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B. Tech 2nd Semester Examination

Environment & Ecology (CBS)

HS-102

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one question from each of the sections A, B, C, and D, and all the subparts of the section E.

SECTION - A

1. What is resource? Distinguish between a renewable resource and a perpetual resource and give an example of each. What is sustainable yield? Define and give three examples of environmental degradation. (12)
2. (a) Justify the statement- "It is essential to develop the non-conventional energy sources in the present day of technology". (6)
- (b) How can we use water more sustainably? List three ways in which human activities increase the harmful effects of flooding. What is the best way to prevent each of these human impacts? (6)

SECTION - B

3. (a) Define ecosystem. Explain the structure and function of an ecosystem. (6)

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- (b) What is meant by ecological pyramid? Explain different types of pyramids giving suitable examples. (6)

4. Explain the value of biodiversity on social, ethical and aesthetic aspects. Define 'Hotspots' of biodiversity with special reference to India. Explain the threats to biodiversity in terms of habitat loss, endangered species and extinct species. How can they be prevented? (12)

SECTION - C

5. Discuss why experts recommended that one third of the total land area of India should be under forest cover in the context of ecological, environmental and economic considerations. (12)
6. Write down the key features of Vienna convention and various mechanisms for its implementation. (12)

SECTION - D

7. (a) What is toxic chemical? How they contaminate water? (6)
- (b) Define toxicity. List out six important toxic substances present in the environment. (6)
8. Discuss about different stages of waste water treatments. Why is it necessary at present time? (12)

SECTION - E

9. Choose the correct option from the following:
 - (i) Environmental studies are very important for _____ (getting clean drinking water/ hygienic living conditions/ clean and fresh air/all of the above).
 - (ii) Micro consumers are popularly known as _____ (primary consumer/secondary consumer/tertiary consumer/decomposers).

- (iii) DDT is harmful from the ecological point of view mainly because it undergoes _____
(biotransformation/bioaccumulation/biomagnification/biodegradation)
- (iv) 'Red Data Book' is published by _____
(IUCN/BNHS/WWF/Green peace)
- (v) Among biomedical waste, human anatomical wastes fall under category _____
(1/2/3/4)
- (vi) E-waste constitutes about _____ of the municipal solid waste
(15%/2%/1%/5%).
- (vii) _____ is the cleanest source of energy. (Hydropower/
Fossil fuel/Nuclear power/Wind energy)
- (viii) The international protocol to protect the ozone layer is _____
(Kyoto/Cartagena/ Montreal/Vienna)
- (ix) The objectives of wildlife (Protection) Act 1972 is _____
(To preserve the biodiversity/To maintain essential ecological and life support systems/Protection and conservation of wildlife/All of the above)
- (x) Among sources of power, India has the largest reserves of _____
(Coal/Oil/Atomic power/Natural gas)
- (xi) Food chain can be divided into how many types?
(6/3/2/4)
- (xii) Ecotone is _____ (ecosystem/a zone of an ecosystem/
an ecological study/a zone between two ecosystem)
(1×12=12)