemistry & - Sankardev College
Prof. B Myrboh, Head, RSIC. Shillong.

Prof. BS Mipun, Department of Geography & - Triot Sing Memorial
Prof. HJ Syiemlieh, Department of Geography. College, Mairang.

Dr.(Ms.)P Nongkynrih, Department of Physics - Christian Academic
& Dr.(Ms.)G.Das, Centre for Applied Statistics College, Shillong.

5:8:1(3)

Dr. S Gurudev, Department of English,
Tura Campus &
Smti. JR Marak, Department of Garo,
Tura Campus.

- Ramsang College
Williamnagar.

Prof. C Nunthara, Department of Sociology &
Prof. ED Thomas Dean, School of Economics
Management & Information Sciences.

- Mawlai Presbyterian
College, Shillong.

Dr.(Ms)S.Dkhar, Department of Khasi &
Dr.B Kharlukhi, Department of Zoology

- Sngap Sing College
Mawkyiat.

Prof.(Ms.)S.Miri, Dean, School of Humanities
& Education &
Prof. RP Sharma, Department of English.

- St. Mary's College

Yours faithfully,
Sd/-

JMS Khongwir
Deputy Registrar

Copy to : The Deputy Registrar(Conf) for favour of placing the
nominations in the next Academic Council Meeting.

5:8 - OTHER

(ii) Revision of Library Rates/Regulation.

Mrs. I Majaw vide letter No. Lib/Committee/ 2003/285 dt. 31.10.03 has forwarded the resolutions passed by the 30th Library Committee held on 18th August' 03 at the Central Library which is placed as Annexure 'A' and the draft proposal for Library Revised Rates proposed by the Library Sub-committee and Library Revised Rate which is placed as Annexure 'B' and the Library Revised Rates as Annexure 'C'

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

5:8:2(2)

ANNEXURE 'A'

NORTH EASTERN HILL UNIVERSITY
Mayurbhanj Complex, Nongthymmai, Shillong-793014(Meghalaya)

No.Lib/Committee/2003/285

Date: 31 October 2003

To,

Dr. J N Nayak
Deputy Registrar
Conf./SC-ST/Annual Report

Sub: Agenda item to be placed in the Academic Council.

Sir,

I am giving below the agenda for Revision of Library Rates/Regulation and the resolution passed by the 30th Library Committee held on 18th August, 2003 at the Central Library.

Current Agenda

2. To consider revision of rates/regulation show under regulation RD-5(Vol.II) on Library.

- (a) RD-5/3 Fine for loss of Pass Book/Borrower Card.
- (b) RD-5/12 Loss of books to be replaced.
- (c) RD-5/13 Overdue book – 15 paise overdue per day for general books and 25 paise per book for overnight books with Rs.10/- from the second day.
- (d) RD-5/6(E) Caution money for teachers of affiliated colleges teachers of NEHU.
- (e) RD-5/6(F) Caution money on the special category.

Resolution :

“Resolved that the revision of rates/regulation be referred to a Sub-Committee who will considered the matter and present a draft proposal to the Academic Council”

The members of the constituted Sub-Committee which sat on the 15th September, 2003 have drawn the draft proposal of Library Revised Rates/Regulation. The same attached herewith may kindly be placed in the Academic Council for consideration and approval.

Thanking you,

Yours faithfully

Sd/-

(Mrs. I Majaw)

University Librarian

5:8:2(3)

ANNEXURE 'B'

**DRAFT PROPOSAL FOR LIBRARY REVISED RATES PROPOSED BY
THE LIBRARY SUB-COMMITTEE ON LIBRARY REVISED RATES**

Members of the Sub-Committee

1. Prof. P. Shukla - Chairman
Dean
School of Physical Sciences
NEHU
2. Prof. AS Chancel - Member
Head
Department of Library &
Information Sciences
NEHU
3. Dr. PM Chacko - Member
Head
Department of Sociology
NEHU
4. Dr. B Myrboh - Member
Reader
Department of Chemistry
NEHU
5. Mrs. I Majaw - Convener
University Librarian
NEHU

LIBRARY REVISED RATE

3. Loss of Book/Card

Existing

If a member losses a Pass Book/Card it should immediately be reported to the Librarian. The Library may issue a duplicate set of Card/Pass Book on payment of a fine of Rs.5/-

Proposed

If member loses a pass Book/Card and it should immediately be reported to the Librarian. The Librarian may issue a duplicate set of Cards/Pass Book on payment of Rs.25/-.

Category of members	No. of	Loan	Amount of	Category of members	No. of	Loan	Amount	Caution
	volum	Period	Caution		Volume	Period	Caution	Deposit
			Deposit				Deposit	
A. Teachers	20	1 month	Nil	A Teachers	20	1 month	Nil	
B. Technical Staff	6	5 days	Nil	B. Technical Staff	6	5 days	Nil	
C. Administrative Staff				C. Administrative Staff				
a) Officer	4	15 days	Nil	a) Officer	4	15 days	Nil	
b) Other Staff	4	5 days	Nil	b) Other Staff	4	5 days	Nil	
D. Students				D. Students				
a) Ph.D.	6	15 days	Rs.500/-+ Rs.50/- Library fee	a) Ph.D.	6	15 days	Rs.500/-+ Rs.50/- Library fee	
b) M.Phil	6	15 days	Rs.400/-+ Rs.50/- Library fee	b) M.Phil	6	15 days	Rs.400/-+ Rs.50/- Library fee	
c) Post Graduate	4	7 days	Rs.200/-+ Rs.30/- Library fee	c) MA/M.Com/ (i) M.Lib	4	7days	Rs.200/-+ Rs.30/- Library fee	
				(ii) M.Sc.	4	7 days	Rs.300/-+ Rs.50/- Library fee	
E. Teachers of affiliated colleges.	2	15 days	Nil	E. Teachers of affiliated Colleges	2	15 days	Rs.500/-+ Rs.50/- Library fee.	
F. Other categories	2	15 days	Rs.100/-+ Rs.10/- Lib. fee.	F. Other categories	2	15 days	Rs.500/-+ Rs.50/- Library fee.	

12. Loss of Books

If book borrowed is lost the member who borrowed the book it shall have to replace it.

In case the book is out of print on documentary evidence of the loss may be replaced as follows :

- (a) By a Xeroxed copy of the same and bound in book form.
- (b) The book may be replaced by a ~~least~~ book to be decided by the Librarian in consultation with the Head of Department.

13. Delays

Any member delaying the return of a book after the due date will be fined 25 paise per book for each day of delay in the return of a text book used for overnight use will be fined.

Any member delaying the return of a book after the due date will be fined Rs.2/- for general book and Rs.5/- for the course book for the first week. Thereafter with doubling of the amount for every subsequent week. Further, the facility of issue will also be withdrawn till the return of the book.

@ 25 paise per book for each hour of delay for the first day, Rs.10/- the second day and if the book for each day of delay in the return of a text book usef for overnight ~~xxx~~ issue will be withdrawn for one month.

19.(c) Reprography

The charges for each Xerox copy will be Rs.0.50 only (ifftth paise only)

The charges for each Xerox copy will be decided by the Librarian form time to time.

5:8:3(1)

(iii) Restructuring of the Centres of Studies.

The Executive Council vide its Resolution No:EC:116:2003:5:8:(v) considered restructuring of the Centres of Studies and Resolved that the University may have Seven Centres of Studies as given below and further decided to refer the matter to the Academic Council.

1. Centre for Distance Education.
2. Centre for Adult and continuing Education.
3. Centre for Science Education.
4. Centre for Cultural and Creative Studies.
5. Centre for Environmental Studies.
6. Centre for Applied Statistics.
7. Centre for Rural Development.

Meanwhile, a letter received from the Deputy Registrar Estt.II which is enclosed at Annexure 'A' saying that there are two more centres viz. centre for Bio-informatics and centre for Bio-technology as sanctioned under X Plan- and centre will be nine and not seven as listed under Executive Council's resolution.

The matter is placed before the Council for consideration.

5:8:3(2)

ANNEXURE 'A'

NORTH EASTERN HILL UNIVERSITY
NEHU Complex Shillong-793 022 (Meghalaya)

No.F.23-7/Estt. II/98.II-6206

Dated 24 September, 2003

To

The Deputy Registrar,
Conference,
NEHU, Shillong.

Sub: Restructuring of the Centres of Studies.

Sir,

With reference to the E.C resolution NO:EC:116:2003:3:(V) held on 21.8.2003 on the subject cited above, it may be mentioned herein that the University has two more Centres i.e. Centres for Bio-informatics and Centre for Bio-technology sanctioned under X Plan. Therefore, the total Centres will be nine and not seven as listed under E.C's resolution NO:EC:116:2003:3:(V).

The view of the above, you are requested to look into the matter and do the needful please.

Yours faithfully,

Sd/-
Deputy Registrar
Establishment-II

5:8:4(1)

- (iv) Nomination of three members to the Board of Under Graduate Studies.

The term of the following Board of Under-Graduate Studies has expired. In term of provisio (i) of the Ordinance OA-9, three members not below the rank of Reader required to be nominated by the Council to the Board of Under-Graduate Studies.

1. Board of Under- Graduate Studies in Assamese
2. Board of Under-Graduate Studies in Garo.
3. Board of Under-Graduate Studies in Hindi.

The matter is placed before the Council for consideration.

6:2:1(1)

6:2 – Appointment/Creation of Posts/Termination of Service etc.

1. Re-employment of teachers.

In pursuance of the Academic Council Resolution No.69:2003:6:2:(i) adopted in its 69th meeting held on 16th & 17th Jan/03, a committee was consolidated under the Chairmanship of Prof. A.N. Rai, to draft "Rules" for re-employment under Ordinance OE-5 Clause 9 keeping in view the U.G.C. guidelines.

The committee met twice during August & September and submitted the draft Rule for re-employment of the Universities teachers, which is placed at Annexure 'A'.

The matter is placed before the Council for consideration.

REPORT OF THE COMMITTEE ON FRAMING DRAFT 'RULES' FOR
RE-EMPLOYMENT UNDER ORDINANCE, OE-5, CLAUSE 9.

A Committee was constituted by the Academic Council vide notification No.Conf/13-5/ORD/99 (Vol.II) – 153 dated 28.6.2003 to draft 'Rules' for re-employment under the Ordinance OE-5 Clause-9, keeping in view the UGC Guidelines in this regard.

The members were:

- | | |
|----------------------------------|----------|
| 1. Prof. A.N. Rai | Chairman |
| 2. Prof. B.K. Tiwari | Member |
| 3. Dr. S. Nongbri | -do- |
| 4. Prof. B. Kharbuli | -do- |
| 5. Prof. R.N.K. Hooroo | -do- |
| 6. Deputy Registrar (Conference) | Convener |

The Committee held three meeting during August and September, 2003 and finalized the Rule 'RU-2' (Annexure I). In doing so the committee has taken into account the UGC notification of 1998 which stipulates re-employment of teachers up to the age of 65 years but bars extension of service (Annexure II), and the UGC notification of 1990 bearing No:F.1-67/79(CPP-I) dated 11.4.1990 which allows Universities to make their own procedures in this regard through Ordinance/Regulations/Rules (Annexure III). While preparing the procedure for re-employment the Committee also looked into the details of the scheme being operated at JNU, Delhi. It should be noted that except for the above mentioned notifications issued by the UGC 1990 & 1998 no other UGC document in this regard was available to the committee. A letter to UGC elicited no response (Annexure IV). Minutes of the three meetings held by the Committee are attached as Annexure V.

Sd/-	Sd/-	Sd/-	Sd/-
(Prof. B.K. Tiwari)	(Dr. S. Nongbri)	(Prof. B. Kharbuli)	(Prof. R.N.K. Hooroo)
Member	Member	Member	Member

Sd/-
(Prof. A.N. Rai)
Chairman

Sd/-
(Dr. J.N. Nayak)
Convener

NORTH EASTERN HILL UNIVERSITY RULES

RULES FOR RE-EMPLOYMENT OF TEACHERS
(Under Ordinance OE-5 Clause 9)

1. The University may re-employ a superannuated teacher up to the age of 65 years but Without extension in service.

Such teachers shall not hold any administrative position and shall not be entitled to LTC and Provident Fund. He/She shall be entitled for housing but the seniority for this will be applicable from the date of re-employment.

2. The re-employed teacher will be entitled to Pay as per the rules governing fixation of pay of re-employed persons.

The Department concerned shall provide the space and infrastructure for the Academic work.

Eligibility

1. A superannuated teacher will be eligible for re-employment provided he/she has served North Eastern Hill University for a minimum period of 5 years.
2. He/She should be academically active with a good record of service.
3. He/She should be medically fit and certified as such by NEHU C.M.O.
4. Teachers of all categories of the University fulfilling the above conditions will be eligible for consideration.

Procedure

1. The Registrar will seek the consent of the retiring teacher within one year prior to his/her retirement.
2. The said teacher will send his/her consent along with the self assessment report of the work done by him/her during the last 5 years through the Head of the Department/Dean (in case the individual applicant is the Head).
3. The University administration will examine the request and the Vice-Chancellor will seek the opinion of at least 3 senior faculty members from within the University or from outside experts related to the area of specialization of the retiring teacher.
4. On the basis of these consultations re-employment is either denied or granted for one year at a time and from a date not in continuation with the date of retirement. During this period efforts should be made to fill the vacancy by regular selection.
5. The retiring teacher should be informed about the decision at least three months before his/her retirement.

Sd/- Sd/- Sd/- Sd/-
(Prof.B.K.Tiwari) (Dr.S.Nongbri) (Prof.B.Kharbuli) (Prof. R.N.K.Hooroo)
Member Member Member Member

Sd/-
(Prof. A.N. Rai)
Chairman

Sd/-
(Dr. J.N. Nayak)
Convenor

(vi) Age of Superannuation.

The age of superannuation of University and College teachers 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.

UNIVERSITY GRANT COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI -110002

No.F.1-67/79(CPP-I)

Date 11.4.90

To

- (i) The Secretary to the
All State Governments
And Union Territories
- (ii) The Registrar,
All Universities
Including Deemed Universities.

Sub: Re-employment of superannuated teachers by the Universities and Colleges as also the age of superannuation of the teachers in Universities and Colleges-regarding.

Sir,

I am directed to say that the Govt. of India is the Ministry of Human Resource Development.(Deptt. 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 the 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".

In this context, it may be noted that the Commission had written to the Education Secretaries of all the State Governments Universities and sought the views on "that 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. upto 63 years and still considered to be fit for

6:2:1(7)

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 to 63 years and then from 60 to 65, the Commission agreed that the procedure to be followed may be left to each university to decide".

In this connection, attention is invited to this Office letter No. F.37-18/64(CDN) date the 13th October, 1967 and dated November 19, 1971.

In the case of Central University the Commission had also considered if the Universities could re-employ teachers for a limited period beyond the age of 60 years, it would be open to the University, if it is 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 statute/Ordinances in this regard.

The Commission is considering appointing a Committee for the preparation of guidelines in this connection. You are requested to furnish your views in the matter for the consideration of the Committee, as an early date.

Yours faithfully,

Sd/-

(P.L.MAKIK)

Deputy Secretary

6:2:1(8)

Annexure – IV

**NORTH EASTERN HILL UNIVERSITY
SHILLONG – 22**

No.DR:CONF:RE-EM/2003-1219

August 22, 2003

To

The Secretary
University Grants Commission
Bahadurshah Zafar Marg
New Delhi – 110 001.

Sub: Re-employment for a superannuated Teacher

Sir,

With reference to the above mentioned subject I am to inform you that NEHU has constituted a Committee to frame a draft Ordinance for re-employment of a superannuated Teacher. However, we have the extract of a UGC notification on revision of Pay scales, minimum qualification for appointment of Teachers in Universities and Colleges and other measures for the maintenance of standards, 1998 placed at Annexure 'A'. In this connection I am to request you to kindly send the existing guidelines framed by the UGC for re-employment of a superannuated teacher.

An early action in this regard is highly solicited.

With regards,

Yours faithfully,
Sd/-
Registrar

Minutes of the meetings held by the Committee for framing draft 'Rules' on Re-employment25.8.2003.

The following resolutions were taken:

1. The Chairman informed the members that at present the guidelines on re-employment of superannuated teachers are not available. The Convenor has written a letter to the UGC for a copy of the Re-employment guidelines, if any.
2. The UGC notification on revision of pay-scale issued in 1998 stipulated that no extension of service should be given beyond the age of 62 years. However, a superannuated teacher can be re-employed by the University up to the age of 65 years.
3. To distinguish between the terms 'Extension' and 'Re-employment' the Committee took recourse to Swamy's hand-book on establishment and administration (Chapter 41: extension & re-employment), and decided to go along with the interpretations given therein :
 - a) Where the services of government servant beyond the age of his superannuation are required in the same cadre post which he is holding at the time of superannuation, then such retention shall be treated as 'extension of service'.
 - b) If, however, the services of a government servant are retained in the present cadre beyond the normal age of superannuation in a post different from the one which he was holding at the time of superannuation, the same shall be treated as 'Re-employment'.
4. For framing the rules for re-employment, UGC guidelines are needed as per the term of reference of this Committee. To expedite the matter, the Committee feels that University should make an attempt to get these guidelines at the earliest, either by asking any officer of the University who is going to UGC in the near future or by deputing the Chairman and one member of this Committee.

5. The Committee decided to meet again on 22nd September, 2003 at 1.00 p.m to frame the detailed draft rules for re-employment. It was further agreed that if no guidelines become available from UGC, the Committee will go ahead with the task of framing rules keeping in view the distinction between extension & re-employment as quoted above.

22.99.2003

The following resolution were taken :

5. Minutes of the last meeting was confirmed.
6. The UGC letter No.F.1-67/79(CPP-I) dated 11.4.1990 was read out and it become apparent thereafter that the procedure to be followed for re-employment is left to the University to decide.
7. The Chairman was asked to write a note to the Academic Council for the draft rule being submitted. The note should point out :
 - I. The UGC notification of 1998 allowing re-employment up to 65 years of age, but not extension in service.
 - II. The UGC notification No.F.1-67/79(CPP-I) dated 11.4.1990, allowing the University to decided the procedure to be followed.
 - III. The distinction between the term 'Extension' and 'Re-employment'.
8. The draft rules were prepared and this will be circulated among the members in the next meeting to be held on 30.9.2003 at 1.P.m in the office chamber of the Head, Department of Bio-Chemistry.

30.9.2003

1. Minutes of the previous meeting were confirmed.
2. The Committee reviewed the draft of "RU-2" on Re-employment and approved the final draft for placement in the Academic Council.

Sd/- Sd/- Sd/- Sd/-
(Prof. BK Tiwari) (Dr.S Nongbri) (Prof.B Kharbuli) (Prof.L Horoo)

Sd/-
(Prof. AN Rai)

Sd/-
(Dr. JN Nayak)