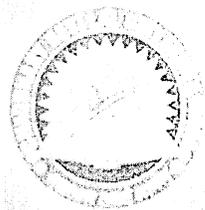


Annexure - II  
P-1

COURSE CURRICULUM AND SCHEME OF EXAMINATION FOR  
UNDER GRADUATE COMPULSORY COURSE IN ENVIRONMENTAL STUDIES



(w.e.f. 2017- 18)

Semester	Course	Nomenclature	Max. Marks	Under Choice Based Credit System (CBCS)	Hours / Periods of Teaching per week	Exam Duration
Sem-I or II	Paper-I	Fundamentals of Environmental Studies	100. (20 Internal+ 80 External)	4 Credits	4 hours/week (6 periods of 45 minutes/week)	03Hrs
Sem-III or IV	Paper-II	Environmental Pollution	100 (20 Internal+ 80 External)	4 Credits	4 hours/week (6 periods of 45 minutes/week)	03Hrs
Sem-V or VI	Paper-III	Environmental Conservation and Society	100 (20 Internal+ 80 External)	4 Credits	4 hours/week (6 periods of 45 minutes/week)	03Hrs

*Dr. J. Sharmas*  
3/7/17

*Dr. V.*  
03/7/17

Vision

Science of Environmental Studies is undisputed. Simple focus on development has led to indiscriminate exploitation of natural and human resources, resulting in their depletion, pollution and scarcity compelling us to think of sustainable development. The mankind today is facing a tough ecological question of survival. Hence, the components of the course curriculum in Environmental Studies aims at providing the students essential understanding of the ecological as well as environmental hazards of modernization, urbanization and consumerism.

Ajay Shamam?  
3/9/17

Amr  
03/02/17

## SEMESTER I or II

### Paper – I: FUNDAMENTALS OF ENVIRONMENTAL STUDIES

#### Scheme of Question Paper

Time: 3 hr

Max Marks 80

Note: The question paper will contain section A, B, and C

#### Section A (16 Marks)

It will consist of one question having eight parts of two marks each. Candidates will be required to attempt all the parts. Answer to any part should not exceed half page.

#### Section B (40 Marks)

It will consist of eight questions, two from each Unit. Candidates will be required to attempt five questions in all selecting at least one from each Unit. Each question carries eight marks. Answer to any of the question should not exceed three pages.

#### Section C (24 Marks)

It will consist of four questions, one from each Unit. Candidate will be required to attempt two questions, each question carrying twelve marks. Answer to any question should not exceed four pages.

#### UNIT I

Definition, Principles and Significance of Environment Studies, General introduction about Abiotic and biotic spheres of the Environment: Atmosphere, Hydrosphere, Lithosphere and Biosphere. Need for Environmental awareness, **Sustainable development**: Definition, concept and tenets of sustainability: Ecology, Environment and Society.

#### UNIT II

**Natural Resources I**: Energy resources: Non-renewable energy resources: Fossil fuel and their reserves, impacts of their uses. Renewable energy resources: Scope and advantages, solar energy wind energy, hydroelectric energy, Growing energy needs, Non conventional energy resources.

#### UNIT III

**Natural Resources II**: Forest resources: Types of forests in India, Use and over-exploitation, deforestation: causes and Consequences, Afforestation programme, Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems, Rainwater harvesting

#### UNIT IV

**Drug Abuse: Concept of Health**: Physical Health, Mental Health, Factors affecting Mental and Physical Health, management of positive mental health; **Drugs and their effects**: What are drugs, useful and harmful drugs, stimulant and depressant drugs, use and abuse of drugs, concept of drug de-addiction; **Legal Position on drugs**: Laws related to drugs i.e. NDPS etc., Concept of Narco-terrorism, role and responsibilities of legal service authorities, Awareness programmes on drugs; Impacts of drugs/Alcohol/Smoking on Longevity

## SEMESTER III or IV

### Paper – II: ENVIRONMENTAL POLLUTION

#### Scheme of Question Paper

Time: 3 hr  
Max Marks 80

Note: The question paper will contain section A, B, and C

#### Section A (16 Marks)

It will consist of one question having eight parts of two marks each. Candidates will be required to attempt all the parts. Answer to any part should not exceed half page.

#### Section B (40 Marks)

It will consist of eight questions, two from each Unit. Candidates will be required to attempt five questions in all selecting at least one from each Unit. Each question carries eight marks. Answer to any of the question should not exceed three pages.

#### Section C (24 Marks)

It will consist of four questions, one from each Unit. Candidate will be required to attempt two questions, each question carrying twelve marks. Answer to any question should not exceed four pages.

#### UNIT I

**Water Pollution:** Natural and anthropogenic sources of water pollution and their effects. Marine pollution, Thermal pollution, Eutrophication, Ground water pollution.

#### UNIT II

**Air Pollution:** Sources, Classification and properties of air pollutants (Particulate matter, Inorganic gaseous pollutants, Organic gaseous pollutants), Smog, Acid rain, Ozone layer depletion, Green house effects, Global warming, Effects of air pollution on Human health

#### UNIT III

**Soil Pollution:** Soil pollution from the use of agrochemicals (viz. Fertilizers and Pesticides), Heavy metals, Industrial effluents and Detrimental effects of soil pollutant, Remedial measures for soil pollution. Types and sources of Solid waste, Electronic waste, Bio-medical waste.

#### UNIT IV

**Radioactive and Noise Pollution:** Definition, Sources of radioactive pollution, Radioactivity, effects of radioactive pollution, Sound pressure level, Frequency, noise monitoring and sound level meter, Sources and effects of noise pollution, Effects of noise pollution on human health.

*Dr. Shouman*

## SEMESTER V or VI

### Paper - III: ENVIRONMENTAL CONSERVATION AND SOCIETY

#### Scheme of Question Paper

Time: 3 hr  
Max Marks 80

The question paper will contain section A, B, and C

#### Section A (16 Marks)

It will consist of one question having eight parts of two marks each. Candidates will be required to attempt all the parts. Answer to any part should not exceed half page.

#### Section B (40 Marks)

It will consist of eight questions, two from each Unit. Candidates will be required to attempt five questions in all selecting at least one from each Unit. Each question carries eight marks. Answer to any of the question should not exceed three pages.

#### Section C (24 Marks)

It will consist of four questions, one from each Unit. Candidate will be required to attempt two questions, each question carrying twelve marks. Answer to any question should not exceed four pages.

#### UNIT I

**National Protection Laws:** India's Ancient Traditions for Protection of Environment, Constitutional Provisions for Protection of Environment, Environmental legislation in India, Environmental Protection Act, 1986, National Green Tribunal Act 2010, Green Bench, Child labour Act.

#### UNIT II

**Biodiversity:** Basic concepts, importance and conservation needs, IUCN red list categories, Biodiversity hotspots, National parks, Biosphere reserves, Wildlife sanctuaries, India as a mega-diversity nation. Efforts to conserve biodiversity, government and nongovernment organizations

#### UNIT III

**Natural Disaster Management:** Causes, effects and control measures of natural disasters, disaster preparedness – prevention and mitigation preparedness plan, community based planning, NDRF, Role of mass media and society in disaster management, Post disaster recovery measures: Rehabilitation, planning and construction, long term counter disaster planning.

#### UNIT IV

**Society and Environmental :** Demography, Population explosion and effects on Environment, Family Welfare Programmes, Role of individual, Self help groups, Role of NGO's, Social movements: Chipko, Appiko, Save Silent Valley, Narmada Bachao Andolan, Eco-feminism, Environmental ethics (Ecocentric and Anthropocentric worldview), Governmental Actions: Swachh Bharat Abhiyan, National Mission for Cleaning Ganga (NMCG)