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| <b>Hi-Tech Institute of Engineering &amp; Technology</b> |  |
| <b>DEPARTMENT OF APPLIED SCIENCE</b>                     |  |
| <b>1<sup>ST</sup> MODEL PAPER, ODD SEMESTER-2023-24,</b> |  |
| <b>Semester: 1st</b>                                     | <b>Course/Branch: B. Tech</b>                  |
| <b>Subject Code: BAS104</b>                              | <b>Subject Name: ENVIRONMENT &amp; ECOLOGY</b> |
| <b>Faculty Name: Dr SHALINI SRIVASTAV</b>                |  |
| <b>Time: 3: 00 Hours</b>                                 | <b>Total Marks: 70</b>                         |

**Note: Attempt all Sections. If you require any missing data, then choose suitably.**

### SECTION A

**1. Attempt *all* questions in brief. 2X7=14**

| Q No. | Question   | Marks | CO |
|-------|--|-------|----|
| a.    | What do you mean by the term Ecology? Describe the term Producer, Consumer and Decomposer.     | 2     | 2  |
| b.    | Discuss in brief Pond eco-system.  | 2     | 1  |
| c.    | What is fluorosis? How it is caused? State its preventive measures.                            | 2     | 1  |
| d.    | What do you mean by the term Environment? Name the components and segments of the environment. | 2     | 2  |
| e.    | Briefly describe the public awareness about the environment.                                   | 2     | 2  |
| f.    | Define Eutrophication.   | 2     | 1  |
| g.    | What is Bio- accumulation?   | 2     | 2  |

### SECTION B

**2. Attempt any *three* of the following: 7X3= 21**

| Q No. | Question   | Marks | CO |
|-------|--|-------|----|
| a.    | Why do we refer Environmental Protection Act 1986 as an umbrella act? Discuss the Environmental Protection Rules 1986.     | 7     | 3  |
| b.    | What is an Environmental Impact Assessment? Discuss its importance in planning and implementation of engineering projects. | 7     | 4  |
| c.    | Write a detailed note on Sustainable Development.  | 7     | 4  |
| d.    | Define the term Ecological Pyramid. Giving suitable examples, explain the term upright and inverted Ecological Pyramids.   | 7     | 3  |
| e.    | What is the concept of food chain and food web. Explain different types of food chain and food web with suitable examples. | 7     | 4  |

### SECTION C

**3. Attempt any *one* part of the following: 7X1= 7**

| Q No. | Question   | Marks | CO |
|-------|--|-------|----|
| a.    | With the help of neat diagram explain Sulphur cycle.                               | 7     | 3  |
| b.    | Write a short note on the following-<br>(i) London Smog<br>(ii) Bhopal Gas tragedy | 7     | 4  |

**4. Attempt any one part of the following:****7X1= 7**

| Q No. | Question  | Marks | CO |
|-------|---|-------|----|
| a.    | What is Acid Rain? Name the gases responsible for Acid Rain. Discuss the causes, effects and remedies of Acid Rain on environment and ecology.                                  | 7     | 3  |
| b.    | Discuss the strategy and policies adopted by the Government of India for the development of women education. Briefly describe the various schemes launched for women education. | 7     | 4  |

**5. Attempt any one part of the following:****7X1= 7**

| Q No. | Question   | Marks | CO |
|-------|--|-------|----|
| a.    | With suitable examples explain the causes, effects and remedies of the waterborne diseases. What do you understand by the arsenic problem in drinking water? | 7     | 5  |
| b.    | Describe various kinds of energy resources. Distinguish between conventional and non- conventional energy resources.   | 7     | 4  |

**6. Attempt any one part of the following:****7X1= 7**

| Q No. | Question  | Marks | CO |
|-------|---|-------|----|
| a.    | What do you mean by the term Ozone hole? Discuss the reactions involved in the formation and depletion of Ozone layer. Also explain the causes, effects and control of Ozone layer depletion. | 7     | 4  |
| b.    | What is Greenhouse effect? Name four Greenhouse gases. Discuss the causes, effects and remedies of Greenhouse effects.  | 7     | 5  |

**7. Attempt any one part of the following:****7X1= 7**

| Q No. | Question   | Marks | CO |
|-------|--|-------|----|
| a.    | What do you mean by the term NGO? Discuss the steps taken by NGOs in Environmental protection.                                     | 7     | 4  |
| b.    | Explain in detail Automobile pollution. How new age transportation is contributing in raising pollution. How can it be controlled? | 7     | 5  |