

Roll No. Total Pages : 3

80015

Dec., 2018

B.Tech. 1st Semester (Reappear)

ENVIRONMENTAL SCIENCES

(HAS 107C)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Write about multidisciplinary nature of Environmental Studies. (1.5)
(b) What are the ecological and commercial uses of forests? (1.5)
(c) Define Food chain. What is its significance? (1.5)
(d) Make a flow chart to show the structure of ecosystem. (1.5)
(e) Explain the term 'Acid Rain' and its effects. (1.5)
(f) What do you understand by the process 'Eutrophication'? Discuss. (1.5)

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- (g) Enlist sources of urban solid waste. (1.5)
- (h) Differentiate between primary and secondary air pollutants. Give examples. (1.5)
- (i) What do you understand by thermal pollution in water bodies? (1.5)
- (j) What are different age structure pyramids to show population growth pattern of a nation? (1.5)

PART-B

2. (a) Define Environmental Studies. Why is it important to study about Environmental issues? (5)
- (b) Write down the scope of Environmental Sciences? (5)
- (c) What is Ecomark Scheme? Explain. (5)
3. (a) Discuss about consumptive use value, social value, ethical value and ecosystem service value of biodiversity, giving examples. (5)
- (b) What is meant by *in-situ* and *ex-situ* conservation of biodiversity? Give examples. (5)
- (c) Define the hotspots of biodiversity. Describe the salient features of hotspots in India. (5)
4. (a) What are biogeochemical cycles? Explain with the help of a diagram of Nitrogen cycle and Phosphorus cycle. (5)
- (b) What are Ecological pyramids? Explain why some of these pyramids are upright while others are inverted in different ecosystems. (5)

- (c) Write a short note on Ecological Succession illustrating its various steps. (5)
5. (a) Explain different processes of sewage treatment in a sewage treatment plant. Make neat and labelled diagram of the whole process. (5)
 - (b) Enumerate with examples the major sources of surface water pollution and ground water pollution. (5)
 - (c) Briefly describe the sources, effects and control of noise pollution. Give an account of noise generated during Diwali. How this can be reduced? (5)
 6. (a) What are renewable sources of energy? Give a brief account of potential energy resources to be used in future. (5)
 - (b) How can you as an individual conserve different natural resources? (5)
 - (c) What are the environmental impacts of modern agriculture practices? Explain. (5)
 7. (a) What are greenhouse gases and greenhouse effect? Discuss the potential and contribution of these gases to global warming phenomenon. (10)
 - (b) Describe the salient features of Air (Prevention and Control of Pollution) Act. (5)