

Subject Code—2673

P.G.Diploma EXAMINATION

(New Scheme)

(Re-appear)

ENVIRONMENTAL MANAGEMENT

PGDEM-01

Fundamentals of Environment

Time : 3 Hours

Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) What are the different layers of the atmosphere ? Discuss.
- (b) Discuss the salient features of marine system.

2. Give an account of various characteristics of soil. Discuss the types of soil organisms and their role in soil.

Unit II

3. (a) Define ecosystem. Explain primary producers, herbivores, carnivores decomposers and detritivores with examples.
- (b) Give an illustrated account of water and nitrogen cycles.
4. Write short notes on the following :
- (a) Food web
- (b) Climax
- (c) Ecological balance.

Unit III

5. Discuss the impacts of mining and deforestation.

6. Explain any *two* of the following :

- (a) Waterlogging .
- (b) Eutrophication
- (c) Soil erosion.

Unit IV

- 7. Explain, how human evolution has taken place on the earth with changing environment.
- 8. Discuss the environmental problems associated with population explosion.

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ENVIRONMENTAL MANAGEMENT

PGDEM-02

Natural Resource Conservation and Management

Time : 3 Hours

Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Describe the various water conservation practices adopted in India.
- (b) Discuss the desalination methods of water.

(1-64)

P.T.O.

2. Write short notes on the following :
- (a) Cloud Seeding
 - (b) Fresh Water Resources
 - (c) Water Consumption Patterns in India
 - (d) Rain Water Harvesting.

Unit II

3. Write an essay on Bio-leaching of various mineral ores.
4. Write short notes on the following :
- (a) Uses of Minerals
 - (b) Types of Minerals
 - (c) Harvesting of Minerals from Sea
 - (d) Recycling of Iron.

Unit III

5. (a) What are the causes of Biodiversity Loss ?
- (b) Describe the various types of forest of India citing their major flora.

6. Write short notes on the following :

- (a) Red Data Book
- (b) Importance of Forest
- (c) Role of IUCN
- (d) Wild life resources.

Unit IV

7. (a) What is Biosphere Reserve ? Mention the biosphere reserve of India.

- (b) Discuss the salient features of National Parks and Wild life Sanctuaries of Haryana.

8. Write short notes on the following :

- (a) Ex-situ conservation
- (b) List the major Wild life sanctuaries
- (c) Project Tiger
- (d) Conservation efforts adopted in ancient times for wild life.

Subject Code—2675

P. G. Diploma EXAMINATION

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ENVIRONMENTAL MANAGEMENT

PGDEM-03

Time : 3 Hours

Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. All questions carry equal marks.

Unit I

1. What is Water Pollution ? Explain the major pollutants and their harmful effects.

(2-31)

P.T.O.

2. Write short notes on the following :
- (i) Oil spills
 - (ii) Self purification capacity of natural waters.

Unit II

3. Give a detailed classification of air pollutants with their harmful effects on human health.
4. Explain the following :
- (i) Plume dispersion
 - (ii) National ambient air quality standards.

Unit III

5. Write short notes on the following :
- (i) Audible, intrasonic and ultrasonic spectrum of sound
 - (ii) Sound pressure level and decibel scale.
6. What is noise pollution ? Briefly explain its sources and effects on human health.

Unit IV

7. Give a detailed account on nature and source of radiations in the environment.
8. Write short notes on the following :
 - (i) Thermal Pollution
 - (ii) Indoor Pollution.

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ENVIRONMENTAL MANAGEMENT

PGDEM-04

Pollution Control and Management

Time : 3 Hours

Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Using suitable diagrams describe the various processes involved in the treatment of domestic sewage.

- (b) Define the following terms :
 - (i) Sedimentation
 - (ii) BOD
 - (iii) Chlorination
 - (iv) COD
 - (v) Coagulation
 - (vi) Waste Water.
- 2. (a) Define activated sludge. Sketch a flow diagram for a conventional activated sludge process.
- (b) Write short notes on the following :
 - (i) Bioreactors
 - (ii) Neutralization
 - (iii) Trickling Filter.

Unit II

- 3. (a) What are colloids ? Why is it important to remove colloids from waste water ?
- (b) What are the various methods of removing solids from waste water ? Explain any one in detail.

- (c) Write down the names of the processes used for industrial waste water treatment.
4. Write notes on the following :
- (i) Reverse Osmosis
 - (ii) Dialysis
 - (iii) Disinfection
 - (iv) Ion Exchange.

Unit III

5. (a) How can solid waste be converted in useful resources ?
- (b) What do you mean by solid wastes ? Enumerate different types of solid wastes.
6. (a) What is Hazardous waste ? What are the guidelines for transportation and storage of hazardous waste.
- (b) What are the various methods of solid waste disposal ?

Unit IV

7.
 - (a) Define noise pollution ? How can noise pollution be minimized ?
 - (b) How can pollution due to particulate matter be controlled ?

8.
 - (a) What measures can be taken to control pollution caused by vehicles ?
 - (b) How is ambient air quality monitored ? What methods can be adopted to increase the quality of air ?

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ENVIRONMENTAL MANAGEMENT

PGDEM-05

Energy and Disaster Management

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Write critical comments on the following :
 - (a) Energy resources of India need a more serious planning and focused programs to meet the requirement of future.

- (b) Non-conventional energy sources, with an adequate management, can be crucial in the development of energy policy and management of the future energy crisis.
2. Discuss the potentials and limitations of biogas technology in India. Critically evaluate the technical, administrative and social aspects of this technology as an alternative energy in Indian context.
3. Write brief account of the following with suitable illustrations and examples :
- (a) Solar photovoltaic system
 - (b) Energy conservation strategies
 - (c) Energy plantation
 - (d) Geothermal energy.

4. Compare the following with specific differences and similarities :
- (a) Solar cooker and improved chullah
 - (b) Hydrogen and natural gas as energy sources
 - (c) Active and passive solar energy collectors
 - (d) Solar pumps and solar ponds.
5. How do Hydel power energy projects can be strengthened to meet the challenges of depleting petroleum based conventional energy. Draw a visionary plan evaluating the future energy need of India.
6. Discuss the advantages of non-conventional energy over the conventional energy for environmental safety and sustainable earth's environment. Critically evaluate the programs drawn for the shift from conventional energy base to non-conventional energy base in phase wise manner.

7. What are natural hazards ? Discuss the dimensions, perceptions and adjustment potentials of natural hazards. Mention the management strategies.
8. Write short notes on the following :
- (a) Tsunami and its management
 - (b) Floods and droughts
 - (c) Mitigation measures for hazard management
 - (d) Valcanoes.

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ENVIRONMENTAL MANAGEMENT

PGDEM-06

Environmental Awareness and Legislation

Time : 3 Hours

Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. (a) Describe the main characteristics of sustainable development.
- (b) Suggest the appropriate model for implementation of sustainable plans in water resource management.

2. (a) Define desertification and discuss the measures to check the desertification problems in Haryana.
- (b) Describe the main environmental problems and its causative health hazards in India.

Unit II

3. (a) Describe the fundamental issues and role of India in Rio earth summit.
- (b) Write short notes on any *two* of the following :
- (i) Montreal protocol
 - (ii) Kyoto conference
 - (iii) Human rights and environment.
4. (a) Describe the latest Public Interest Litigations (PIL) related to pollutional aspects in India.
- (b) Describe the main features of M.C. Mehta vs. tennerus discharging effluents in Ganga.

Unit III

5. (a) Define the "Environmental Ethics" and ethical aspects based on eco-centred world.
(b) Describe the ancient Vedic views on the preservation, conservation and management of environment.
6. (a) Describe the significant roles of mass media and public participation in forest conservation.
(b) Describe the main objectives and duties of governmental agencies related with environmental issues in India.

Unit IV

7. Describe the basic methodology of Environmental Impact Assessment (EIA). Suggest the constructive role in dam constructions on river.

8. (a) Differentiate the primary, secondary and tertiary environmental laws.
- (b) Describe the National Forestry Action Plan (NFAP)-1999.