

II B.Tech II Semester Supplementary Examinations, Aug/Sep 2007
ENVIRONMENTAL STUDIES
(Common to Civil Engineering, Electrical & Electronic Engineering,
Mechanical Engineering, Computer Science & Engineering, Chemical
Engineering, Electronics & Instrumentation Engineering, Bio-Medical
Engineering, Information Technology, Electronics & Control Engineering,
Mechatronics, Computer Science & Systems Engineering, Metallurgy &
Material Technology, Production Engineering, Bio-Technology and
Automobile Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Mention briefly the contributions made by the following:
 - (a) Wildlife Institute of India
 - (b) Sunderlal Bahuguna
 - (c) Zoological Survey of India
 - (d) Salim Ali [4+4+4+4]

2. (a) Discuss in detail the water cycle.
(b) Write about sustainable water management. [8+8]

3. (a) Explain the term 'energy cycle' and how the organisms in the ecosystem are dependent on it.
(b) What is ecological succession? What are the different stages of development of an ecosystem? [8+8]

4. (a) Write a brief note on biodiversity and ecosystem diversity.
(b) Explain the evolution of diverse species in an ecosystem. [16]

5. (a) List the wastes that are prohibited from processing along with municipal solid waste. Discuss.
(b) Briefly describe the methods of heating and disposal of solid waste. [8+8]

6. Why should natural ecosystems and various forms of species be protected ? How does indiscriminate exploitation of these areas lead to damage ? [16]

7. (a) Describe the problems created by the growing population of the earth.
(b) Explain briefly the pattern of global population growth in recent years which is causing alarm to environmental experts. [8+8]

8. (a) Describe how you would methodically record the elements and resources in an ecosystem and assess its functioning.

Code No: R05220105

Set No. 1

- (b) Write about your observations and main conclusions about any ecosystem which you have studied (e.g: forest, sea shore, farmlands, hilly area etc.)

[8+8]

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1. (a) Explain the need for students from all courses to be aware of environmental issues.
(b) Write briefly about the scope of environmental studies. [6+10]
2. Discuss the importance of environmental studies with respect to the following statements.
(a) We live in a world wherein natural resources are limited.
(b) Green spaces and gardens are vital to the psychological and physical health of city dwellers. [8+8]
3. (a) What are the different kinds of grasslands in India and where are they found? Describe their characteristics.
(b) What are the threats to grasslands and what should be done to conserve them? [8+8]
4. Which type of conservation is better? In-situ or ex-situ? Elaborate and explain your answer in detail. [16]
5. (a) Oceans are ultimate sink for most of the waste we produce. Explain.
(b) List off shore sources of Marine Pollution.
(c) Explain the effects of oil pollution on the ocean. [8+4+4]
6. (a) Define watershed management and explain its objectives.
(b) Discuss various water conservation techniques that can be practiced by individuals. [8+8]
7. (a) Describe the problems created by the growing population of the earth.
(b) Explain briefly the pattern of global population growth in recent years which is causing alarm to environmental experts. [8+8]

Code No: R05220105

Set No. 2

8. (a) Explain the aspects to be studied and the procedure for collecting information when you want to document the environmental features and resource assets of a water resource ecosystem during a field visit.
- (b) Describe, in the format given above, the features of any such ecosystem you have studied during field visit. [8+8]

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1. Explain the different areas of environmental conservation to which people belonging to different disciplines can contribute. [16]
2. (a) Explain show agricultural practices implemented to increase the field from the land lead to formation of unproductive land.
(b) Explain the difference in consumption of resources by the countries of the developing and developed world. [8+8]
3. (a) Explain the significance of preserving balance in various kinds of ecosystems. Illustrate with examples.
(b) Describe the structure and functions of an ecosystem. [8+8]
4. (a) Write briefly about the different types of diversity in ecosystems.
(b) Explain what is value of biodiversity and what are the different types of values of biodiversity? [8+8]
5. (a) What are the impacts of thermal pollution on global warming?
(b) Why is coal based electricity used in the world? [10+6]
6. Discuss briefly the provision of the following Acts:
 - (a) The Water (Prevention Control of Pollution) Act ,1974
 - (b) The Air (Prevention and Control of Pollution) Act, 1981
 - (c) The Wildlife Protection Act 1971
 - (d) The Forest Conservation Act of 1980 [4+4+4+4]
7. (a) Describe the problems created by the growing population of the earth.
(b) Explain briefly the pattern of global population growth in recent years which is causing alarm to environmental experts. [8+8]
8. (a) Describe how you would methodically record the elements and resources in an ecosystem and assess its functioning.

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Set No. 3

- (b) Based on your field visits, summarize your observations and findings of the water resource ecosystem in your region. [8+8]

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1. What are the different activities that can be taken up to increase public awareness of environmental issues? Explain how they help in better environmental management. [16]
2. Write about :
 - (a) Nuclear power
 - (b) Biomass energy and biogas. [8+8]
3. (a) How do human activities lead to degradation of ecosystems?
(b) Briefly write about ecological succession over a period of time. [10+6]
4. (a) What are the major hotspots of biodiversity in our country?
(b) Why is it important to preserve these areas and how do they contribute to the environment in different ways? [6+10]
5. (a) Oceans are ultimate sink for most of the waste we produce. Explain.
(b) List off shore sources of Marine Pollution.
(c) Explain the effects of oil pollution on the ocean. [8+4+4]
6. (a) What are the major issues associated with resettlement and rehabilitation?
(b) Bring out the main elements of water conservation. [8+8]
7. What are the environmentally related reasons for the occurrence of various types of cancer? How can these be prevented and controlled? [6+10]
8. What are the problems encountered in the disposal of solid waste from various sources. Describe the outcome of poor management of solid waste, illustrating your answer with any case-study. [16]
