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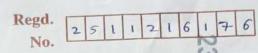
COLLEGE CODE:



223



Total No. of Questions - 21 Total No. of Printed Pages - 2





Part - III CHEMISTRY - Paper - II (English Version)

Max. Marks: 60

Time: 3 Hours Note: - Read the following instructions carefully.

- (i) Answer all the questions of Section A. Answer any six questions in Section B and any two questions in Section - C.
- (ii) In Section A, questions from Sr. Nos. 1 to 10 are of "Very Short Answer Type". Each question carries two marks. Every answer may be limited to 2 or 3 sentences. Answer all these questions at one place in same order.
- (iii) In Section B, questions from Sr. Nos. 11 to 18 are of "Short Answer Type". Each question carries four marks. Every answer may be limited to 75 words.
- (iv) In Section C, questions from Sr. Nos. 19 to 21 are of "Long Answer Type". Each question carries eight marks. Every answer may be limited to 300 words.
- (v) Draw labelled diagrams, wherever necessary for questions in Section B and Section - C.

SECTION - A

 $10 \times 2 = 20$

Note: - Answer ALL questions:

- Name two most familiar antioxidants used as food additives. 1.
- What are Antacids? Give example. 2.
- What is PHBV? How is it useful to man? 3.
- What are the repeating monomeric units of Nylon-6 and 4. Nylon-6, 6?
- State Raoult's Law. 5.
- What is the difference between a mineral and an ore? 6.
- State the Faraday's first law of electrolysis.



- 8. Write the reactions of F2 and Cl2 with water.
- What happens when Cl₂ reacts with dry slaked lime?



10. Aqueous Cu²⁺ ions are blue in colour, whereas Aqueous Zn²⁺ ions are colourless. Why?

SECTION - B

 $6 \times 4 = 24$

Note: - Answer ANY SIX questions:

- 11. How are XeF₂ and XeF₄ prepared? Give their structures.
- 12. What are different types of Adsorptions? Give any four differences between characteristics of these different types.
- 13. Derive Bragg's equation.
- 14. A solution of glucose in water is labeled as 10% (w/w). What would be the molarity of the solution?
- 15. Explain briefly the extraction of aluminium from bauxite.
- 16. Explain Werner's theory of coordination compounds with suitable examples.
- 17. What are Hormones? Give one example for each.
 - (i) Steroid hormones (ii) Polypeptide hormones and (iii) Amino acid derivatives
- 18. Explain the mechanism of Nucleophilic bimolecular substitution (SN²) reaction.

SECTION - C

 $2 \times 8 = 16$

Note: - Answer ANY TWO questions:

- 19. (i) Write the chemical reactions that occur in the manufacture of nitric acid.
 - (ii) How's ozone prepared from oxygen? Explain its reaction with (a) C₂H₄ (b) KI
- 20. (a) Describe the salient features of the collision theory of reaction rates of bimolecular reactions.
 - (b) State and explain Kohlrausch's law of independent migration of ions.
- 21. Describe the following reactions -
 - (a) Carbylamine reaction
 - (b) Gattermann reaction
 - (c) HVZ reaction
 - (d) Aldol condensation