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

BCA

SEM: III - 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. The term ecology was first coined by: (CO1, K1)

1

- (a) Charles Darwin
- (b) Ernst Haeckel
- (c) Aristotle
- (d) Alfred Wallace

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. The major source of SO_x pollution is: (CO3,K1)

1

- (a) Burning of coal
- (b) Plastic disposal
- (c) Deforestation
- (d) Nuclear reaction

1-d. Identify which of the following is a key aim of women education?(CO4 K1)

1

- (a) Health awareness
- (b) Skill development
- (c) Gender equality
- (d) All of these

1-e. NGOs play a role in environmental protection by:(CO4 K1)

1

- (a) Organizing campaigns
- (b) Policy making
- (c) Legislation enforcement
- (d) Tax collection

2. Attempt all parts:-

- 2.a. Define ecology and explain its scope briefly. (CO1, K1) 2
- 2.b. Define deforestation and give one major cause. (CO2,K1) 2
- 2.c. Define primary and secondary air pollutants with one example each. (CO3,K1) 2
- 2.d. State eutrophication? Write any two harmful effects. (CO3,K2) 2
- 2.e. Define what is the main aim of the Environmental Protection Act, 1986? (CO4,K2) 2

SECTION-B

15

3. Answer any three of the following:-

- 3-a. Explain the concept of ecological pyramids with suitable examples. (CO1, K2) 5
- 3-b. Define renewable and non-renewable energy resources with two examples each. (CO2, K1) 5
- 3-c. Describe the environmental impacts of mining and suggest possible control measures. (CO2, K3) 5
- 3.d. Explain the process of eutrophication and its effects on aquatic life. (CO3, K2) 5
- 3.e. Identify and describe three bioindicators commonly used to assess water and soil quality. (CO4, K3) 5

SECTION-C

20

4. Answer any five of the following:-

- 4-a. Define ecology and explain its scope with respect to environmental studies. (CO1, K1) 4
- 4-b. List the basic components of an ecosystem with examples. (CO1, K1) 4
- 4-c. Explain how deforestation leads to environmental problems. (CO2, K3) 4
- 4-d. Describe the importance of the nitrogen cycle in maintaining ecological balance. (CO2, K3) 4
- 4-e. Explain the major causes of soil pollution and how they affect soil fertility. (CO3, K2) 4
- 4-f. Describe how industrial waste disposal can affect crop productivity. Provide an example. (CO3, K2) 4
- 4-g. Describe the main aims and objectives of Environmental Impact Assessment (EIA). (CO4, K2) 4
- 4-h. Using the concept of sustainability, analyze how the UN Sustainable Development Goals (UNSDGs) can be applied to improve waste management in a city.(CO4, K3) 4