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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

BCA

SEM: I - THEORY EXAMINATION (2025- 2026)

Subject: Environmental Science and Sustainability

Time: 2 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. Which of the following is a biotic component of an ecosystem?(CO1, K1) 1
- (a) Soil
- (b) Light
- (c) Microorganisms
- (d) Water
- 1-b. Deforestation primarily leads to: (CO2,K2) 1
- (a) Increase in rainfall
- (b) Loss of biodiversity
- (c) Decrease in soil fertility
- (d) Both b and c
- 1-c. Which gas is linked with photochemical smog? (CO3, K1) 1
- (a) CO₂
- (b) SO₂
- (c) NO_x
- (d) Methane
- 1-d. Women education can indirectly help in environmental protection by:(CO4 K1) 1
- (a) Encouraging eco-friendly practices
- (b) Increasing population
- (c) Reducing literacy
- (d) Promoting industrial growth
- 1-e. Flood management is a part of:(CO4 K1) 1

- (a) Disaster prevention
- (b) Disaster management
- (c) Climate change mitigation
- (d) Wildlife protection

2. Attempt all parts:-

- 2.a. Explain in-situ and ex-situ biodiversity conservation strategies. (CO1, K2) 2
- 2.b. Explain the advantages of biogas over fossil fuels. (CO2,K2) 2
- 2.c. Define the term solid waste? Name the different types of solid waste and their effects on environment? (CO3, K1) 2
- 2.d. Explain the causes and effects of climate change with suitable examples. (CO3, K2) 2
- 2.e. State two objectives of Environmental Impact Assessment (EIA). Name the steps of EIA? (CO4, K2) 2

SECTION-B

15

3. Answer any three of the following:-

- 3-a. Discuss the role of producers, consumers, and decomposers in a garden ecosystem. (CO1, K2) 5
- 3-b. Discuss the effects of mining and industrialization on the. Ecosystem? (CO2, K2) 5
- 3-c. Define the term natural recourses? Classify natural resources in different parameters? (CO2, K1) 5
- 3.d. Define the term pollution and pollutant? Discuss the causes, effects and control measures of water pollution? (CO3, K1) 5
- 3.e. Discuss the salient features of Water (Prevention and Control of Pollution) Act, 1974 (CO4, K2) 5

SECTION-C

20

4. Answer any five of the following:-

- 4-a. Describe the importance of the nitrogen cycle in maintaining ecological balance. (CO1, K2) 4
- 4-b. Describe the different types of ecological pyramids with suitable examples. (CO1, K2) 4
- 4-c. Define nonrenewable resources? Write down the benefits and limitations of renewable and nonrenewable recourses? (CO2, K1) 4
- 4-d. Discuss the impacts of timber extraction on tribal communities and forest ecosystems. (CO2,K2) 4
- 4-e. Discuss the major sources and effects of acid rain and global warming? (CO3, K1) 4
- 4-f. Describe the types of soil pollution and their impacts on agriculture. (CO3, K2) 4
- 4-g. Explain the main objectives of Environmental Impact Assessment (EIA). (CO4, K2) 4
- 4-h. Explain the salient features of Wildlife (Protection) Act, 1972 contribute to biodiversity conservation? (CO4, K2) 4