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**Reg. No. :**

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**Question Paper Code: 52007**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Second Semester

Civil Engineering

15UCY207 - ENVIRONMENTAL SCIENCE

(Common to ALL branches)

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The primary producers in a forest ecosystem are CO1- R  
(a) Chlorophyll containing trees and plants      (b) Herbivores  
(c) Carnivores      (d) Bacteria
2. Genetic variation between distinct population of the same species is known as CO1- U  
(a) Species diversity    (b) Ecosystem diversity    (c) Genetic diversity    (d) Food web
3. Which of the following is an air pollutant? CO2- U  
(a) Nitrogen      (b) Carbon monoxide      (c) Carbon dioxide    (d) Oxygen
4. High level radioactive waste can be managed by CO2- U  
(a) Composting      (b) Store indefinitely      (c) Incineration      (d) Neutralization
5. Fossil fuel based pattern of energy use is having the problem of CO3-R  
(a) limited natural reserve      (b) Pollution  
(c) Lack of term sustainability      (d) All the above
6. Identify the non-renewable source of energy from the following CO3- R  
(a) Solar      (b) Wind      (c) Tidal      (d) Coal

7. The primary cause of acid rain around the world is CO4- R  
 (a) Carbon monoxide (b) Carbon dioxide (c) Sulphur dioxide (d) Oxygen
8. First of the major environmental act protection act to be promulgated in India CO4- R  
 was  
 (a) The water act (b) The air act (c) The environment act (d) Noise pollution act
9. The average life expectancy around the world is currently CO5-R  
 (a) Decreasing (b) Increasing (c) Stabilizing (d) No Changing
10. Declaration of human rights by the United nation was established in CO5- R  
 (a) 1948 (b) 1950 (c) 1955 (d) 1946

PART – B (5 x 2= 10 Marks)

11. Define Food chain. CO1- R
12. List the sources of soil pollution. CO2- R
13. Identify the demerits of tidal energy. CO3-Ana
14. Define sustainable development. CO4- R
15. Define zero population growth. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) (i) Describe the structure and function of an grass land ecosystem. CO1- U (8)  
 (ii) Explain in situ and ex situ conservation methodology in CO1- U (8)  
 conservation of Biodiversity.
- Or
- (b) (i) Discuss the process ecological succession. CO1- U (8)  
 (ii) Discuss the status of India as a mega diversity nation of CO1- U (8)  
 biodiversity.
17. (a) (i) Discuss the various methods involved in disposal of municipal CO2- U (8)  
 non hazardous solid wastes.  
 (ii) Discuss the role of individual in conservation of natural resources. CO2- U (8)

Or

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|-----|-----|--|--------|-----|
|     | (b) | (i) Describe the sources and effects of water pollution.                               | CO2- U | (8) |
|     |     | (ii) Discuss the effects and preventive measures of flood and landslides.              | CO2- U | (8) |
| 18. | (a) | (i) How is wind energy used to generate electricity? Give its merits and demerits.     | CO3- U | (8) |
|     |     | (ii) Discuss the major measures to attain sustainability.                              | CO3- U | (8) |
|     |     | Or   |        |     |
|     | (b) | (i) Discuss the term green power with an example                                       | CO3- U | (8) |
|     |     | (ii) Discuss different methods of harvesting of solar power.                           | CO3- U | (8) |
| 19. | (a) | (i) Discuss the major issues related to resettlement and rehabilitation of the people. | CO4- U | (8) |
|     |     | (ii) Discuss the effects and control measures of global warming.                       | CO4- U | (8) |
|     |     | Or   |        |     |
|     | (b) | (i) Describe any four waste land reclamation practices.                                | CO4- U | (8) |
|     |     | (ii) Analyze the salient features and drawbacks of Wild life (protection) act 1972.    | CO4- U | (8) |
| 20. | (a) | (i) Discuss the role of IT on environment and human health.                            | CO5- U | (8) |
|     |     | (ii) Write symptoms and control measures of HIV/AIDS .                                 | CO5- U | (8) |
|     |     | Or   |        |     |
|     | (b) | (i) Explain the consequences of population explosion on environment.                   | CO5- U | (8) |
|     |     | (ii) Discuss the objective and elements of value education.                            | CO5- U | (8) |

