0223
(TS)

B

Total No. of Questions - **21**

Total No. of Printed Pages - **2**

Regd. No.

Part - III

CHEMISTRY, Paper - II

(English Version)

Time : 3 Hours ***Max. Marks : 60***

Note : Read the following instructions carefully.

1) Answer **all** questions of Section 'A'. Answer **any six** questions in Section 'B' and **any two** questions in Section 'C'.

2) 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 the same order.

3) 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.

4) 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.

5) Draw labelled diagrams **wherever necessary** for questions in Sections 'B' and 'C'.

SECTION A

10 × 2 = 20

Note : Answer **all** questions.

1. What is metallic corrosion? Give an example.

2. What is reverse osmosis? What is practical utility?

3. Give the composition of the following alloys :

a) Brass b) German silver

4. How is $XeOF_4$ prepared? Describe its molecular sha e.

5. Give two reactions in which transition metals or their compounds acts as catalysts.

6. What are ambident nucleophiles?

7. What is stereochemical result of S_N^1 and S_N^2 reactions?

8. Give the structures of A and B.

$$C_6H_5N_2Cl \xrightarrow{CuCN} A \xrightarrow{H_2O/H^+} B$$

9. Explain Gatterman Reaction.

10. Write the reactions of F_2 with water.

SECTION B

$6 \times 4 = 24$

Note : Answer **any six** questions.

11. Define molarity. Calculate the molarity of a solution containing 5 g of *NaOH* in 500 ml of solution.

12. Derive Bragg's equation.

13. Give any four differences between physisorption and chemisorption.

14. Explain briefly the extraction of aluminium from bauxite.

15. Write the formulas for the following coordination compounds.

a) Tetraammineaquachloro cobalt (III) chloride

b) Potassium tetrahydroxozincate (II)

c) Potassium trioxalatoaluminate (III)

d) Tetracarbonylnickel (0)

16. Explain the purpose of vulcanization of rubber.

17. Give the sources of the following vitamins and name the diseases caused by their deficiency.

a) A b) D c) E d) K

18. Write notes on antiseptics and disinfectants.

SECTION C

$2 \times 8 = 16$

Note : Answer **any two** questions.

19. a) How is Ammonia manufactured by Haber's Process with a neat diagram?

b) Explain the reactions of the following with ozone.

a) C_2H_4 b) KI c) Hg d) PbS

20. a) What are the fuel cells? How are they different from Galvanic cells? Give the construction of H_2 and O_2 fuel cells.

b) What is molecularity of a reaction? How it is different from the order of a reaction? Name one bimolecular and one trimolecular gaseous reactions.

21. a) Explain the preparation of phenol from cumene.

b) Describe the following :

i) Cross aldol condensation

ii) Decarboxylation