

COMMON PAPER – ENVIRONMENTAL STUDIES – 15UEVS11

Sl. No.	Course Title	Subject Code	Page No.
28	Organic Chemistry – III	15UCHC62	59
29	Project	15UCHP61	61
30	Gravimetric Analysis Preparation of Organic Compounds	15UCHC6P 1	62
31	Physical Chemistry and Computer in Chemistry	15UCHC6P 2	63
32	Applied and Analytical Chemistry	15UCHE6A	65
33	Medicinal Chemistry	15UCHE6 B	67
34	Organic Analysis, Estimation and Physical Constants	15UCHE6P	69
35	Carbohydrates, Nucleic Acids and Metabolism	15UCHA11	70
36	Amino Acids, Lipids and Enzymes	15UCHA21	72
37	Allied Bio-Chemistry Practical	15UCHA2P	74
38	Statistics and Calculus	15UMAA11	75
39	Algebra & Differential Equations	15UMAA21	76
40	Allied Physics – I	15UPHA31	77
41	Allied Physics – II	15UPHA41	78
42	Allied Physics Practical	15UPHA4P	79
43	Allied Chemistry - I	15UCHA31	80
44	Allied Chemistry - II	15UCHA41	82
45	Allied Chemistry Practical	15UCHA4P	84
46	Chromatography	15UCHS31	85
47	Polymer Chemistry	15UCHS41	87
48	Water Management	15UCHN31	89
49	Applied Chemistry	15UCHN41	90
50	List of Non – major Elective Subjects	-	92
51	Environmental Studies	15UEVS11	93
52	Value Education-I	15USVE2A	95
53	Value Education-II	15USVE2B	96
54	Scheme of Examinations	—	97

I SEMESTER			
EVS	ENVIRONMENTAL STUDIES	15UEVS11	
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ UNIT: 6	Credits: 1

UNIT - I: Nature of Environmental Studies

Goals, Objectives and guiding principles of environmental studies. Towards sustainable development - Environmental segments- Atmosphere, Hydrosphere, Lithosphere, Biosphere - definition. Pollution episodes -- Hiroshima - Nagasaki, - Bhopal gas Tragedy, Fukushima - Stone leprosy in Taj Mahal

UNIT - II: Natural Resources

Renewable and Non Renewable resources - classification.

- Forest resources: Use and over - exploitation, Afforestation and deforestation.
- Water resources: Use and over - utilization and conservation of surface and ground water - Rain harvesting.
- Marine Resources: Fisheries and Coral reefs.
- Mineral resources: Use and exploitation - environmental impacts of extracting and using mineral resources.
- Food resources: Effects of modern agriculture fertilizers - pesticide problem.
- Energy resources: Growing energy needs - use of alternate energy source - Solar cells & wind mills.
- Land resources: Land degradation

UNIT - III: Ecosystem

- Concept of Eco-systems - Tropic level, food chains, food web and Ecological pyramids. Types, structure & Functions of the following:
 - a) Aquatic ecosystem
 - b) Grassland ecosystem

- c) Forest ecosystem
- d) Desert ecosystem
- e) Living conditions on other planets (Briefly)

UNIT - IV: Biodiversity & Its Conservation

Introduction - Definition: eco system diversity, species and Genetic Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitual Loss, Poaching of wild life and Man - wild life conflicts. –

Conservation of biodiversity: Insitu and ex-insitu.

UNIT - V: Environmental Pollution

Sources, effects, prevention and control measures of the following.

- a) Air pollution: Composition of clean air, Global warming, Ozone layer depletion.
- b) Water Pollution: Fresh and Marine water pollution
- c) Noise Pollution
- d) Soil pollution
- e) Bio degradable and Non Bio degradable wastes
 - Air (prevention & Control of Pollution) Act.
 - Environmental Protection Act
 - Water (Prevention & Control of pollution) Act
 - Environmental movements - Green peace and Chipco,
 - Role of State & Central pollution Control Boards.

REFERENCE BOOKS:

1. Basic of Environmental Science. Vijajalakhmi, Murugesan and Sukumaran - Manonmaniam Sundaranar University publications.
2. Environmental Studies. John de Brito, Victor, Narayanan and Patric Raja - published by St. Xavier's College, Palayamkottai.
3. Environmental Science and Biotechnology. A.G. Murugesan and C. Raja Kumar - MJP Publishers.
4. Fundamental of Environmental pollution - Krishnan Kannan - Chand & Company Ltd., New Delhi 1997.
5. Environmental Studies. S. Muthiah, Ramalakshmi publications, Tirunelveli.
6. Environmental Studies. V.M. Selvaraj, Bavani Publications, Tirunelveli.