



Printed Pages : 3

TOE03

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0903

Roll No.

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B.Tech

(SEM VII) ODD SEMESTER THEORY EXAMINATION 2009-10
ENVIRONMENT & ECOLOGY

Time : 3 Hours]

[Total Marks : 100

- Note : (i) Attempt all questions.
(ii) All questions carry equal marks.

1 Attempt any **four** parts of the following : $5 \times 4 = 20$

- "Environment has a direct impact on the physical, mental and social well being of those living in it." - Discuss.
- Explain the significance of biosphere, atmosphere, hydrosphere and lithosphere.
- Enumerate and discuss the essential requirements of an ecosystem.
- Explain the concept of ecological pyramid.
- What do you mean by "Recycling" ? Why it is considered as an integral part of solid waste management ?
- With a neat sketch, explain the functioning of hydrological cycle.

2 Attempt any **four** parts of the following : $5 \times 4 = 20$

- What are natural resources ? How will you classify the global natural resources ?

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- (b) Define Lapse Rate. How lapse rate affects the stability of environment ?
- (c) Differentiate between food web and food chain.
- (d) What is thermal pollution ? State and explain the various sources and causes of thermal pollution.
- (e) What do you mean by deforestation ? Explain the direct and indirect benefits of forests.
- (f) How we can classify the solid wastes ? What do you mean by solid waste management ?
- (g) Distinguish between slow sand filter and a rapid sand gravity filter from construction and operational considerations.

3 Attempt any **two** parts of the following : **10×2=20**

- (a) Enumerate various air pollution control devices for control of particulate emission at source. Indicate the size range of particulate that each type of unit is capable of removing efficiently. Explain any one unit with its merits and demerits.
- (b) How can we conserve the natural resources ? What are the alternative energy resources ? Explain the difference between renewable and non-renewable natural resources.
- (c) (i) Discuss the salient features of major sources of community noise. Explain the methods for reducing the noise from transportation activities.
(ii) Write a short note on legislative measures to control the noise pollution in India.

4 Attempt any **two** parts of the following : **10×2=20**

- (a) Define ecosystem. Give an account of the structure and function of an ecosystem. What is ecological succession ?
- (b) Enumerate different characteristics of municipal solid wastes. What are the contaminants present in the leachate of a sanitary landfill. Describe the functioning of an incinerator.
- (c) Enumerate the various air pollution control devices. Differentiate in the working of wet scrubbers and electrostatic precipitator.

5 Attempt any **two** parts of the following : **10×2=20**

- (a) Enumerate the various parameters used for measuring the organic load of waste water. What happens in the downstream side of a river from point of discharge of untreated waste water in a river ?
- (b) (i) What do you mean by community ecology ? Define the characteristics of a community ?
(ii) What is meant by 'flow of energy' in an ecosystem ? What is its importance for ecosystem ?
- (c) (i) What is ozone hole ? Discuss the effects of ozone layer depletion and its remedial measures ?
(ii) Explain briefly the salient features of Air (Prevention and Control of Pollution) Act, 1981.