

VAC 2

CREDITS: 2

ENVIRONMENTAL SCIENCE

Unit 1: Introduction to Environmental Studies

- Multidisciplinary nature of environmental studies;
- Scope and importance;
- Concept of sustainable development

Unit 2: Ecosystems

- What is an ecosystem? Structure and function of ecosystem: Energy flow in an ecosystem: food chains, food web and ecological succession. Case studies of the following ecosystems:
 - a) Forest ecosystem
 - b) Grassland ecosystem
 - c) Aquatic ecosystems (ponds, streams, lakes, rivers)
 - d) Mountain ecosystem

(8 lectures)

Unit 3: Natural Resources: Types, Renewable and Non-renewable Resources

- Land resources : land use change; land degradation, soil erosion and desertification
- Forest resources: Deforestation: Causes and impacts due to mining, Construction of big dams and their effects on forests and people.
- Water resources: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state: Indo-China, Indo-Bangladesh, Cauveri disputes) .
- Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies – coal mining, crude oil extraction.

Unit 4: Biodiversity and Conservation

- Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex situ conservation of biodiversity.
- Ecosystem and diversity services: Ecological, economic, social, ethical, aesthetic and informational value.

(8 lectures)

Unit 5: Environmental Pollution

- Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management: Control measures of urban and industrial waste.
- Pollution case studies – Bharalu river, Deepor Beel, Kolong river

(8 lectures)

Unit 6: Environmental Policies & Practices

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of pollution) Act; Wildlife Protection Act; Forest

Conservation Act. International agreements, policies and treaties; Montreal and Kyoto protocols and Convention on Biological Diversity (CBD), CITES

- Nature reserves, tribal populations and rights, and human wildlife conflicts in the context of Assam

Unit 7: Human Communities and the Environment

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquake, cyclones and landslides
- Environmental movements: Chipko, Silent valley, Narmada Bachao, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (CNG, electric vehicles, green energy, waste minimization)

Unit 8: Field work

- Visit to an area to document environmental assets : river/forest/flora/fauna, etc
- Visit to a local polluted site - Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems- pond, river, stream
(Equivalent to 8 lectures)

Suggested Readings:

1. Bharucha Erach : Text book on Environmental Studies, UGC, New Delhi
2. Carson, R 2002. Silent Spring. Houghton Mifflin Harcourt.
3. De A.K.: Environmental Chemistry, Wiley Eastern Ltd.
4. Kaushik Anubha and C.P.Kaushik : Perspective in Environmental Studies, New Age International
5. Rajagopalan, R. (2018). Environmental Studies. (3rd Edition) Oxford University Press
6. S. C. Santra (2011): Environmental Science, New Central Book Agency

SEC 2

CREDITS: 3

OFFICE MANAGEMENT AND PRACTICES

UNIT I :Modern Office and Its Functions: Meaning of Office, Office Work, Office Activities, the Purpose of an Office, Office Functions, Importance of Office, the Changing Office Scene

UNIT II : Office Management: Elements of Office Management, Functions of Office Management, Office Manager, Functional Office Management, Administrative Office Management, Scientific Office Management
Office Organization: Meaning and Definitions, Benefits of Good Organization, Steps in organizing

UNIT III : Administrative Arrangements and Physical Conditions: Office Accommodation and its Importance, Factors Influencing Choice of Office Accommodation, Office Layout- Meaning, Importance and Principles, Steps in Office Layout

UNIT IV; Office Automation: Definition, Scope of New Office Technology, Automation- Feasibility, Management Structure and Automation

Practicals:

Designing of Various Office Forms (Purchase Requisition Form, Progress Report, Employee Personal Information Form, Office Supply Order Form, Incident Reports, Quality Control, Contact Tracing, Feedback Form)

Suggested Books:

1. Office Management, R. K. Chopra, Himalaya Publishing House
2. Office Management, R. S. N. Pillai and Bagavathi, S. Chand
3. Modern Office Management, R. S. N. Pillai and Bagavathi, S. Chand

MULTI 2

CREDITS: 3

MIS AND DATABASEMANAGEMENT

Unit 1: The meaning and use MIS, System View of Business, Process of MIS, Development of MIS within the organization, Management Process, Information Needs, System Approach in Planning Organizing and Controlling MIS.

Unit2:Planning, Implementation and Controlling of Management Information System; Fundamentals of Data Processing, Computer Operation of Manual Information System, Components of Computer Systems, Flow Chart, Conversion of Manual to Computer Based Systems,ComputerSystemsSoftware,ApplicationSoftware,TelecommunicationModem.

Unit 3: System Design: System design consideration, input/output design, forms design, file organization and database, data management, file design, program design, control and security.

Unit4:Introduction, BasicConceptandDefinitions:DataandInformation,DataVsInformation, Data Dictionary, Data Item or Field, Record, Definition of DBMS, Applications of DBMS, File processing system Vs DBMS, Advantages and Disadvantages of DBMS.

Users of DBMS: Database Designers, Application programmer, Sophisticated Users, End Users, Views of Data.

Unit 5 :Data Models: Object Based Logical Model, Object Oriented Data Model, Entity Relationship Data Model, Record Base Logical Model: Relational Model, Network Model, Hierarchical Model, Entity Relationship Diagram(ERD), Examples of ERD

Practical Topics:

1. Installation of MySQL/Microsoft SQL(*anyone*)
2. Table Creation using SQL
3. Simple Queries
4. Nested Queries

Suggested Books:

2. Bhatnagar,S.C.andK.V.Ramani,ComputersandInformationManagement,PrenticeHall ofIndiaPrivateLtd.
3. GoyalD.P., Management Information Systems (MIS), Deep & Deep Publications.

4. Database Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition.
5. Fundamentals of Database Systems, Elmasri Navathe, Pearson Education

AEC 2

CREDITS: 2

BUSINESS COMMUNICATION-2

Unit I: Forms of Communication, Barriers of Communication, Audience analysis, Developing Positive attitude, Group Discussion.

Unit II: Business Writing, Memorandum, Circulars, Notices, Agenda, Minutes, Job application

Unit III: Report Writing – Importance, Types of Reports ,Structure of reports, Characteristics of reports.

Unit IV: English Vocabulary, listening and speaking skills