

NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA (136119)
DEPARTMENT OF CHEMISTRY

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Examination: **B. Tech. 1st Year 1st Semester (Midterm II)**

Date & time of examination: **05.02.2021 (09.30am to 10.20am)**

Subject: **Energy & Environmental Science (Common to all Branches)**

Course Code: **CHIR11**

Maximum Marks: **15**

Time allowed: **50 min**

Note:

1. The candidates are required to attempt all five questions. They must write their name, complete roll number and section on the top RHS corner of the answer sheet.
2. Students are required to submit the answer sheet as PDF that must be saved as (**complete roll number_section.pdf**). Suppose the roll number of any student is 12012001 and section is CS-A1, then PDF name must be: **12012001_CS-A1.pdf**

| Q. No. | Description | Marks |
|--------|--|-------|
| I | Write answers to the following: a. In which layer of the atmosphere ozone layer is present. b. Write two names of secondary pollutants of air. c. Write a short note on bad ozone. | 1×3 |
| II | What is photochemical smog? Write the main requirements for its formation and its effects on plants and animals. | 3 |
| III | Write short notes on the following a. Write only chemical reactions for the Carbaryl synthesis. b. Greenhouse effect. c. Temporary hardness of the water. | 1×3 |
| IV | Explain the ion-exchange method for purifying wastewater. What type of contaminants can be removed and can't be removed with this method. | 3 |
| V | Calculate BOD of a water sample of 10.4 ppm initial DO which declines to 4.6 ppm upon incubation of 50 mL of water sample in a 300 mL BOD bottle for first 5 days. or What is thermal pollution? What are its effects and explain various control measures? | 3 |