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QP Code: D153277	Total Pages: 1	Name:
		Register No.

FIFTH SEMESTER (CUFYUGP) DEGREE EXAMINATION, NOVEMBER 2026

CHEMISTRY

CHE5CJ302 INORGANIC CHEMISTRY III

2024 Admission onwards

Maximum Time :2 Hours | **Maximum Marks :70**

Section A

All Questions can be answered. Each Question carries 3 marks (Ceiling : 24 Marks)

1	Distinguish between a pollutant and a contaminant with suitable examples.
2	What is smog? Name the two major types of smog.
3	What is acid rain? Mention its major causes
4	Distinguish between ionizing and non-ionizing radiation
5	Mention two limitations of the Arrhenius concept.
6	Mention three important properties of ceramic materials.
7	How is borate eliminated during qualitative analysis?
8	What is cupferron? Mention its analytical applications.
9	Define gravimetric factor and write its expression.
10	Discuss Eutrophication.

Section B

All Questions can be answered. Each Question carries 6 marks (Ceiling : 36 Marks)

11	Explain Biochemical Oxygen Demand (BOD), and Chemical Oxygen Demand (COD) in assessing water quality. How are these parameters measured?
12	Explain the Brønsted–Lowry concept of acids and bases. What are conjugate acid–base pairs? Illustrate with suitable examples.
13	Compare perovskite and spinel structures.
14	Explain solubility product and common ion effect and discuss their applications in qualitative inorganic analysis.
15	Explain the methods employed for the elimination of interfering acid radicals with special reference to oxalate, fluoride and phosphate.
16	Differentiate between co-precipitation and post- precipitation. Explain any one method used to minimize these errors
17	Explain the structure and applications of polymer matrix composites and metal matrix composites. Give one example of each.
18	Explain the role of pesticides and fertilizers in soil pollution.

Section C

Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)

19	Explain the sources, and environmental impacts of soil pollution and thermal pollution.
20	Describe the catalytic applications of zeolites and alumina.

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