

**Scheme of Examination and  
Courses of Reading for B.Com. (Hons.)**

**SEMESTER-I (2019)**



**SCHOOL OF OPEN LEARNING  
University of Delhi**

*Syllabus Applicable for the students seeking admission to  
B.A. (Hons.) Political Science Course in 2019*

## B.COM. (HONS.) SEMESTER – I (2019)

### CORE-COURSE

1. Financial Accounting
2. Business Law

***Compulsory***

### ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)

Environmental Science

***Compulsory***

### GENERIC ELECTIVE

1. Economics : Introductory Microeconomics

***Compulsory***

## **B.COM. (HONS.) SEMESTER – I (2019)**

### **1. FINANCIAL ACCOUNTING**

#### **Course Objective**

This course provides conceptual knowledge of financial accounting and the techniques for preparing accounts in different types of business organisations.

#### **Course Learning Outcomes**

After completing the course, the student shall be able to:

CO1: understand the theoretical framework of accounting and to prepare financial statements

CO2: explain and determine depreciation and value of inventory

CO3: learn accounting for hire purchase transactions, leases, branches and departments

CO4: understand the concepts of partnership firm and prepare accounts for dissolution of a partnership firm

CO5: develop the skill of preparation of trading and profit and loss account and balance sheet using computerized accounting.

#### **Course Contents**

##### **Unit-1: Introduction**

Conceptual Framework: Accounting principle, Concepts and Conventions Introduction to Accounting Standards and Indian Accounting Standards (AS & Ind AS), Accounting Process: Journal, ledger, Trial Balance, Financial Statements (overview) Capital Expenditure (and Receipts), Revenue Expenditure (and Receipts) and Deferred Revenue Expenditure. Preparation of Financial Statements of a profit making sole proprietorship trading firm with additional information, Preparation of Financial Statements of a not for profit organisations.

##### **Unit-2: Depreciation Accounting and Inventory Valuation**

Accounting for Plant Property and Equipment & Depreciation: Meaning of Depreciation, Depletion and amortization, Objective and Methods of depreciation (Straight line, Diminishing Balance), Change of Method, Inventory Valuation: Meaning, Significance of Inventory Valuation, Inventory Record System-Periodic and Perpetual, Methods of Inventory Valuation-FIFO, LIFO and Weighted Average

*(Relevant accounting Standards as applicable)*

##### **Unit-3: Special types of Accounting**

Hire Purchase Accounting: Calculation of Interest, Partial and Full Repossession, profit Computation (Stock & Debtors System only), Accounting for Leases: Concept, Classification of leases (Simple practical problems), Accounting for Branches (excluding foreign branches): Dependent branches ('Debtors system' and 'Stock & debtors System') and overview of Independent branches. Departmental Accounting: Concept, Type of departments, Basis of

allocation of departmental expenses, Methods of departmental accounting (excluding memorandum stock and memorandum mark-up account method)

(Relevant accounting Standards as applicable)

#### **Unit-4: Accounting for Partnership Firm**

Partnership accounts: Fundamentals, Admission, Retirement and Death of a partner (only an overview), Accounting for Dissolution of Partnership Firm: Dissolution of Partnership Firm including Insolvency of partners (excluding sale to a limited company), Gradual realization of assets and piecemeal payment of liabilities

#### **Unit-5: Computerized Accounting System**

Computerized Accounting System: Computerized accounts by using any popular accounting software: Creating a company; Configure and Features settings; Creating Accounting Ledgers and Groups, Creating Stock Items and Groups; Vouchers Entry; Generating Reports – Cash Book, Ledger Accounts, Trail Balance, Profit and Loss Account, Balance Sheet, Funds Flow Statement, Cash Flow Statement, Selecting and Shutting a Company; Backup and Restore of Data of a Company

**Note:** Latest Accounting Standards to be followed

#### **References**

- Goyal, Bhushan Kumar and H.N. Tiwari, Financial Accounting , Taxmann
- Kumar, Alok. Financial Accounting, Singhal Publication.
- Lt Bhupinder. Financial Accounting – Concepts and Applications, Cengage
- Monga, J R. Financial Accounting: concept and Applications. Mayur paper Backs, New Delhi
- Sehgal, Ashok & Deepak Sehgal. Fundamentals of Financial Accounting, Taxmann
- Tulsian, P C. Financial Accounting, Tata McGraw Hill New Delhi
- Lal, Jawahar, Seema Srivastava & Abrol, Shivani. Financial Accounting Text and problems, Himalaya Publishing House, New Delhi.

#### **Additional Resources**

- Charles, T Horngren, Gart L. Sundem, John A Elliot and Donna R. Philbrick. *Introduction to Financial Accounting*, Pearson.
- Leonardo, A. Robinson, James R. Qanis, C. Wayne Alderman, *Accounting Information Systems: A cycle Approach*. Publisher Wiley.
- Marshall, B Romney and Paul, John Steinbart, *Accounting Information Systems*, Pearson Education Limited.
- Robert, L. Hurt, *Accounting Information Systems: Basic Concepts and Current Issues*, McGraw Hill.

**Note:** Latest edition of readings may be used

#### **Teaching Learning Process**

Theory/ numerical with examples, Practical Lab Lectures

## **Assessment Methods**

- There shall be 4 credit hours for lectures + one credit hour (Two Practical Periods per week per batch) for practical lab + one credit hour for tutorials (per group)
- Examination scheme for computerized accounting system – Practical for 20 marks. The practical exam will be of one hour
- Theory exam shall carry 80 marks (Including Internal Assessment of 25 Marks). The theory exam will be of 2.5 hours

## **Keywords**

Financial Statements, Depreciation, Inventory Valuation, Hire Purchase, Branch Accounting, Departmental Accounting

## **2. BUSINESS LAWS**

### **Course Objective**

To impart basic knowledge of the important business laws relevant for conduct of general business activities in physical and virtual spaces along with relevant case laws.

### **Course Learning Outcomes**

After completing the course, the student shall be able to:

CO1: understand basic aspects of contracts for making the agreements, contracts and subsequently enter valid business propositions.

CO2: be able to recognize and differentiate the special contracts and identify their appropriate usage at varied business scenarios.

CO3: equip the students about the legitimate rights and obligations under The Sale of Goods Act

CO4: enable with skills to initiate entrepreneurial ventures as LLP

CO5: understand the fundamentals of Internet based activities under The Information and Technology Act.

### **Course Contents**

#### **Unit I: The Indian Contract Act, 1872**

Contract – meaning, characteristics and kinds, Essentials of valid contract - Offer and acceptance, consideration, contractual capacity, free consent, legality of objects. Void agreements. Discharge of contract – modes of discharge including breach and its remedies.

#### **Unit II: Special Contracts**

Quasi – contracts, Contract of Indemnity and Guarantee, Contract of Bailment and Pledge  
Contract of Agency

#### **Unit III: The Sale of Goods Act, 1930**

Contract of sale, meaning and difference between sale and agreement to sell. Conditions and warranties. Transfer of ownership in goods including sale by non-owners. Performance of contract of sale. Unpaid seller – meaning and rights of an unpaid seller against the goods.

#### **Unit IV: The Limited Liability Partnership Act, 2008**

Salient Features of LLP, Difference between LLP and Partnership, LLP and Company LLP Agreement. Nature of LLP, Partners and Designated Partners, Incorporation Document

Incorporation by Registration, Registered office of LLP and change therein. Change of name, Partners and their Relations. Extent and limitation of liability of LLP and partners. Whistle

blowing. Taxation of LLP. Conversion into LLP. Winding up and dissolution of LLP.

### **Unit V: The Information Technology Act 2000**

Definitions under the Act. Digital signature. Electronic governance. Attribution, acknowledgement and dispatch of electronic records. Regulation of certifying authorities. Digital signatures certificates. Duties of subscribers under the Act. Penalties and adjudication. Offences as per the Act.

#### **References**

- Singh, Avtar.(2018). *The Principles of Mercantile Law*. Lucknow. Eastern Book Company.
- Sharma, J.P. and Kanojia S. (2019). *Business Laws*. New Delhi. Bharat Law House Pvt. Ltd.
- Tulsian P.C. (2018). *Business Law*. New Delhi.Tata McGraw Hill.
- Jagota R. (2019). *Business Laws*. MKM Publishers ScholarTech Press.

#### **Additional Resources**

- Information Technology Rules 2000 with Information Technology Act 2000, Taxmann Publications Pvt. Ltd., New Delhi.
- Kuchhal, M C. (2018). *Business Laws*. New Delhi. Vikas Publishing House.
- Arora, S. (2015). *Business Laws*. New Delhi. Taxmann
- Sharma, J.P. and Kanojia S. (2015). *Vyavsayik Sanniyam*, Delhi University Hindi Cell.(For Hindi)

**Note: Latest edition of readings may be used**

#### **Teaching Learning Process**

The teaching -learning processes play a vital role in instilling in the student the curiosity to study the subject law. It includes lectures through presentations of case laws, expert lectures, case study approach is widely followed, role plays, seminars, tutorials project- based learning. Case laws comprehension and higher-order skills of reasoning and analysis will be encouraged through teaching strategies.

#### **Assessment Methods**

The assessment methods of this course is properly aligned with teaching learning processes and anticipated learning outcomes. It includes oral and written tests, case presentations, peer evaluation, problem solving exercises, observation of practical skills through case laws and viva voce interviews.

#### **Keywords**

The Indian Contract Act, 1872, The Sale of Goods Act, 1930, The Limited Liability Partnership Act, 2008

# Environmental Studies

Compulsory course on Environmental Studies at UG level (AECC I)

## Course Learning Outcomes

*The course will empower the undergraduate students by helping them to:*

- i. Gain in-depth knowledge on natural processes and resources that sustain life and govern economy.
- ii. Understand the consequences of human actions on the web of life, global economy, and quality of human life.
- iii. Develop critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.
- iv. Acquire values and attitudes towards understanding complex environmental- economic-social challenges, and active participation in solving current environmental problems and preventing the future ones.
- v. Adopt sustainability as a practice in life, society, and industry.

## Unit 1

### Introduction to Environmental Studies (2 lectures)

- Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere
- Scope and importance; Concept of sustainability and sustainable development; Brief history of environmentalism

### Suggested Readings

1. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). *Environment*, 8th Edition. Wiley Publishing, USA. **Chapter 1** (Pages: 1-17); **Chapter 2** (Pages: 22-23); **Chapter 3** (Pages: 40, 41); **Chapter 4** (Pages: 64, 66).
2. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 1** (Page: 3-28).

## Unit 2

### Ecosystems (6 lectures)

- Definition and concept of Ecosystem
- Structure of ecosystem (biotic and abiotic components); Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis
- Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries); importance and threats with relevant examples from India
- Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration

### Suggested Readings

1. Odum, E.P., Odum, H.T., and Andrews, J. (1971). *Fundamentals of Ecology*. Saunders, Philadelphia, USA. **Chapter 1** (Pages: 1-16); **Chapter 2** (Pages: 18-76); **Chapter 10** (Pages: 414-458).
2. Raven, P.H., Hassenzuhl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapter 3** (Pages: 38-52); **Chapter 4** (Pages: 53-62); **Chapter 5** (Pages: 100-103); **Chapter 6** (Pages: 106-128).
3. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 13** (Pages: 307-323); **Chapter 18** (Pages: 420-442); **Chapter 28** (Pages: 747-769).

### Unit 3

#### Natural Resources (8 lectures)

- Land resources: Minerals, soil, agricultural crops, natural forest products, medicinal plants, and forest-based industries and livelihoods; Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities
- Water resources: Natural and man-made sources; Uses of water; Over exploitation of surface and ground water resources; Floods, droughts, and international & inter-state conflicts over water
- Energy resources: Renewable and non-renewable energy sources; Use of alternate energy sources; Growing energy needs; Energy contents of coal, petroleum, natural gas and bio gas; Agro-residues as a biomass energy source
- Case studies: Contemporary Indian issues related to mining, dams, forests, energy, etc (e.g., National Solar Mission, Cauvery river water conflict, Sardar Sarovar dam, Chipko movement, Appiko movement, Tarun Bharat Sangh, etc)

### Suggested Readings

1. Gadgil, M. and Guha, R. (1993). *This Fissured Land: An Ecological History of India*. University of California Press, Berkeley, USA. (pp. 1-245).
2. McCully, P. (1996). *Rivers no more: the environmental effects of dams*, In: *Silenced Rivers: The Ecology and Politics of Large Dams*, Zed Books, New York, USA. **Page. 29-64**.
3. Raven, P.H., Hassenzuhl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapters 10, 11, 12, 13** (Pages: 180-263); **Chapter 14** (Pages: 272-275); **Chapter 15** (Pages: 286-289).
4. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 25** (Pages: 623-663).

### Unit 4

#### Biodiversity and Conservation (8 lectures)

- Definition of Biodiversity; Levels of biological diversity: genetic, species and ecosystem diversity
- India as a mega-biodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species of India; IUCN Red list criteria and categories
- Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and informational values of biodiversity with examples; sacred groves and their importance with examples

- Threats to biodiversity: Habitat loss, degradation, and fragmentation; Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis
- Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation
- *Case studies*: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent Valley movement, Save Western Ghats movement, etc)

### Suggested Readings

1. Primack, R.B. (2014). *Essentials of Conservation Biology*, Oxford University Press, USA. Page. 1-536.
2. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapter 5** (Pages: 97-99); **Chapter 16** (Pages: 299-318).
3. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapters 24** (Pages: 599-690); **Chapter 26** (Pages: 664-714).

## Unit 5

### Environmental Pollution (8 lectures)

- Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards
- Nuclear hazards and human health risks
- Solid waste management: Control measures for various types of urban, industrial waste, Hazardous waste, E-waste, etc; Waste segregation and disposal
- Pollution case studies: Ganga Action plan (GAP), Delhi air pollution and public health issues, Plastic waste management rules, Bhopal gas tragedy, etc

### Suggested Readings

1. Brusseau, M.L., Pepper, I.L. and Gerba, C.P. (2019). *Environmental and Pollution Science*, 3rd Edition. Academic Press, USA. **Chapter 16** (Pages: 243-255); **Chapter 18** (Pages: 280-305); **Chapter 21** (Pages: 352-358); **Chapter 22** (Pages: 365-374); **Chapter 23** (Pages: 378-388); **Chapter 25** (Pages: 416-426).
2. Carson, R. (2002). *Silent Spring*. Houghton Mifflin Harcourt, USA. Pp. 1-264.
3. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapter 19** (Pages: 359-381); **Chapter 21** (Pages: 401-421); **Chapter 23** (Pages: 440-453).
4. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapters 19, 20, 12** (Pages: 445-535).

## Unit 6

### Global Environmental Issues and Policies (7 lectures)

- Causes of Climate change, Global warming, Ozone layer depletion, and Acid rain; Impacts on human communities, biodiversity, global economy, and agriculture

- International agreements and programmes: Earth Summit, UNFCCC, Montreal and Kyoto protocols, Convention on Biological Diversity(CBD), Ramsar convention, The Chemical Weapons Convention (CWC), UNEP, CITES, etc
- Sustainable Development Goals: India's National Action Plan on Climate Change and its major missions
- Environment legislation in India: Wildlife Protection Act, 1972; Water (Prevention and Control of Pollution) Act, 1974; Forest (Conservation) Act 1980; Air (Prevention & Control of Pollution) Act, 1981; Environment Protection Act, 1986; Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

### Suggested Readings

1. Divan, S. and Rosencranz, A. (2002). *Environmental Law and Policy in India: Cases, Material & Statutes*, 2nd Edition. Oxford University Press, India. **Chapter 2** (Pages: 23-39); **Chapter 3** (Pages: 41-86).
2. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapter 19** (Pages: 370-376); **Chapter 20** (Pages: 385-399).
3. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 23** (Pages: 555-598); **Chapter 30** (Pages: 801-807).

## Unit 7

### Human Communities and the Environment (6 lectures)

- Human population growth: Impacts on environment, human health, and welfare; Carbon foot-print
- Resettlement and rehabilitation of developmental project affected persons and communities; relevant case studies
- Environmental movements: Chipko movement, Appiko movement, Silent valley movement, Bishnois of Rajasthan, Narmada Bachao Andolan, etc
- Environmental justice: National Green Tribunal and its importance
- Environmental philosophy: Environmental ethics; Role of various religions and cultural practices in environmental conservation
- Environmental communication and public awareness: case studies (e.g., CNG vehicles in Delhi, Swachh Bharat Abhiyan, National Environment Awareness Campaign (NEAC), National Green Corps (NGC) "Eco-club" programme, etc)

### Suggested Readings

1. Divan, S. and Rosencranz, A. (2002). *Environmental Law and Policy in India: Cases, Material & Statutes*, 2nd Edition. Oxford University Press, India. **Chapter 10** (Pages: 416-473).
2. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. **Chapter 2** (Pages: 33-36); **Chapter 8** (Pages: 148-162).
3. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 1** (Pages: 23-26); **Chapter 31** (Pages: 826-842).

### Field work/ Practicals

(Equal to 5 lectures, including two mandatory field visits)

- Field visit to any of the ecosystems found in Delhi like Delhi Ridge/ Sanjay lake/ Yamuna river and its floodplains etc., or any nearby lake or pond, explaining the theoretical aspects taught in the class room
- Visit to any biodiversity park/ reserve forest/ protected area/ zoo/ nursery/ natural

history museum in and around Delhi, such as Okhla bird sanctuary/ Asola Bhatti Wildlife Sanctuary/ Yamuna Biodiversity Park/ Sultanpur National Park, explaining the theoretical aspects taught in the classroom

- Visit to a local polluted site (urban/rural/industrial/agricultural), wastewater treatment plants, or landfill sites, etc
- Study of common plants and animals; basic principles of identification
- Organize a seminar/ conference/ workshop/ panel discussion on relevant topics for enhancing awareness, capacity building, and critical reasoning among students

### **Essential Readings**

1. Brusseau, M.L., Pepper, I.L., and Gerba, C.P. (2019). *Environmental and Pollution Science*, 3rd Edition. Academic Press, USA. (pp. 1-520).
2. Divan, S. and Rosencranz, A. (2002). *Environmental Law and Policy in India: Cases, Material & Statutes*, 2nd Edition. Oxford University Press, India. (pp. 1-837).
3. Gadgil, M., and Guha, R. (1993). *This Fissured Land: An Ecological History of India*. University of California Press, Berkeley, USA. (pp. 1-245).
4. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Giff, N.Y., and Berg, L.R. (2015). *Environment*, 8th Edition. Wiley Publishing, USA. (pp. 1-472).
5. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. (pp.1-842).

### **Weekly Lesson Plan**

#### **Week 1**

Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere  
Scope and importance; Concept of sustainability and sustainable development; Brief history of environmentalism

#### **Week 2**

Definition and concept of Ecosystem: Structure of ecosystem (biotic and abiotic components); Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis

#### **Week 3**

Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries); importance and threats with relevant examples from India  
Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration

#### **Week 4**

Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities

Natural and man-made sources of water; Uses of water; Over exploitation of surface and ground water resources; Floods, droughts, and international & inter-state conflicts over water

### **Week 5**

Renewable and non-renewable energy sources; Use of alternate energy sources; Growing energy needs; Energy contents of coal, petroleum, natural gas and bio gas; Agro-residues as a biomass energy source

Case studies: Contemporary Indian issues related to mining, dams, forests, energy, etc (e.g., National Solar Mission, Cauvery river water conflict, Sardar Sarovar dam, Chipko movement, Appiko movement, Tarun Bharat Sangh, etc).

### **Week 6**

Definition of Biodiversity; Levels of biological diversity; India as a mega-biodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species of India; IUCN Red list criteria and categories

Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and informational values of biodiversity with examples; sacred groves and their importance with examples

### **Week 7-8**

Threats to biodiversity: Habitat loss, degradation, and fragmentation; Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis; Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation

Case studies: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent Valley movement, Save Western Ghats movement, etc)

### **Week 9**

Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards

Related case studies

### **Week 10**

Nuclear hazards and human health risks; Control measures for various types of urban, industrial waste, Hazardous waste, E-waste, etc; Waste segregation and disposal

Related case studies

### **Week 11**

Causes of Climate change, Global warming, Ozone layer depletion, and Acid rain; Impacts on human communities, biodiversity, global economy, and agriculture

International agreements and programmes: Earth Summit, UNFCCC, Montreal and Kyoto protocols, Convention on Biological Diversity(CBD), Ramsar convention, The Chemical Weapons Convention (CWC), UNEP, CITES, etc

### **Week 12**

Sustainable Development Goals: India's National Action Plan on Climate Change and its major missions

Wildlife Protection Act, 1972; Water (Prevention and Control of Pollution) Act, 1974; Forest (Conservation) Act 1980; Air (Prevention & Control of Pollution) Act, 1981; Environment Protection Act, 1986; Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

### **Week 13**

Human population growth: Impacts on environment, human health, and welfare; Carbon foot-print; Resettlement and rehabilitation of developmental project affected persons and communities; relevant case studies; Environmental movements: Chipko movement, Appiko movement, Silent valley movement, Bishnois of Rajasthan, Narmada Bachao Andolan, etc; Environmental justice: National Green Tribunal and its importance

## **Week 14**

Environmental philosophy: Environmental ethics; Role of various religions and cultural practices in environmental conservation

Environmental communication and public awareness: case studies (e.g., CNG vehicles in Delhi, Swachh Bharat Abhiyan, National Environment Awareness Campaign (NEAC), National Green Corps (NGC) “Eco-club” programme, etc)

## **Week 15-16**

Practical/project

- Field visit to any of the ecosystems found in Delhi like Delhi Ridge/ Sanjay lake/ Yamuna river and its floodplains etc., or any nearby lake or pond, explaining the theoretical aspects taught in the class room
- Visit to any biodiversity park/ reserve forest/ protected area/ zoo/ nursery/ natural history museum in and around Delhi, such as Okhla bird sanctuary/ Asola Bhatti Wildlife Sanctuary/ Yamuna Biodiversity Park/ Sultanpur National Park, explaining the theoretical aspects taught in the classroom
- Visit to a local polluted site (urban/rural/industrial/agricultural), wastewater treatment plants, or landfill sites, etc
- Organize a seminar/ conference/ workshop/ panel discussion on relevant topics for enhancing awareness, capacity building, and critical reasoning among students
- Basic exercise to Calculate and Assess carbon footprint/ Solid waste generation/ water consumption for a specific duration at individual/ family/ college/ locality level.

## **Teaching Learning process**

The teaching–learning methodologies are designed to provide the undergraduate students a comprehensive understanding of the subject in a simplistic manner as well as evoke critical reasoning and analytical thinking among them. The various approaches to teaching–learning process include classroom lectures, video presentations, and ICT enabled teaching tools. For enhancing practical understanding, field visits are encouraged to relevant places in Delhi like Biodiversity parks, Protected areas, Wetlands, Sewage treatment plants, etc.

## **Assessment methods**

1. Written examinations (Semester exams, Internal assessment)
2. Project work and reports related to field visits and practical learning
3. Assignment/presentations on any contemporary environmental issue

## **Keywords**

Environment, Ecosystem, Biodiversity, Conservation, Pollution, Natural Resources, Environmental Degradation, Protection, Sustainable Development, Climate Change, Environmental Justice, Environmental Ethics, Environmental Communication

## Generic Elective

### 1. Economics : Introductory Microeconomics

#### **Introductory Microeconomics (HC12)**

Core Course (CC) Credit: 6

##### Course Objective

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

##### Course Learning Outcomes

The course introduces the students to the first course in economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, interactions of supply and demand, and characteristics of perfect and imperfect markets.

##### Unit 1

**Introduction** What is microeconomics? Scope and method of economics; the economic problem: scarcity and choice; the concept of opportunity cost; the question of what to produce, how to produce and how to distribute output; science of economics; institutions for allocating resources; the basic competitive model; prices, property rights and profits; incentives and information; rationing; positive versus normative analysis

The scientific method; the role of assumptions; models and mathematics; why economists sometimes disagree

Interdependence and gains from trade; specialization and trade; absolute advantage; comparative advantage and trade

## Unit 2

**Supply and demand: How markets work, markets and welfare** Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets

Application to international trade; comparison of equilibria with and without trade, the winners and losers from trade; effects of tariffs and quotas; benefits of international trade; some arguments for restricting trade

## Unit 3

**The Households** The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision; choice between leisure and consumption

## Unit 4

**The firm and perfect market structure** Behaviour of profit maximizing firms and the production process; short-run costs and output decisions; costs and output in the long-run

## Unit 5

**Imperfect Market Structure** Monopoly and anti-trust policy; government policies towards competition; imperfect competition

## Unit 6

**Input Markets** Labour and land markets: Basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves; competitive labour markets; labour markets and public policy

## References

1. Bernheim, B., Whinston, M. (2009). *Microeconomics*. Tata McGraw-Hill.
2. Mankiw, N. (2007). *Economics: Principles and applications, 4th ed.* Cengage Learning.

## Teaching Learning Process

Lectures and tutorials

## Assessment Methods

Internal assessment and final examination as per CBCS rules

## Keywords

Supply, demand, elasticity, consumer behaviour, firm behaviour, perfect and imperfect markets