BGONDWANA UNIVERSITY GADCHIROLI

Ordinance NO. 5 OF 2017.

EXAMINATION LEADING TO THE DEGREE OF (शिक्षण पारंगत) MASTER OF EDUCATION (ANNUAL PATTERN) (M.Ed.) Ordinance, 2017.

WHEREAS, it is expedient to provide ordinance in respect of Examination leading to the Degree of Master of Education (Annual Pattern) (M.Ed.) in the Faculty of Education for the purposes here with appearing, the Management Council is here by leased to make the following Ordinance.

- 1. This Ordinance may be called as Examination leading to Degree of (शिक्षण पारंगत) Master of Education (Annual pattern), Ordinance, 2017.
- 2. This Ordinance shall come in to force with effect from the date of its making by the Management Council.
- (i) The following shall be the Examination Leading to the Degree of Master of Education in the Faculty of

Education:-

- a) (शिक्षण पारंगत) Master of Education (M.Ed.) (Annual Pattern) (One Year Post Graduate Degree in Education).
- (ii) The Duration of the program: The duration of postgraduate (P.G.) Degree program in the faculty of Education

i.e. (M.Ed.) shall be of one academic year.

- 4 . General Objectives of M.Ed. Course shall be :
- a) To prepare professional personnel required for staffing of the colleges of Education.
- b) To prepare professional administrators and supervisors for positions of responsibilities in the Departments of Education, Educational planning and supervisory educational services, Department of Education of Institutions engaged in Educational Research and educational planning.
- c) To prepare personnel for various educational services.
- 5 Eligibility :

A candidate who has passed the B.Ed. Degree Examination of a statutory university or any other university recognized as equivalent thereto shall be eligible for admission to the course, provided he/she has secured minimum required marks as per the norms laid down by the University/Government of Maharashtra/NCTE and further the candidates should have been declared passed in the M.Ed. (CET) conducted by Government of Maharashtra subject to the revision by the GoM and University from time to time.

6 Eligibility for Admission :

Provisional admission of candidates shall be done, based on the qualifying examination marks as well as entrance test marks following the reservation policy and the guidelines issued by the University/State Government, in this respect from time to time.

7. Intake for the course shall be as prescribed by the NCTE from time to time.

8. The examination for the Degree of M.Ed. course shall be by there papers, report of sessional work, seminar, project, Records.

9. (i) A candidate desiring to appear for the M.Ed. examination must attend the Institute/ University Department recognized for this purpose by Gondwana University and NCTE.

(ii) In each paper, sessional work/seminar a student should have 75% attendance, subject to the general provision for condo nation of attendance to be provided to a student.

(iii) Student shall attend the lectures and undertake all the activities of the course as prescribed by the university.

(iv) In case a student remains absent for a particular component or activity he/she will have to make good of the subsequent course.

10. Structure of the M.Ed. (One Year) Course :

Subjects / Papers	Maximum Marks			Minimu
	Session	Theo	Tot	m Pass
	al	ry	al	Marks
A) Four Compulsory Papers : -				
(1) Philosophy of Education	20	80	100	50
(2) Advanced Educational Psychology	20	80	100	50
(3) Elements of Educational Research	20	80	100	50
(4) Educational research project work	20		100	
/Dissertation with viva voce		100		50
B) Two Optional Papers :1) History of Education in India				
2) Educational organization & Administration in				
India				
3) Comparative study of Educational systems in	20	80	100	50
U.K., U.S.A. & U.S.S.R.	20	80	100	50
4) Educational Sociology				
5) Advanced Statistics in Education	20	80	100	50
6) Guidance and Counseling				
7) Educational Technology	20	80		50
8) Teacher Education	20 20	80	100	50 50
9) Environmental Education			100	
	20	80	100	50
	20	80	100	50
	20	80	100 100	50
	20	80	100	50
Total	100	500	600	300
Aggregate Marks				300
PAPER : 4				

Formulation of research proposal, Educational Research project work/Dissertation should be completed by the end of session before annual examination.

A candidate admitted to the M.Ed. shall submit an application with formulation research project /Dissertation proposal stating (a) the subject of his project/Dissertation, (b) the recognized post graduate teacher of the faculty of education under whose supervision he/she proposes to conduct his/her research for the project for recommending approval to the subject of project /Dissertation by concern committee of the university.

At the end of the session, candidate should submit project work/Dissertation report, through the supervisor and the principal, in five copies (printed or computer typed)

Project work/Dissertation report submitted by the candidate for M.Ed examination shall be examined by a pair of internal and external examiners appointed by the university.

Final assessment shall be done after viva-voce of the candidates. Each Examiner shall examine maximum ten project work//Dissertations.

Sessional marks (out of Twenty in each written paper) of examinee shall be submitted to the controller of Examination at least one week prior to the date of commencement of the written examination in a tabulated form.

11. standard of passing:-

The M.Ed. degree in the faculty of Education will be conferred on a candidate who has pursued a regular course of study for of one academic year as prescribed in the scheme of examination.

12.Successful examinee shall, on payment of the prescribed fees receive a degree in the prescribed form, duly signed by the vice-chancellor.

13. Scheme of examination and classification of successful students :

- a) Examination will be held at the end of session. (OR as per the Programme declared given by the University.
- b) Each theory paper will be of 100 marks of which 80 marks will be for theory examination and 20 marks will be for internal assessment of sessional work.,
- c) Minimum marks to pass, in each paper shall be 50 marks obtained in theory evaluation and Internal assessment and 50% in aggregate;
- d) Internal assessment include test, assignment (sessional work) and seminar;
- **14.** Declaration of class/division shall be on the aggregate marks obtained out of the total marks as follows : -

Aggregate of total marks of	Class	
two semesters		
75 and above	Distinction	
60 to 74	First class	
50 to 59	second class	
less than 50	Fail	

Classification of Results

Note : Marks obtained in decimal of point five and above should be rounded to one.

15 Students, who have taken admission in Marathi or Hindi medium colleges, can give the examination in any medium ie. English, Marathi or Hindi. The medium of examination stated in an examination form, shall be mentioned in the mark sheet of the candidate.

373

(Statement of object and reasons)

The Academic Council in to meeting held on 09/05/2015 had approved the recommendations of the Faculty & Education in respect of introducing Annual Pattern of Examination for the Degree of Master of Education (M.Ed.) to regulate the examination scheme based on Annual Pattern, Direction NO 103 & 2012 was issued by the Vice-Chancellor.

To convert the directions issued by the Vice-Chancellor into an Ordinance, Draft Ordinance in that regard is prepared for Consideration of the Academic council and the Management Council.

SYLLABUS

FOR

The Examination for the Degree of Master of Education, 2012 and onwards

Objectives :

- 1) To prepare professional personnel required to staff College of Education at Pre-primary, primary and secondary levels;
- To prepare professional administrators and supervisors for position of responsibility in educational institutions such a Departments of Education, Educational planning and supervisory Educational Services.
- 3) To prepare persons for various psychological services such as psychological testing, personal, educational and vocational guidance, statistical services with an educational orientation.
- 4) To prepare persons for participation in programmes of examination reforms and educational evaluation.
- 5) To prepare personal through systematic study and research that will contribute to the development of educational literature and to the growth educational discipline.

GROUP – A : Compulsory Paper PAPER – I Philosophy of Education

(Marks : 80)

Objectives : To enable the students to have a scientific and comparative study of Educational Philosophy, its aims, methods, concepts and principles and their bearing on present day educational reforms.

- Along with educational implications of

 (i) Indian spiritualism,
 (ii) Idealism,
 (iii) Naturalism,
 (iv) Pragmatism,
 (v) Realism, their comparative study and criticism on each of the trend in philosophy.
- Concept of Education, Functions, Aims and Ideals of Education, Educational principles and postulates. Characteristics of Ancient Indian Education. Achievements and failures.
- 3) <u>Branches of Educational philosophy</u>: Ontology, Epistemology and Axiology.

4) <u>Modern Trends in Education :</u>

I) The place of moral and religious education :

- a) How are the arms of education and religion the same?
- b) Why religion plays an important place in the life of man?
- c) Can only moral education be enough?
- d) Why cannot we impart formal religious education?
- e) The various activities and programmes through which indirect religious teaching can be imparted at different levels.
- II) Democratic and Secular concept of Education :
 - a) Aims of education.
 - b) Democracy as a way of life.
 - c) The role that education plays in preparing a man for democratic way of life.
 - d) The needs for citizenship in democracy.
 - e) Education from the point of view of facility in general and freedom.
 - f) Education as a means for efficient democracy.
- III) Education for social change and Social Control :
 - i) What is Social change ?
 - ii) Why does it take place ?
 - iii) What is Social log?
 - iv) Why is Social control necessary even when we welcome Social change?
 - v) What role does education play in bringing about a change?
 - vi) How does it help to keep Social control?
- IV) Education for the development of International understanding :
 - a) The concept of international understanding.
 - b) The various means through which international understanding is inculcated.
 - c) Education as a powerful means for this understanding.
 - d) Attempts to be made in education at various levels for development of international understanding.
- V) Educational Philosophy and thoughts of Gandhiji and Tagore :
 - a) Similarity in the philosophy (Philosophic origin).
 - b) The two philosophers and their views with specifications.
 - c) The difference in the philosophies due to their different roles in life.
 - d) Comparison with Western Philosophies.
 - e) Criticism from present situational point of view.

Brief acquaintance with Modern Trends :

- 5) Modern Trends is Education :
 - i) Reconstructiolism,
 - ii) Essentialism,
 - iii) Existentialism,
 - iv) Logical positivism

SESSIONAL WORK

Two Essay

Reference Books :

- 1) Dr. Altekar : Education in Ancient India.
- 2) R. K. Mukerjee : Ancient Indian Education (Prologue)
- 3) Whitehead, A. N. : Aims of Education and Other Essays.
- 4) Rusk : Philosophical Bases of Education.
- 5) Dewey : Democracy and Education.
- 6) A. Meyer : Development of Education in 20^{th} Century.
- 7) Curtis, S. J. : Introduction to the Philosophy of Education.
- 8) Educational Writings of Gandhi and Togore.
- 9) M. S. Patel : Educational Philosophy of Mahatma Gandhi.
- 10) V. S. Mathur : Gandhi as an Educator.
- 11) Bertrand Russel : Education and Social Order.
- 12) Brubecher : Modern Philosophies of Education
- 13) Vishwa Bharati : Special 1947 Issue on Education.
- 14) Nunn : Education, its data and first principles.
- 15) Ratna, Nev Ratnam : New Frontiers in East and West Philosophies of Education.
- 16) Kabir : Indian Philosophies of Education.
- 17) Ramanathan : Education from Dewey to Gandhi.
- 18) O'Connor, D. J. : Introduction to the Philosophy of Education.
- 19) Theodore Brameld : Philosophy of Education in Cultural Perspectives.
- 20) गोंधळेकर : शैक्षणिक संक्षिप्त कोष (व्हिनस)
- 21) Avinashilingam, T. S. and Swaminathan, K. : World Teachers Education.
- 22) Bhatia : Theory and Principles of Education.
- 23) V. S. Mathur : A Sociological Approach to Indian Education.
- 24) Geogre Kneller : Introduction to Philosophy of Education, John Willey and Sons, London, 1971.
- 25) John B. Magee : Philosophical Analysis of Education, Harper & Row, New York, 1971.

Marks: 20

- 26) R. F. Dearden : The Philosophy of Primary Education, Routledge and Kegan Paul, London, 1970.
- Dr. Z. K. Satranjiwalla : Philosophical and Sociological Foundations of Education, S. Chand & Co., New Delhi, 1973.
- R. Raman Nayar : Philosophical and Sociological Bases of Education, College Books House Trivendrum, 1971.
- 29) Harry S. Broudy : Building a Philosophy of Education, Prentice Hall of India (Private) Ltd., New Delhi 1965.
- S. Samual Shermis : Philosophical Foundations of Education, American Book Co., New York, 1967.
- 31) V. P. Bokil, S. V. Bokil: Foundation of Education, Sadashiv Peth, Pune-30, 1970
- 32) V. P. Varma : Studies in the Philosophy of Education, Lakshmi Narain Agarwal Publishers, Agra- 1964.
- 33) डॉ. सौ. प्रतिभा सुधीर पेंडके शिक्षणाची तात्विक आणि समाजशास्त्रीय भूमिका, विद्या प्रकाशन, नागपूर
- 34) डॉ. सौ. प्रतिभा सुधीर पेंडके उदयोन्मुख भारतीय समाजातील शिक्षण, श्री मंगेश प्रकाशन

PAPER – II ADVANCED EDUCATIONAL PSYCHOLOGY

(Marks : 80)

Objectives :

To enable the students to have a scientific study of Educational Psychology, its objectives, methods, concepts and applications.

1) Learning Process :- Miniature system and theories of learning.

Stimulus Response theory connectionism, conditioning (classical and operant reinforcement), Hull's systematic behaviour theory :- Cognitive field theory (insight and Imitation). Relating learning theories to teaching in the context of various schools of psychology.

- 2) Motivation :- Theories of motivation with special reference to achievement, motivation and self-actualization.
- Teaching :- Acquaintance with the following modern trends and techniques, programmed Instruction, Flander's class room, interactional analysis system and micro teaching. Transfer of training.
- Cognitive aspects of Mind :- Theories of intelligence the present concept of intelligence. Test of aptitude, abilities and achievement, Convergent and Divergent Thinking, Creativity, Guilford's Structure of Intellect Model.

- 5) Psychology of Adjustment :- Determinants of Personality. Theories of personality with reference to trait approach, type approach and personality Dynamics, problems of Adjustment, Defense mechanisms and guidance. Test of interest and attitude.
- 6) The concept of Manas and its functions according to the Indian school of Yoga.
- 7) Brief acquaintance with methods of educational, psychological, experimental, differential, psycho-physical, clinical.
- 8) Education of emotion, Psychology of Attention, Interest and Habit formation.

SESSIONAL WORK

(Marks : 20)

Two Essays

Reference Books :

- 1) Gardner Murphy : Historical introduction to modern psychology.
- 2) Boring, Longfeld & Weld : Foundations of physiology
- 3) Chapline & Krawiec : Systems and Theories of Psychology.
- 4) Calvin, S. Hall & Gardner Lindzey : Theories of personality.
- 5) E. Lowell Kelly : Assessment of Human characteristics
- 6) Pressey, Robinson, Horrocks : Psychology in Education
- 7) Bigge & Hunt : Psychological foundations of Education
- 8) Collins, M & Drever : Experimental psychology
- 9) Valentine, C. W. : Psychology and its bearing on education.
- 10) Woodworth, R. S : Contemporary schools of psychology.
- 11) Freeman, F. S. : Theory and practices of psychological testing.
- 12) Collins, M. & Drever : Laboratory guide in psychology.
- 13) Akhilanand : Hindu psychology.
- 14) Andrews : Methods of psychology.
- 15) Reckless, W. C. & Smith : Juvenile Delinquency.
- 16) Vernon : Structure of Human Abilities
- 17) J. W. Nicole : Normal and Abnormal Psychology
- 18) Vernon : Measurement of Human Abilities.
- 19) Hall : Primer of Freudian Psychology.
- 20) Eysenck : Dimensions of Personality.
- 21) Adler : Understanding Human Nature.
- 22) Karen Horney : Neurotics of our times.
- 23) Barr, scates & Good : Methodology of Educational Research.
- 24) Bell : Projective Techniques.
- 25) Cattell : Personality
- 26) Postman : Experimental Psychology.

Following Publications of Centre of Advanced Study in Education,

M. S. University of Baroda, Baroda.

- 27) M. B. Buch : Studies in Teaching and Teacher Behaviour.
- 28) M. B. Buch & M. R. Santhanam : Communication in Classroom.
- 29) S. K. Mitra : Psychology of Teaching national lectures.
- 30) Research in teaching (Reporting of Third National Seminar)
- 31) S. P. Bhattacharya : Review of Research on Theory Teaching.
- 32) M. L. Sharma, P. M. Buch and K. Rai : Diagnosing School Personality.
- 33) B. K. Passi & M. M. Shah : Micro Teaching in Teacher Education.
- 34) I. J. Patel & Other : A Handbook of Programmed Learning.
- 35) G. B. Shah : Studies in Programmed Learning.
- 36) M. B. Buch : A Survey of Research in Education.
- 37) आ.पा. खरात— प्रगत शैक्षणिक मानसशाास्त्र

PAPER – III

ELEMENTS OF EDUCATIONAL RESEARCH

(Marks : 80)

Objectives :

- 1) To acquaint the teacher with the concept of research.
- 2) To enable the teachers to realize the significance and need of the research in the field of education.
- 3) To acquaint the teachers with various methods of research and different tools of data collection.
- 4) To acquaint the teachers with different statistics useful in research in education.
- 5) To enable the teachers to make use of different statistics in the actual research work undertaken by them.
- 6) To enable the teachers to undertake research work.
- 7) To create proper attitude in the teachers which will enable them and locate the day to day problems and try to find out solution on scientific basis by undertaking some action research.

Unit I :- Research in Education :

Significance of and need for research in Education. Special characteristics of educational research.

Unit II :- Different fields of Educational Research :

Various areas of educational research, e.g. curriculum, text-book, syllabus organisation, Administration, Guidance and counselling, equipment, methods of teaching, Teacher education, Educational measurement.

Unit III :- Tools of Data Collection :

Major Tools of Research :- Inquiry forms, Questionnaire Schedule, Checklist, Rating Scales, Attitude Scales, Observation, Interviews, Social Measures, Sociometry, Psychological Tests, etc.

Unit IV :- Types and Methods of Education Research :

- 1) Fundamental research
- 2) Applied research
- 3) Normative Survey Method
- 4) Historical Method
- 5) Experimental Method
- 6) Case study Method, Genetic Method
- 7) Action Research
- 8) Philosophical Research

Unit V :- Planning the research :

Procedure in Educational Research : The Problem and Formation of Hypothesis, Survey and collection of related information, need to know about related literature in any field of study.

Availability of sources of information. Direct and indirect-survey of the sources and collection of useful data. Organization of data-editing, classifying and Tabulating, Analysis of data, Data processing by computers, interpretation of data, formation of conclusion and generalizations.

Unit VI :- Reporting the Research :

Preliminary section, title page, acknowledgement page, preface, list of contents, tables and figures etc. The main body Introduction, the problem, the plan and the procedure for collection, analysis and interpretation of data and conclusions and Suggestions for further study. Reference Section-Foot notes, Bibliography, Appendices, Graphs. Photo prints, etc. General Precautions to be taken as regards language, Typing, binding etc.

Unit VII :- Measurement in Educational Research :

1) Measurement in Educational Research :

Sampling, the dependent and independent variables, Scaling, Measures of central tendency, Measures of variability correlation, Reliability and validity of Measurements, Statistical inferences, Testing of hypothesis. Tests of significance.

2) Experimental designs :

Ungrouped randomized experiments, Randomization of a latin-square.

Functional experiments. Factorial designs for 2 experiments in one replication.

SESSIONAL WORK

Two Essays

Reference Books :

- 1) Whitney : Elements of Educational Research.
- 2) Best : Research in Education
- 3) Dr. . Varma : An Introduction to Educational and Psychological Research.
- 4) Good, Barran and Scates : Methodology of Educational Research.
- 5) Almack : Research and Thesis Writing.
- 6) Edward : Experimental Design in Psychology.
- 7) Lindquist : Educational Measurement
- 8) Good & Scates : Methods of Research
- 9) Guilfod : Psychometric Methods.
- 10) Garette : Statistics in Psychology and Education
- 11) Cohen : Experimental Design in Psychological Research
- 12) A. S. Patel and B. P. Lulla : A Handbook of Thesis Writing.
- 13) Samant : The making of Educational Research
- 14) Corey : Action Research to Improve School Practices.
- 15) Moreno : Sociometry in the Classroom.
- 16) Hayman : Research in Education
- 17) Travers : Introduction to Educational Research
- 18) Fox : The Research Process In Education
- 19) David, J. Fox : Research Methods in Education
- 20) C. A. S. E. (Baroda) : Survey of Research in Education
- 21) Turabian Kate, L. : A Manual for Writers of Terms Papers. Theses and Dissertations.
- 22) Festingers and Katz : Research Methods in Behavioural Sentences.
- 23) Van Dalen : Understanding Educational Research, An introduction
- 24) Lewis : Experimental Designs in Education
- 25) Gupta and Das Gupta : Fundamentals of Statisticians, Vol. II
- 26) Kerlenger Fied : Fundamentals of Behavioural Research

(Marks : 20)

- 27) शैक्षणिक संशोधनः लेखक- भा. गो. बापट
- 28) शैक्षणिक संशोधनाची मुलतत्वे: लेखक– श्री. मुळे व श्री. उमाळे (ना. वि.ग्रं.नि.मं)

Psychology and Statistics

- 1) Lowell Kelly : Assessment of Human Characteristics.
- 2) Krawiec Chaplin : Systems and Theories of Psychology.

$\mathbf{PAPER}-\mathbf{IV}$

EDUCATIONAL RESEARCH PROJECT WORK/DISSERTATION WITH VIVA-VOCE

GROUP – B:

OPTIONAL PAPERS

(Any two of the following)

(Marks : 80)

PAPER – V

HISTORY OF EDUCATION IN INDIA

Objectives :

- 1) To acquaint the students with the trend of events in the field of education during the period immediately preceding the following introduction of Western learning.
- 2) To keep the students conversant with the successive administrative policies adopted and the machinery introduced for the spread of education and as well as with the reactions of the various sections of the Indian Society to the change brought about by them.
- 3) To encourage students to handle original documents which is essential for intensive research work.

Unit : I) Social impact of the introduction of Western Education :-

- a) Emergence of a New Elite.
- b) Reform movements Brahma Samaj, Prathana Samaj and Arya Samaj.

Unit : II) Freedom Movement and Education

- a) Rise of nationalism,
- b) Educationalists as leaders of the struggle for independence
- c) Educational institutions started by freedom fighters.

Unit : III) Education of India in ancient and medieval times upto 1812.

Education in ancient and medieval India -

- a) Aims and ideals of education in vogue during these periods.
- b) Educational organization and finance.
- c) Educational postulates, practices and devices.
- d) Prominent educational centers and institutions.
- e) Literary, professional and vocational education
- f) Education of Women.

Unit : IV) Growth of Education in India since 1854 under the following heads :

- a) University Education
- b) Secondary Education
- c) Basic and Primary Education
- d) Professional and Vocational Education
- e) Social Education
- f) Education of Women

Unit : V) Intensive study of the growth of the following after 1947 :-

- a) Basic Education
- b) Social Education
- c) Rural Education
- d) Universal, Free and Compulsory Education
- e) Education of Women.

SESSIONAL WORK

(Marks : 20)

Two Essays :

Reference Books :

- 1) R. K. Mukerjee : Ancient Indian Education.
- 2) Nurullah and Naik : History of Education in India.
- 3) Key : Education in India.
- 4) Radhakrishnan Commission Report 1948 (University)
- 5) Mudaliar Commission Report 1953 (Secondary)
- 6) Kothari Commission Report 1966 (National)
- 7) Bombay State Education 1855 to 1955 (Review)
- 8) Altekar : Education in Ancient India.
- 9) Basu : Indian Education in Parliamentary Papers.
- 10) Dass : Educational Systems of the Ancient Hindus.
- 11) Jaffar : Education in Muslim India.
- 12) Sen : Educational Reorganization in India.
- 13) Seshadri : The Universities in India.
- 14) Naik : Selection from Educational Records, Vol. II.
- 15) Mujumdar : The History and Culture of Indian People.

PAPER - VI

EDUCATIONAL ORGANISATION AND ADMINSTRATION IN INDIA

(Marks: 80)

- Unit: I) Factors determining the character of administration. The centralized and decentralized system of administration. The purpose of administration, functions of the Central and State authorities in respect of Education.
- Unit : II) Organization of Education Administration in India. Responsibilities of The Central Government towards Indian Education. The educational activities of the ministry of Education –
 - (a) Central Advisory Board
 - (b) Inter University Board
 - (c) University Grants Commission
 - (d) Social Welfare Boards
- **Unit : III)** UNESCO and Indian Education.
- Unit : IV) Secondary Education:- Its organization defects and plans for re-organization. The Maharashtra Secondary Education Board, its constitution and Functions. The School Code, the Mudaliar Commission Report on Secondary Education. Kothari Commission Report on National Education.
- Unit: V) University Education:- Types of University organization. Separation of the Intermediate College from University Examinations, Medium of Instruction, Rural Universities.
- Unit: VI) Primary Education, Directive laid down in the Constitution of India regarding Education. The local authorities (Zilla Parishad), Janapadas, Municipalities corporations and their duties. Compulsory Primary Education. Junior Basic and Senior Basic Schools.

The development plans in Education in the Five Year Plan periods.

Unit : VII) Supervision:- Aims and objectives, Principles of Inspection of Schools at various levels.

- Unit: VIII) (a) Technical Education :- The All India Council of Technical Education, Social Education and its organization, Library services and their organization.
 - (b) Extension Services Departments.
 - (c) All India Elementary Education Council.
 - (d) Fundamental Education, Basic Education.
- **Unit : IX**) Pattern of Educational Organization in Maharashtra.
- **Unit : X)** Training of teachers and their selection, their remuneration, their professional organizations.
- **Unit : XI**) Educational Finance and its administration, Grant-in-Aid system.

SESSIONAL WORK

(Marks : 20)

Two Essays

Reference Books :

- 1) Barr, Burton and Bruchnor : Supervision.
- 2) Mort : Principles of School Administration.
- 3) Kandel : Comparative Education
- 4) Mudaliar Commission Report, 1983.
- 5) Kothari Commission Report, 1966.
- 6) Year Book of Education : Latest Edition (Portions Relating to Organisation)
- 7) Various C. A. B. Report on Education
- 8) Narendra Deo Commission Report.
- 9) Reller and Morphet : Comparative Educational Administration.
- 10) Mishra : Financing of Education in India.
- 11) Mukerjee : Problems of Administration of Education in India.
- 12) Mukerjee : Administration of Education, Planning and Finance.

PAPER – VII

Comparative Study of Educational System in the U.K., U.S.A. and U.S.S.R.

(Marks : 80)

The present day Educational systems in U.K., U.S.A. and U.S.S.R.A comparative study of the systems of education in these countries under the following heads with comparisons of the situation obtaining in India.

- Unit : I) State and Education :- The cultural background, organization and control. A short history of Educational developments. Local and private agencies. The role of the State and Federal Governments in Education.
- **Unit : II) Pattern of Educational System:** Articulation of Pre-Primary, Primary, Secondary and Higher Education.

- **Unit : III)** Compulsory Education, Nursery School, Vocational and Technical Education, Social Education.
- **Unit : IV**) University Education, Training of Teachers.
- **Unit : V)** Social Service in Education. Counselling and Guidance.
- **Unit : VI**) Education of Special Group Backward, Handicapped and the gifted children.
- **Unit : VII**) Co-curricular and Youth Welfare Activates.

SESSIONAL WORK

(Marks : 20)

Two Essays.

Reference Books :

- 1) W. Wans : Comparative Education
- 2) Kandel : New Era in Education
- 3) Kandel and Others : Society and Education
- 4) Judd and Russell : American Education
- 5) Beatrice King : Russia Goes to School.
- 6) Clerk, J. and Others : Review of Educational Thought.
- 7) Mudaliar Commission Report, 1953.
- 8) Alexander : History of English Education.
- 9) Hoehlman : Comparative Education Systems.
- 10) King : Communists Education.
- 11) Othari Commission Report, 1966.
- 12) Rugg : Foundations of American Education.
- 13) Dent : Education Act of 1944.
- 14) Mallison : An Introduction to the Study of Comparative Education.
- 15) Dent : Education in Britain.
- 16) Dr. C. D. Indapurkar : ''अमेरिकेतील शिक्षण पध्दती''
- 17) श्री. द.ग. गोखलेः अमेरिकेतील माध्यमिक शाळा (व्हीनस प्रकाशन,पुणे)

PAPER – VIII

EDUCATIONAL SOCIOLOGY

(Marks : 80)

Unit I :

To enable the students to attain the detailed meaning, Scope of Educational Sociology as under :-

- (i) Sociology its meaning from different points of view.
- (ii) Sociology as basis of Education, Educational Sociology History, meaning, interpretations of Brown, Oltaway, Herbert, Spencer, George Payne etc.
- (iii) Scope of Educational Sociology Educational objectives, Curriculum, Teaching methods, Evaluation, Role of teacher etc.

(iv) Relationship between Educational Sociology and other Subject (i.e. History, Science, Psychology, Philosophy) with limitations.

Unit II :

To enable the students to have the perfect knowledge of basic and nature of Society, Religion and Family pertaining to following points :

- (ii) Meaning of society.
- (iii) Centrifugal and Centripetal forces of society.
- (iv) Social groups, classification of groups (Primary, Secondary and Marginal groups).
- (v) Functions of social groups (Individual) and Social, Primary and Secondary.
- (vi) Folkways, Mores and Laws.

Religion :

- (i) What is religion? The basic concept.
- (ii) Secularism-its place in Indian constitution.
- (iii) Necessity of Religious Education, Introduction of the same in all stages of Educational institutions.
- (iv) Reports of different commissions on the issue of Religious Education.

Family :

- (i) Family as an important group of Society.
- (ii) Functions of Family as an informal agency of Education.
- (iii) Its impact on Education.

Unit III :

To enable the students to know fully the process of socialization, culture, Civilization and their impact on society and Education under the following heads :

- (i) Process of socialization during all the stages of life. Man as a social animal.
- (ii) Responsibility of all groups of society over Socialization of a man.
- (iii) Socialization and Education emphasis on Indian Education.
- (iv) Meaning of culture, its scope.
- (v) Effect of culture on society.
- (vi) Culture as basis of General and Moral Education.
- (vii) Culture and civilization on Society and Education.

Unit IV :

To enable the students to study the great forces of social change and Social control under the following headlines and details :

- (i) Meaning of Social change.
- (ii) Principles on which the Social change is occurred.
- (iii) Causes of Social change.
- (iv) Factors of Social change, Physical, Biological, Technical, Cultural.

- Education and Social change : Historical background of Indian Education, Curriculum, Cooperation Community living
- (vi) Meaning of Social control.
- (vii) Formal and informal ways of Social Control :- Traditions, Folkways, Majority, Mores, Laws, Ideals, Religion and Ethics.
- (viii) Education and Social control.
- (ix) Social Attitudes-Evaluating power of social values of Social Investigation, human adjustment.

Unit V :

To enable the students to know about the interactions between individual and group and its outcomes.

- (i) What is social interaction? Its meaning and scope.
- (ii) Various types of Social interactions.
- (iii) Medium of social interaction.
- (iv) Role of Education to bring proper balance in the society.
- (v) Mass media of Instruction (Radio, Television, Cinema)

Unit VI :

To enable the students to know how the emotional and national integration should be achieved :-

- (i) National and Emotional Integration defined.
- (ii) Need of Problem.
- (iii) Inherent unifying forces.
- (iv) Barriers and obstacles in the achievement of Emotional and national integration.
- (v) Role of Education aims, curriculum, Co-curricular activities, role of educator.

Unit VII :

To enable the students to know in detail the relations of State and Education :

- (i) What is a State?
- (ii) Its function towards education.
- (iii) Relation of State of Education, Eastern and Western historical view.
- (iv) Monarchy and Education. Education in Aristocracy, Dictatorship and Education. Democracy and Education.
- (v) What is Welfare State?
- (vi) Education in a Welfare State.

Unit VIII :

Social Education. Co-operation between schools and other social agencies.

Unit IX :

Social Welfare Department – Voluntary and other Welfare agencies in India – Organization and functions.

SESSIONAL WORK

(Marks : 20)

Two Essays

Reference Books :

- 1) Brown : Educational Sociology.
- 2) Kimball and Young : Sociology
- 3) Flemings : Social Psychology of Education
- 4) Bogardus : Fundamentals of Social Psychology.
- 5) Clow : Principles of Sociology with Educational Application.
- 6) Dr. S. S. Mathur : A Sociological Approach to Indian Education
- 7) S. N. Mukerjee : Higher Education and Rural India.
- 8) Apte, D. G. : Social Education at a Glance.
- 9) Yadva, R. K. : The Indian Language Problems.
- 10) Bhatia : The Theory and Principles of Education.
- 11) Havighust and Negartan : Education and Society.
- 12) Cook and Cook : A Sociological Approach to Education.
- 13) Gore and Others : Sociology of Education
- 14) A. R. Desai : Social Background of Indian Nationalism.
- 15) Emile Durkheim : Education and Sociology.
- 16) Manhein, K and Stewart, W. A. C. : An Introduction to Sociology of Education.
- 17) D. A. Goslin : The School in the Contemporary Society.
- 18) Torsten Husen : The learning Society (Mathuen and Co. Ltd., New Fetter Lane, London, Ec. 4)
- 19) Mudaliar & Kothari Commission Repots.

PAPER - IX

ADVANCED STATISTICS IN EDUCATION

(Marks : 80)

- **Unit : I) Sampling** :- The probability methods. The non-probability methods.
- **Unit : II)** Descriptive Statistics :- Central tendency, dispersion, percentiles, skew ness, Kurtosis, Graphical representation.
- **Unit : III)** Study of correction, Linear correlations, Rank, Product moment, Contingency coefficient, Phi-co-efficient, Biserial and Tetrachloric.
- Unit : IV) Analysis of Variance
- **Unit : V)** Factor analysis, Meaning, Spearman types factors, Thurstone's factor, General factor method, the problem of rotation of axes.
- **Unit : VI**) Scaling of attitudes :- Thurstone method, Likert scale, Rammer's method.
- **Unit : VII**) Testing experimental hypothesis. The null hypothesis, The 't', the Chi-square.
- **Unit : VIII)** Reliability and validity of measures and tests.
- Unit: IX) Predication and decision process. The nature of variables, predication of attributes from attribute, predication of quantity from attribute, predication of attribute from quantity, Discriminant function. Multiple R. Regression. Absolute and differential weighting.
- **Unit : X)** Small sample Statistics

Reference Books :

- 1) Garette : Statistics in Psychology and Education.
- 2) Thurstone, L. L. : Multiple Factor Analysis.
- 3) Thomson, G. : Factor Analysis of Human Abilities.
- 4) Tate : Abilities.
- 5) Guildford, J. P. : Fundamental Statistics in Psychology and Education.
- 6) Lindquist, E. F. : Educational Measurement.
- 7) Vermas, M. : An Introduction of Educational and Psychological Research.
- 8) Coulden, C. H. : Methods of statistical Analysis.
- 9) Q. McNemar : Psychological Statistics.
- 10) Edward, A. S. : Experimental Design in Psychological Research.
- 11) Vernon : Measurement of Human Abilities.
- 12) Cronbach : Essentials of Psychological Testing
- 13) Dempster : Selection for Secondary Education.
- 14) Fruchter : Introduction to Factor Analysis.

- 15) Buros : Statistical Methodology Views.
- 16) Fisher : Statistical Method for Research Workers.
- 17) Guildford : Psychometric Methods.

SECTIONAL WORK

(Marks : 20)

One essay 10 1) 2) One Term Paper 10

PAPER - X

GUIDANCE AND COUNSELLING

(Marks : 80)

- Unit : I) Concept of guidance : Need for guidance. Educational, Vocational and Personal.
- Unit : II) Basic principles of guidance.
- Unit : III) Techniques of guidance : (A) Tests, intelligence, achievement, aptitude, personality. (B) Cumulative records, anecdotal records, case-study, interview, sociometric Techniques.
- Unit : IV) Educational guidance at different levels : Pre-primary, primary, secondary and higher.
- Unit : V) Vocational guidance : Preoperational placement and follow-up.
- Unit : VI) Occupational information (a) Collection and dissemination of information about various courses and occupations, (b) Training facilities and job opportunities. (c) Patterns of employment
- Unit : VII) Job-analysis and job profiles : Individual and group guidance.
- Unit : VIII) Adjustive guidance, the adjustment projects, defense mechanisms and identification of mal-adjustment.
- Unit : IX) Counselling - Need of counselling Principles and techniques, types counselling interviews.
- Unit : X) Recent trends and research in guidance.

SESSIONAL WORK

(Marks : 20)

Two Essays.

Reference Books :

- 1) Meyers, E. G. : Principles and Techniques of Vocational Guidance.
- 2) Shartle, C. L. : Occupational Information.

Marks

- 3) Williamson, E. G. : Counselling Adolescents.
- 4) Ruth Strang : Educational Guidance, its Principles and Practice.
- 5) Jones : Principles of Guidance.
- 6) Bingham : Aptitudes and Aptitude Testing.
- 7) Erickson and Smith : Organization and Administration of Guidance Services.
- 8) Ruth Strang : Counselling Techniques in Colleges and Secondary School.
- 9) Adams : Counselling and Guidance.
- 10) Buros : The Sixth Measurement Year Book.
- 11) Crow and Crow : An Introduction to Guidance
- 12) Drickson : The Counselling Interviews.
- 13) NCERT : Hand Book of Counselors.
- 14) Traxler : Techniques of Guidance.
- 15) Warters : Techniques of Counselling
- 16) Super : Appraising Vocational Fitness

PAPER – XI

EDUCATIONAL TECHNOLOGY

- Unit 1) Concept of Educational Technology. Its nature, function, and importance.
- Unit 2) Types of instructional materials, Principles of its selection for teaching and learning, their use and evaluation of instructional materials.
- Unit 3)Process of Communication, Communication sources, Message/Channel, Receiver,
Types-one to one, small group, mass use of Technology in Communication.
- **Unit 4**) A. V. Aids-nature, significance and contribution to teaching and learning-criteria for evaluating A.V. Material.
- Unit 5) A. V. Material-hardware and software types of A. D. aids, Preparation and use of different types of A. V. aids charts, maps, models, films, film-strips, radio, television, tape-records, work-book, tax-book. The role of principal and teachers in promoting use of educational T.V., importance of educational T.V., Viewers club.
- **Unit** 6) Educational Television-its importance, advantages and limitations, classroom utilization of education T.V. programmes.
- Unit 7) Museums-concepts, functions, types of museum-organization and classification of materials of museum, planning and organizing visits to museum and evaluation of visits.
- Unit 8) Library-concept, functions, types of library, Organization and classification of books and other reference material. Planning and organizing supervised Library

reading and its evaluation. Role of Librarian in Individualization of instruction. Role of teacher in motivating students.

Unit – 9) Sanctuaries, Botanical Gardens, Aquarium, Nature, function and significance.
 Development of school gardens and aquarium and their maintenance. Planning and organizing supervised visits/studies-evaluation of visits/studies.

Role of teacher in motivating students. Association for educational Technology.

Unit – **10**) **Programmed Instruction:-** Its concept historical background, functional characteristics, styles of programming.

Development of programmes, formulation of instructional material, specifications (terminal behaviours), content matter analysis, writing of items and frame administration and evaluation of programmes, finance, provision of liberty, adequate programmes.

Unit – **11**) Elementary knowledge of the use of computer in data processing.

Reference Books :

- Allport, F. H. Theories of Perception and the concept of structure, New York, John Wiley and Sons, 1955.
- 2) Banghart, F. W. Educational System Analysis, London, Macmillan Co., 1969, 26, 240.
- 3) Bushall, D. S. and Rappaport, D. Planned change in Education, New York, Harcourt Brace.
- Coombs, P. H. The World Educational Crisis, Allahabad (India) A. H. Wheeler and Co. Pvt. Ltd. 15 Eligin Road 196811, 241.
- Coombs, P. H. and Hallak Jacques Managing Educational Cost, New York, Oxford University Press, UNESCO Publication 1972, 288.
- (Ed) Culbertson, A and Handey, S. P.- Educational Research New Perspectives, Illinois. The interstate, Printers and Publishers Inc. Danville, 1963, 347
- Cyrs, T.E. and Lowenthal, R. A Model for Curriculum Design using a systems approach, Audio-visual Instruction, January 1970-15, 1-25.
- Devis, Robert, Alexander, H.M. Laurance, T. and Yeton S. L-Learning System Design An Approach to the Improvement of Instruction McGraw Hill book Co., 1974, 303, 342.
- (Ed) Deighton, Lec C. The Encyclopedia of Education. The System concept in Education, U.S.A. The Macmillan Co., free Press, 1971 Vol. 8583, 587.
- Hall, A. D. and Gagre, R. E. Definition of system in Modern Systems, Research for the Behavioural Scientist, W. Budkles (ed) Chicago, Aldine Publ. Co. 1968.
- Jantach, Erich Perspective of planning, Italy OECE publications, Bellagic, 27th October, 2nd November, 1968.
- Kanfman, R. A. Educational System, planning, New Jersey, Englewood Cliffs, Prentice Hall 972, 165.

- 13) Rasik, T. A. Systems Approach to Teacher Training and Curriculum Development, Parts International Instt. For Educational Planning UNESCO 1970-15.
- 14) Skiner, B. F-Beyond Freedom and Dignity New York, Alfred an Knokg, 1971, 15,
- 15) Buch, Pillo-Measurement of innovation antology of tools, Ahmedabad Sahitya Mudranalaya, 1977.
- 16) Chaurasia, G. Challenges and innovations in education, New Delhi, Sterling publs. 1977.
- 17) N.C.E.R.T. Educational Research and Innovations Committee Reports I and II 1974-8.
- 18) Khalsa, D. N. Innovative practices in teacher education at secondary level.
- Singh, T-Diffusion of innovations among training Colleges of India, Varanasi, Bharat Bharatiya Prakshan, 1978.

PAPER – XII TEACHER EDUCATION

(Marks : 80)

Objectives :

- 1) To acquaint the students with changing concepts, teacher education during various periods of educational development in the country.
- 2) To acquaint them with the principles and problems of teacher Education.
- 3) To develop in them the ability to locate and utilize professional problems.
- 4) To develop in them the ability of critical appraisal of the trends and issues in some developing and developed countries with a view to understanding their bearing on trends and issues in teacher education in India.
- Unit 1: Development of teacher education in India, Historical and Current developments at all levels – Pre-primary, Primary, Secondary and University.
- **Unit 2 :** Concept to Teacher Education, Aims and objectives of effective teacher education programme.
- Unit 3 : Organization, control and finance of teacher education programme.

The role of the national and International Agencies, e.g. UNESCO, UNICEF, IATE, Govt. of India, U.G.C., NCERT, State Govt., Professional Organizations and Private enterprise.

Curricula at different levels, Criteria for selection of trainees at all levels, review of present practice in State of Maharashtra.

Unit 4 : Teaching techniques in Teacher Education :

Lecture, lecture-cum demonstration, tutorials, seminars, discussion, symposia, workshop, supervised study, inter-disciplinary approach, field work etc. Use of subject Laboratories including language laboratory, audio-visual material, teaching machines, closed circuit television etc. Evaluation techniques in teacher education.

Unit 5 : Principles, Practice and evaluation of concept of student teaching, types of student teaching programmes in service, refresher, proservice including microteaching, role of the practicing and experimental schools.

Orientation courses, correspondence course, Types and Techniques of supervision Evaluation of Practice.

Teaching Programmes :- Grades and scores, Rating scales, e.g. Flander's interaction analysis (NCERT), Criteria of evaluation, self-evaluation, peer rating, head master's rating supervisor's rating etc.

Unit 6 : Research in Teacher Education

Need for research, Researches done at various level, Action Research and innovative practices in Teacher Education, Acquaintance with computer facilities in Educational Research.

SESSIONAL WORK

Practical connected with any two units.

10 marks each Total : (20 Marks)

References :

- 1) All India Teacher Educator's Association, "Conference Report," Delhi Model Town.
- 2) All India symposium on Teacher Education in India-Indian Publications, Ambala, 1964.
- All India Symposium of Teacher Education in India- 'Report of the Study Groups on the Education of Secondary Teachers in India', Delhi Model Town 1964.
- 4) Adaval, S. B. : 'Teacher Education in the United Kingdom' Allahabad, Garg Brothers, 1947.
- 5) Allen, E. A. : Professional Training of Teachers A Review of Research, Educational Research.
- American Association of Colleges for Teacher Education, Chicago Teacher Education for the Future, Twelth Year Book.

7) Amidon, E. J. & Flanders, N. A :

"The Role of the Teacher in the Clas-room". A manual for understanding and improving teacher class-room behaviour. Association for production Teaching Inc., 1940 Plymouth Building, Minneapolis, Minnesota – 55402, U.S.A.

- Amidon, E. J. & Peggy Amidon : Interaction Analysis Training Kit. Level I. Minneapolis Association for Productive Teaching.
- Amidon, E. J. & Peggy Amidon : Interaction Analysis Training Kit. Level II. Minneapolis Association for Productive Teaching.
- Amidon, E. J. & Peggy Amidon : Teaching Pattern Analysis Minneapolis Association for Productive Teaching.
- American Association of college for teaching Education, Co-operation Structures in School-College Relationship for teacher Education Report No. 2, 1965, Washington, D.C., U.S.A.
- Barr, A. S. & Others : Wisconsin Studies of the Measurement and Predication of Teacher Effectiveness. Dember Publication Inc., Madison 3, Wisconsim, U.S.A.
- Berday, George, Z. F and Lawyors, Joseph A : The Education and Training of Teachers, New Youk, High Court Brace and World.
- Buch, M. B. & Palsave : Roadings in Inservice Education, Anand, V. B. Patel University, 1968.
- 15) Chourasia, G : New Era in Teacher Education, Delhi Sterling Publication 1967.
- 16) Bennie, W. A.: Co-operation for Better Student-teaching Minnesota, 1966.
- 17) Ganaut, J. B. : The Education of American Teacher, New York, McGraw Hill, 1963.
- Cottrell, D. P. Ed. : Teacher Education for a Free People, The American Association of colleges of Teacher Education, New York, 1956.
- Chatterjee & D'Souza : A Training for teacher in India and England, Bombay Orient Longmans, 1959.
- 20) Committee on Plan Projects, Report on Teacher Training, Delhi Planning Commission, 1964.
- Corey, S. M. & Shukla, J. K. : Practical Class-room Research by Teacher, Delhi, Manager of Publications, Civil Lines, 1962.
- Stemphen & Corey : Inservice Education of Teachers & Educators and Administrator, Chicago, University of Chicago, 1962.
- Conant, J. B. : The Education of American Teacher, McGraw Hill Book, New York, Toranto, London, 1964.
- 24) Gage, N. L. : Hand-books of Research in Teaching.
- 25) Journal of Teacher Education, N.E.A. 1201, Sixteenth Street, Washington D. C. 20036.
- 26) Hand-book on Practice Teaching, Baroda, Faculty of Education & Psychology.
- 27) Mukherjee, S. N. : Education of Teachers in India, Part I
- 28) Mukherjee, S. N. : Education of Teachers in India, Part II

- 29) Pires, E. A. : Better Teacher Education, Delhi University, Delhi, Atmaram, 1959.
- Kaul & Menon : Experiments in Teacher Training, Delhi, Manager, Publication Division, 1954.
- 31) Roy Bina : Relationship between the Measured of success of Teachers as Students under Training and as Teachers in Schools, Doctoral Thesis, Published by the Central Institute of Education, 37, Chhatra Marg, Delhi-7 1970.
- Shah, M. M. : An Aptitude Test for Secondary Teachers, The Publication Division, M. S. University of Baroda, 1965.
- 33) Learning to be : UNESCO.

PAPER – XIII ENVIRONMENTAL EDUCATION

- **Unit I :** NEED and concept of Environmental Education; Goals; Objectives and guiding principles of Environmental Education.
- **Unit II :** Environmental Education at different stages Primary, Secondary and University Non-formal Environmental Education.
- Unit III : Environmental priorities in India. Environmental Management, population stabilization, integrated land use planning, deforestation, development of non-polluting renewable energy systems, recycling of wastes, human settlements.
- **Unit IV :** Population and community Ecology :- A brief outline of the base concept of population ecology, population characteristics.

A brief history of community ecology. Characteristics of a community, its composition, structure and development.

Unit – V : ENVIRONMENTAL POLLUTION :

Kinds of Pollution :

- Air : Pollutants in air, acid rain, green house effect, prevention and control of air pollution (in brief)
- Water : Sources of water pollution, Pollution of major rivers like Ganga and Yamuna. Brief information about the Ganga Action plan and the Ganga Project Directorate. Prevention and Control of water pollution.

- 3) Radioactive Pollution : Sources, prevention and control.
- 4) Noise Pollution : Sources, prevention and control.

Unit – VI : Environmental Impact Assessment (EIA) and environmental health. Need for EIA, Its importance, duties of the Environment Appraisal Committee (EAC) of the Department of Environment. Animals in relation to human health, Ecological change and disease water in relation to human health, stress due to Urbanization and Industrialization.

Unit – VII : Environmental Law :

A brief knowledge about Environmental Policy of India, Pollution control through Law. Brief information about the following :

1) The water (Prevention and Control of Pollution) Act. 1974.

2) The Air (Prevention and Control of Pollution) Act. 1981.

3) The Environmental (Protection) Act, 1986.

4) The Motor Vehicles Act, 1988

The Different law enforcing agencies.

Unit – VIII: Wildlife Management:

Wildlife in India, Ecological sub-regions of India. Endangered flora and fauna, Wildlife management in India, Indian Board for Wildlife (IBVL) Network of protected areas.

National parks and sanctuaries. Project Tiger A brief history of the formation and working of the World Wildlife Fund (WWF) for nature in India.

Unit – IX : Problems of environmental pollution in urban and rural India. The role of voluntary, organizations and environmental protection movements in India.

Practical Work : SESSIONAL WORK – Two Essays

(20 Marks)

Field Report : Visit to any Institute dealing with environmental problems.