

SYLLABUS

(CORE MODULES SYLLABUS FOR ENVIRONMENT STUDIES FOR UNDERGRADUATE COURSES OF ALL BRANCHES OF HIGHER EDUCATION)

UNIT 1

The multidisciplinary nature of environment studies. Definition, scope and importance. (2 Lectures)

Need of public awareness.

Natural resources :- Renewable and non-renewable resources : Natural resources and associated problems.

(a) Forest resources : Use and over-exploitation, deforestation, case studies, timber extraction, mining, dams and their effects on forest and tribal people.

(b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams - benefits and problems.

(c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

(d) Food resources : World food problem, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizers, pesticide problems, water logging, salinity, case studies.

(e) Energy resources : Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.

(f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

Role of an individual in conservation of natural resources.

Equitable use of resources for sustainable life styles. (8 Lectures)

UNIT 2

ECOSYSTEMS : Concept of an ecosystem.

Structure and function of an ecosystem.

Producers, consumers and decomposers.

Energy flow in the ecosystem.

Ecological succession.

Food chains, food webs and ecological pyramids.

Introduction, types, characteristic, features, structure and function of the following ecosystem :

(a) Forest ecosystem,

(b) Grassland ecosystem,

(c) Aquatic ecosystem,

(d) Estuarine ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) (6 Lectures)

UNIT 3

Biodiversity and its conservation.

Introduction : Definition, genetic-species and ecosystem diversity.

Biogeographical classification of India.

स्नातक - पर्यावरण अध्ययन अनिवार्य विषय

Value of biodiversity, consumptive use, productive use, social ethical, aesthetic and option values.

Biodiversity at global, national and local levels.

India as a mega-diversity nation.

Hot-spots of biodiversity.

Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.

Endangered and endemic species of India.

Conservation of biodiversity : *In situ* and *Ex situ* conservations of biodiversity. (8 Lectures)

UNIT 4

Environmental Pollution.

Definition, Causes, effects and control measures of :

(a) Air pollution,

(b) Water pollution,

(c) Soil pollution,

(d) Marine pollution,

(e) Noise pollution,

(f) Thermal pollution,

(g) Nuclear hazards.

Solid Waste Management : Causes, effects and control measures of urban and industrial wastes.

Role of an individual in prevention of pollution.

Pollution case studies.

Disaster Management : Floods, earthquake, cyclone and land slides.

Human Population and the Environment :

Population growth, variation among nations.

Population explosion - Family welfare programme.

Environment and human health.

Human Rights. Value Education. (18 Lectures)

UNIT 5

Social Issues and the Environment :

From unsustainable to sustainable development.

Urban problems related to energy.

Water conservation, rain water harvesting, watershed management.

Resettlement and rehabilitation of people; its problems and concerns, case studies.

Environmental ethics : Issues and possible solution.

Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.

Wastland reclamation.

Consumerism and waste products.

Environment Protection Act.

Air (Prevention and control of pollution) Act.

Water (Prevention and control of pollution) Act.

Wildlife Protection Act. Forest Conservation Act.

Issues involved in enforcement of environmental legislation.

Public awareness.

HIV/AIDS.

Women and child welfare.

Role of Information Technology in Environment and human health.

Case studies. (6 Lectures)


PRINCIPAL
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स्नातकोत्तर हेतु अनिवार्य विषय -

COURSE TITLE : INTELLECTUAL PROPERTY RIGHTS, HUMAN RIGHTS & ENVIRONMENT: BASICS

CREDIT: THEORY: PRACTICAL : 6	HOURS: 90 THEORY: 90 PRACTICAL : 135
MARKS: 80 + 20 THEORY: PRACTICAL :	MARKS: THEORY: PRACTICAL :

OBJECTIVE:

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data.

UNIT - 1 12 Hrs

- Patents :- Introduction & concepts, Historical Overview.
- Subject matter of patent.
- Kinds of Patents.
- Development of Law of Patents through international treaties and conventions including TRIPS Agreement.
- Procedure for grant of patents & term of Patent.
- Surrender, revocation and restoration of patent.
- Rights and obligations of Patentee
- Grant of compulsory licenses
- Infringement of Patent and legal remedies
- Offences and penalties
- Discussion on leading cases.

UNIT - 2 24 Hrs

- Meaning of Copyright, Historical Evolution,
- Subject matter of copyright.
- Literary works
- Dramatic Works & Musical Works
- Computer Programme
- Cinematographic films
- Registration of Copyrights

- Term of Copyright and Ownership of Copyrights
- Neighboring Rights
- Rights of Performers & Broadcasters
- Assignment of Copyright.
- Author's Special Rights (Moral Rights)
- Infringement of Copyrights and defenses
- Remedies against infringement (Jurisdiction of Courts and penalties)
- International Conventions including TRIPS Agreement WIPO, UCC, Paris Union, Berne Convention, UNESCO.
- Discussion on leading cases.

UNIT-3 10 Hrs

- Rights: Meaning
- Human Rights- Meaning & Essentials
- Human Rights Kinds
- Rights related to Life, Liberty, Equals & Disable.

UNIT -4 24 Hrs

- National Human Rights Commission
- State Human Rights Commission
- High Court
- Regional Court
- Procedure & Functions of High & Regional Court.

UNIT -5 20 Hrs

- Right to Environment as Human Right
- International Humanitarian Law and Environment
- Environment and Conflict Management
- Nature and Origin of International Environmental Organisations (IEOs)
- Introduction to Sustainable Development and Environment
- Sustainable Development and Environmental Governance.

SUGGESTED READINGS

1. G.B.Reddy, *Intellectual Property Rights and Law*, Gogia Law Agency, Hyderabad.
2. S.R.Myneni, *Intellectual Property Law*, Eastern Law House, Calcutta


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**COURSE TITLE : RESEARCH METHODOLOGY &
COMPUTER APPLICATION: BASICS**

CREDIT:6
THEORY: 6 PRACTICAL : 0

HOURS: 90
THEORY: 90 PRACTICAL : 0

MARKS:
THEORY: 100 (80+20)

OBJECTIVE:

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data
- Achieves skills in various research writings
- Gets acquainted with computer Fundamentals and Office Software Package .

UNIT-1 18 Hours

CONCEPT OF RESEARCH :

- ① Meaning and characteristics of research , Steps in research process , Types of research
i) Basic, applied and action research ii) Quantitative and qualitative research , Areas of research in concern discipline

SELECTION OF PROBLEM FOR RESEARCH :

Sources of the selection of the problem , Criteria of the selection of the problem , Drafting a research proposal , Meaning and types of variables , Meaning and types of hypotheses.

UNIT-2 18Hours

TOOLS OF RESEARCH :

- Meaning and general information about construction procedure of (i) Questionnaire, (ii) Interview, (iii) Psychological test, (iv) observation (v) Rating scale (vi) Attitude scale and (vii) check list , Advantages and disadvantages of above tools


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SAMPLING :

(Meaning of population and sample, Importance and characteristics of sample) (Sampling techniques - i) Probability sampling : random sampling, stratified random sampling, systematic sampling, cluster sampling ii) Non-probability sampling: incidental sampling, purposive sampling, quota sampling)

UNIT-3

18 Hours

METHODS OF RESEARCH:

(Meaning and conducting procedure of following methods of research : Historical method, Survey method, Case study, Causal comparative method, Developmental methods, Experimental methods)

UNIT-4

18 Hours

TREATMENT OF DATA:

(Level of measurements of data) (Steps in treatment of data: editing, coding, classification, tabulation, analysis and interpretation of results)

WRITING RESEARCH REPORT:

Sections of report : Preliminary section, Content section : various chapters, Supplementary section : appendices, references, abstract, Format and style

UNIT-5

18 Hours

Computer Fundamentals:

Computer System : Features, Basic Applications of Computer, Generations of computers.

Parts of Computer System : Block Diagram of Computer System ; Central Processing Unit (CPU) ; Concepts and types of Hardware and Software, Input Devices - Mouse, Keyboard, Scanner; Bar Code Reader, track ball ; Output Devices - Monitor, Printer, Plotter, Speaker ; Computer Memory - primary and secondary memory, magnetic and optical storage devices.

Operating Systems - MS Windows : Basics of Windows OS ; Components of Windows - icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders ;

Word Processing - MS Word : Creating, Saving, Opening, Editing,

Formatting, Page Setup and printing Documents ; Using tables, pictures, and charts in Documents ; Using Mail Merge sending a document to a group of people and creating form, letters and label. Spreadsheet - MS Excel : Opening a Blank or New Workbook, entering data/Function/Formula into worksheet cell, Saving, Editing, Formatting, Page Setup and printing Workbooks. Presentation Software - MS Power Point : Creating and enhancing a presentation

SUGGESTED READINGS

Agrawal, Y. P. (1988). *Better sampling : Concepts, Techniques and Evaluation*. New Delhi : sterling Publishers Private Ltd. Best, J. W. (1993).

Research in Education (6th ed.) New Delhi : Prentice-Hall of India Pvt. Ltd.

Brooto, K. D. (1992) *Experimental design in Behavioral Research* (2nd ed)

New Delhi : Wiley Eastern Limited.

Daxgupta, A. K. (1968). *Methodology of Economic Research*.

Bombay: Asia Publishing House. Edwards, A. L. (1957).

Techniques of Attitude Scale construction. New York : Appleton-Century

Gall, M. D., Gall, J. P. and Borg, W. R. (2007). *Educational Research : An introduction*

(8th ed.) Coston : Allyn and Bacon.

Garrett, H. E. & Woodworth, R. S. (1969). *Statistics in Psychology and Education*. Bombay : Vakils, Fecffer & Simons Pvt. Ltd.

Goode, W. J. & Hatt, Paul K. (1952). *Methods in Social Research*. New York : McGraw-Hill.

Gopal, M. H. (1964). *An Introduction to research Procedure in Social Sciences*. Bombay : Asia Publishing House.

Hillway, T. (1964) *Introduction to Research* (2nd ed.) Noston : Houghton Mifflin.

Hyman, H. H., et al. (1975). *Interviewing in Social Research*.

Chicago : University of Chicago Press.

Kerlinger, F. N. (1983) *Foundation of Behavioural Research*. (2nd


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