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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech.

SEM: III - THEORY EXAMINATION (2022 - 2023)

Subject: Environmental Science

Time: 3 Hours

Max. Marks: 50

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION A

15

1. Attempt all parts:-

- | | | |
|------|---|---|
| 1-a. | What is the characteristic of each type of ecosystem? (CO1) | 1 |
| | (a) Interaction between living things | |
| | (b) Interaction between biotic and abiotic factors | |
| | (c) Interaction between abiotic factors | |
| | (d) Fights among individuals | |
| 1-b. | Photovoltaic energy is the conversion of sunlight into: (CO2) | 1 |
| | (a) Electricity | |
| | (b) Biogas energy | |
| | (c) Geothermal energy | |
| | (d) Hydrogen | |
| 1-c. | How many biogeography zones India have (CO3) | 1 |
| | (a) 5 | |
| | (b) 6 | |
| | (c) 8 | |

(d) 10

- 1-d. Which of the following devices is suitable for the removal of gaseous pollutants (CO4) 1
- (a) Cyclone separator
 - (b) ESP
 - (c) Fabric filters
 - (d) Wet scrubber
- 1-e. The Forest (Conservation) Act extends to the whole of India except? (CO5) 1
- (a) Uttar Pradesh
 - (b) Karnataka
 - (c) Jammu and Kashmir
 - (d) M P

2. Attempt all parts:-

- 2.a. List all the segments of atmosphere. (CO1) 2
- 2.b. Which are non-conventional source of energy ? Mention any three. (CO2) 2
- 2.c. Differentiate between primary and secondary ecological successions. (CO3) 2
- 2.d. What is the full form of three R? How they are beneficial for environment protection? (CO4) 2
- 2.e. Write short notes on non formal environmental education? (CO5) 2

SECTION B

15

3. Answer any three of the following:-

- 3-a. Describe the different segment of environment. (CO1) 5
- 3-b. Discuss the extraction of energy from hydrogen? (CO2) 5
- 3-c. What do you understand by Alpha diversity, Beta diversity and “Gamma diversity”? (CO3) 5
- 3-d. Write short notes on causes, consequences and remedial measures of Green house effect? (CO4) 5
- 3.e. Discuss the salient features of EPA? Discuss the strategy adopted by Government for the protection of environment. (CO5) 5

SECTION C

20

4. Answer any one of the following:-

- 4-a. Define overgrazing? Write down the effects of overgrazing on the environment? (CO1) 4
- 4-b. Discuss the impact of modern agriculture on the environment? (CO1) 4

5. Answer any one of the following:-

- 5-a. Discuss the different methods of water conservation? (CO2) 4
- 5-b. Discuss the fluoride and arsenic problems in drinking water.(CO2) 4
6. Answer any one of the following:-
- 6-a. Describe approaches for ex-situ conservation and in situ conservation as a strategy for biodiversity conservation.(CO3) 4
- 6-b. What is ecological succession? Describe steps involve in ecological succession. (CO3) 4
7. Answer any one of the following:-
- 7-a. .Illustrate the photochemical reactions involved in the formations and destructions of ozone in the stratosphere? (CO4) 4
- 7-b. Write down the effects of air pollution on human health and environment .(CO4) 4
8. Answer any one of the following:-
- 8-a. Write short notes on the functions of Central Pollution Control Board regarding Water (Prevention)Act? (CO5) 4
- 8-b. Write down the role of individuals to achieving the goal of sustainable development? (CO5) 4