

SEMESTER END EXAMINATION, APRIL-MAY, 2025

Course Name: - B.tech

Semester:- II

Paper Name: - Environmental Science

Paper Code:- NVA-203

Time - 3Hrs + 20 minutes per hour extra time for V.I. & examinees with writer.

Max Marks-70

Additional 30 Minutes for Mid-Test.

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries 3 mark. All questions are compulsory.
- Section B- Answer any 5 out of 7 given questions. Each question carries 7 marks.
- Section C- Answer any 2 out of 3 given questions. Each question carries 10 marks.
- Section D- Each question carries 02 mark. All questions are compulsory.

Section - A (खण्ड-अ)

Objective Questions (वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions.

5x3 =15

निम्नलिखित सभी प्रश्न अनिवार्य हैं।

- Environmental Protection Act came into force on
 - 1980
 - 1986
 - 1974
 - 1981
- Who had brings the concept of 'Hotspots of Biodiversity'?
 - Norman Myers
 - Walter G. Rosen
 - E. P. Odum
 - A G Tansley
- Brackish water ecosystems are found in which of the following:
 - Streams
 - Wetlands
 - Coastal shallows
 - Deltas
- Eutrophication is
 - An improved quality of water in lakes
 - A process in carbon cycle
 - The result to accumulation of plant nutrients in water bodies
 - A water purification technique
- Which among the following is a Green house gas?
 - Methane
 - Hydrocarbons
 - Phosphorous
 - Sulphur dioxide

Section - B (खण्ड-ब)

Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions.

5x7=35

निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर दें।

- Define Environmental Science. What are the scopes of studying Environmental Science?
- Explain the concept of Ecological succession with example?

- iii. What are the objectives of Air (Prevention & control of pollution) Act?
- iv. What is Green Chemistry? What are the different principles of Green Chemistry?
- v. Explain the Nitrogen and Phosphorus cycle.
- vi. Briefly tell about 'Chipkko Movement'.
- vii. Explain the process of formation and depletion of Ozone layer.

Section - C (खण्ड-स)

Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question.
निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर दें।

2x10=20

- i) Illustrate the structure and function of an Ecosystem.
- ii) Explain in brief the conservation method of Biodiversity.
- iii) What are the causes, effect and control measure of Water Pollution?

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Mid-Test

Course Name:- B.Tech

Paper Name:- Environmental Science

Time - 30 minutes.

Semester:- 2nd

Paper Code:-NVA-203

Max Marks-20

All questions are compulsory.

2x10=20

सभी प्रश्न अनिवार्य हैं।

Objective Questions.

बहुविकल्पीय प्रश्न।

1. The pair of greenhouse gases are:
 - a) CO₂, N₂O
 - b) CFC, CO
 - c) O₂, CO₂
 - d) CH₄, N₂
2. Who discovered the term 'ecosystem'?
 - a) EP Odum
 - b) AG Tansley
 - c) Charles Elton
 - d) Norman Myers
3. Which one of the following is the cause of acid rain?
 - a) Water pollution
 - b) Noise pollution
 - c) Land pollution
 - d) Air pollution
4. Which atmospheric layer contains Ions and helps in wireless communication?
 - a) Troposphere
 - b) Mesosphere
 - c) Stratosphere
 - d) Thermosphere
5. Integrated Crop Management (ICM) is defined as a process to:
 - a) Use the traditional methods for growing crops.
 - b) Using alternatives to inorganic fertilizers and pesticides.
 - c) Both (a) and (b)
 - d) Only (a)

6. What are the numbers of biodiversity hotspots in the world?
 - a) 18
 - b) 28
 - c) 36
 - d) 32
7. Bhopal tragedy was caused due to
 - a) Air pollution
 - b) Water pollution
 - c) Leakage of poisonous gas
 - d) Emission of poisonous gas
8. 'Smog' is a mixture of
 - a) Snow and Fog
 - b) Smoke and Fog
 - c) Sulphur dioxide and Fog
 - d) Snow and Dust
9. _____ is the hotspot of Biodiversity in India.
 - a) Gangetic plains
 - b) Sunderbans
 - c) Eastern ghats
 - d) Western ghats
10. Pyramid of biomass for Aquatic ecosystem is
 - a) Upright
 - b) Spindle shape
 - c) Inverted
 - d) None of the above

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Section - A (खण्ड-अ)

Objective Questions (वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions.

5x3 =15

निम्नलिखित सभी प्रश्न अनिवार्य हैं।

- The Air (Protection & Control) Act came into force on
 - 1980
 - 1986
 - 1974
 - 1981
- The Major reservoir for Phosphorous is
 - Aquifers
 - Soil and rocks
 - The Atmosphere
 - Clouds
- The term 'detritivore' includes
 - Decomposers
 - Primary consumers
 - Secondary consumers
 - Producers
- Which atmospheric layer contains Ozone?
 - Troposphere
 - Thermosphere
 - Stratosphere
 - Mesosphere
- Which One of the Following is a Greenhouse Gas?
 - Carbon monoxide
 - Nitrogen dioxide
 - Sulphur dioxide
 - Nitrous oxide

Section - B (खण्ड-ब)

Short Answer Questions (लघु उत्तरीय प्रश्न)

2. Answer any five of the following questions.

5x7=35

निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर दें।

- What is Natural Resources? Classify it.
- What are the different spheres of the Earth?
- Explain the concept of Food chain and food web with example?
- What are the objectives of Wildlife Protection Act, 1972?

- v. Illustrate the composition of soil and also explain its formation?
- vi. What do you understand by Biodiversity? Classify different types of Biodiversity.
- vii. Briefly explain in detail about the 'Narmada Bachao Andolan'.

Section - C (खण्ड-स)
Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question.

2×10=20

निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर दें।

- i) What is Ecological Pyramids? Explain different types of Ecological Pyramids with examples.
- ii) Explain in brief the 'Hotspots of Biodiversity'.
- iii) What are the causes, effect and control measure of Air Pollution?

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Mid-Test

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All questions are compulsory.

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सभी प्रश्न अनिवार्य हैं।

Objective Questions.

बहुविकल्पीय प्रश्न।

1. Which power plant works on the basis of gravity of earth?
 - a) Hydropower
 - b) Wind energy
 - c) Geothermal
 - d) Nuclear power
2. Which of the following Acts is popularly known as Umbrella Legislation?
 - a) The Water (Prevention and Control of Pollution) Act, 1974
 - b) The Environment (Protection) Act, 1986.
 - c) The Wildlife Protection Act, 1972,
 - d) The Air (Prevention and Control of Pollution) Act, 1981
3. Which of the following are major environmental issues involved in mining?
 - a) Air pollution from dust
 - b) Water pollution
 - c) Soil degradation
 - d) All the above
4. Which of the following pyramids is always upright?
 - a) Pyramid of numbers
 - b) Pyramid of biomass
 - c) Pyramid of energy
 - d) None of the above

5. Which of the following is not an environmental problem?
- a) Genetic modification of food
 - b) Afforestation
 - c) Acid Rain
 - d) Loss of Biodiversity
6. What is the name of the species whose population has been reduced to a critical level?
- a) Endangered
 - b) Rare
 - c) Vulnerable
 - d) Extinct
7. _____ is an example of an ex-situ conservation.
- a) Sacred groves
 - b) Wildlife sanctuary
 - c) Seed bank
 - d) National park
8. Sustainable development means
- a) meeting present needs without compromising on future needs
 - b) balance between human needs and the ability of earth to provide the resources
 - c) progress of human beings
 - d) all of the above
9. Chipko movement was first led by
- a) Rajiv Gandhi
 - b) Sunderlal Bahuguna
 - c) Ramdev Mishra
 - d) None of the above
10. Which of the following activities has contributed maximum to the global warming?
- a) Industrial processes
 - b) Deforestation
 - c) Fossil fuel combustion
 - d) Agriculture
