

SUBJECT: ENVIRONMENTAL STUDIES (ENST)

**CLASS XII
SEMESTER III**

THEORY

FULL MARKS –40

(MCQ Type Question)

Course content:

Theory:

Unit I Introduction

- i What is environment
- ii Physical, Biological and Social Environment
- iii Perception of environment in ancient India
- iv Indian society and environment: Indian heritage, custom and culture

Unit II Man and Environment-A

- i Origin of Earth – evolution of its land, ocean and atmosphere
- ii Development of life-its impact on atmospheric composition-emergence of terrestrial life-emergence of homosapien sapiens
- iii Earth- a dynamic system- present day environment is a result of continuing geological and life processes and interaction between them
- iv Anthropogenic activities and their impact on environment
- v Impact of human activities on environment since industrial revolution

Unit III Man and Environment-B

- i Urban and rural environment
- ii Impact of urbanisation on environment
- iii Impact of development on environment
- iv Impact of population on environment
- v Impact of poverty on environment
- vi Impact of bad habits (e.g. spitting, responding to nature's call in the open) superstition on environment
- vii Destruction of environment for personal greed
- viii Degradation of natural wealth by human activities
- ix Importance and need of environmental studies

Unit IV Disaster and Environment

- i Impact of Natural disaster – earth quakes, volcanic eruptions, forest fires, cyclones, typhoons, hurricanes, tornadoes, floods, landslides
- ii Impact of man-made disasters – Destruction of Hiroshima and Nagasaki by atom bomb, Bhopal gas tragedy, Chernobyl accident and minamata disease

Unit V Environment conservation

- i Importance of environment conservation
- ii Conservation of biodiversity
- iii Conservation of forests
- iv Conservation of wild life
- v Conservation of soil
- vi Conservation of wet-land
- vii Role of society in the environmental conservation

Unit VI Sustainable Development

- i The concept of sustainable development
- ii Sustainable industry
- iii Sustainable agriculture

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Semester – IV

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Unit VII Energy and Environment

- i Energy and civilisation
- ii Use of conventional sources of energy – coal, petrol, diesel, wood, adverse effect on the environment
- iii Use of atomic energy – advantages and disadvantages
- iv Use of non-conventional and renewable sources of energy - advantages

Unit VIII Environmental Pollution – A

- i Pollution and pollutant
- ii Air pollution – pollutants (solids, liquids and gases) and their sources, Adverse-effects of air pollution, control of air pollution
AIR QUALITY
Smog – classical smog and photochemical smog, condition for photochemical Smog event, selected photochemical smog species, adverse effects of photochemical smog, control
- iii Land pollution – pollutants and their sources, adverse effects and control
- iv Water pollution – pollutants and their sources, adverse effects and control
Quality of drinking water

Unit IX Environmental Pollution – B

- i Acid rain – causes of acid rain, adverse effects and control
- ii Green house Gases – their sources, green house effect and global warming, effects of global warming, measures to control global warming
- iii Ozone layer – its range and importance, how it prevents falling of harmful uv

- radiation on earth
- Depletion of ozone layer – causes and effects
- Antarctic and Arctic so called “ozone layer” – and its adverse effects
- iv Adverse effects of tobacco smoking including indoor tobacco smoking
- v Adverse effects of e-wastes and plastics on environment
- vi Radiation pollution
- vii Noise pollution
- viii Odour pollution, pollen pollution
- ix Thermal pollution
- x Metal pollution – Cr, Cu, Zn, Cd, Hg, Pb – their sources and adverse effects

Unit X Environment Related Movement in India

- i Introduction
- ii Chipko movement
- iii Save Narmada movement
- iv “Silent valley” movement

Unit XI International Conferences of Human Environment

- i Stockholm Conference, 1972
- ii Earth summit Conference, 1992
- iii Montreal Protocol, 1987
- iv Kyoto Protocol, 1997
- v Conference of the Parties (Cop21), Paris, 2015

Unit XII The Green Bench

- i What is Green Bench
- ii Jurisdiction of Green Bench

Practical/Project:

Full Marks: 20

No. of Periods: 14

The students will have to undertake a PROJECT. They may choose the topic of PROJECT in consultation with their teachers. As example, a few topics are given below –

- 01 Domestic solid and liquid disposals in a specified locality
- 02 Month wise average temperature for the last five years
- 03 Month wise average rain fall for the last five years
- 04 Drainage system in a specified locality
- 05 Impact of road widening on plant population
- 06 Rain-water harvesting
- 07 TV viewing and exposure to extra radiation
- 08 Hazards of drinking water containing arsenic above safe limit
- 09 Importance of wet land
- 10 Occupational health hazards
- 11 E-waste and plastic disposal
- 12 Impact of urbanisation on biodiversity