



B.E DEGREE EXAMINATIONS: MAY 2018

(Regulation 2015)

Fourth Semester

CIVIL ENGINEERING

U15EST002: Introduction to Environmental Science and Engineering

COURSE OUTCOMES

CO1: Analyse the impact of engineering solutions in a global and societal context

CO2: Discuss contemporary issues that results in environmental degradation and would attempt to provide solutions to overcome those problems

CO3: Highlight the importance of ecosystem and biodiversity

CO4: Ability to consider issues of environment and sustainable development in his personal and professional undertakings

CO5: Paraphrase the importance of conservation of resources

CO6: Play an important role in transferring a healthy environment for future generations

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Match the List I with List II

CO5 [K₂]

List I		List II	
A. Aquifers		i. Landslides	
B. Increasing hill population and growth of hydropower and related infrastructures		ii. Alternate Energy	
C. Hydrogen		iii. Mineral resource	
D. Hematite		iv. Water	

- | | A | B | C | D |
|----|-----|----|-----|----|
| a) | ii | i | iii | iv |
| b) | iii | iv | ii | i |
| c) | ii | iv | iii | i |
| d) | iii | i | ii | iv |

2. Which of the following is not a correct option for managing hazardous waste? CO2 [K₄]
- a) Reducing the production of waste while increasing the amount generated b) Dumping at sea.
- c) Reducing the hazard of the waste d) Long-term storage or disposal
3. Consider the following statements regarding natural resources CO5 [K₂]
1. Forests act as a source and sink of carbon
 2. Cutting of trees in a forest reduces global warming
 3. Fossil fuels are renewable resources
 4. Wind and water are the major causes of soil erosion
- Which of the above statements are wrong?
- a) 1,3 b) 1,4
- c) 1,2 d) 2,3
4. A device fitted to the exhaust system petrol driven motor vehicle to reduce emissions of pollutants is called as CO2 [K₃]
- a) Conversion system b) Conversion kit
- c) Catalytic converter d) Catalytic box
5. Assertion (A): Tropical rain forests are disappearing fast from developing countries such as India. CO3 [K₃]
- Reason (R): No value is attached to these forest because these are poor in biodiversity
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
- c) A is true but R is false d) A is false but R is true
6. El nino is related to CO4 [K₂]
- a) Air pollution b) Energy consumption
- c) Climate change d) Water pollution
7. Sequence the following greenhouse gases based on increasing order of their concentration in the atmosphere. CO1 [K₂]
1. N₂O 2.CFC 3.CH₄ 4.CO₂
- a) 2-3-4-1 b) 1-3-2-4
- c) 3-4-2-1 d) 4-1-3-2
8. Uses of cooling ponds prevents CO1 [K₂]
- a) Air pollution b) Water pollution
- c) Soil pollution d) Thermal pollution

9. Assertion (A): India has crossed its one billion mark in population size recently CO6 [K₄]
Reason (R): A large percentage of India population is in the productive age group
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true
10. HIV is transmitted through CO6 [K₂]
- a) Blood b) Saliva
c) Air d) Water

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. State the need for public awareness for solving environmental problems. CO1 [K₂]
12. List the disadvantages of fossil fuels. CO1 [K₃]
13. Specify the impacts of dam construction. CO2 [K₃]
14. List the drawbacks of exploitations of minerals. CO2 [K₄]
15. Differentiate food chain and food web. CO3 [K₄]
16. What are the methods to be adapted to conserve biodiversity? CO3 [K₄]
17. List the sources for marine pollution. CO4 [K₂]
18. Define sustainable development. CO4 [K₁]
19. State any two methods to conserve land resource. CO5 [K₂]
20. What are the major objectives of family welfare programmes? CO6 [K₃]

Answer any FIVE Questions:-
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. Elaborate the renewable energy resources that could support in achieving a sustainable energy base. CO1 [K₂]
22. i) Describe the values of biodiversity. (7) CO3 [K₃]
ii) Explain the concept of an ecosystem with its structure and functions. (7) CO3 [K₂]
23. Discuss in detail on solid waste management. CO2 [K₃]

24. How do the water bodies get polluted? Describe the effects of pollution of water bodies and control measures. CO2 [K₃]
25. i State the air act and issues involved in enforcing its legislation. (7) CO5 [K₃]
ii State the issues involved in Rehabilitaion and Resettlement of people. (7) CO4 [K₃]
26. i Discuss the various threats to biodiversity. (7) CO3 [K₂]
ii Write a note on ecological pyramids. (7) CO3 [K₃]
27. Describe the role of Information Technology in Environment and human health. CO6 [K₄]
