223

III

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 out of eight in Section 'B' and answer **any two** questions out of three 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 **5** lines. 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 **20** lines.

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 **60** lines.

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 Ebullioscopic constant?

2. What is galvanic cell or a voltaic cell? Give one example.

3. Why Zn^{+2} is diamagnetic whereas Mn^{+2} is paramagnetic?

4. What is PHBV? Give one use.

5. What is vulcanization of rubber?

6. What is matte? Give its composition.

7. Write examples for the following compounds :

   a) Phosphorous acidic oxide b) Nitrogen neutral oxide

8. What is tailing of mercury? How it is removed?

9. What are antacids? Give two examples.

10. What are artificial sweetening agents? Give two examples.

SECTION B

$6 \times 4 = 24$

Note : Answer **any six** questions.

11. What is doping? Give one example for each of *P*–type and *N*–type semiconductors.

12. Calculate the molality of 2.5 gms of ethanoic acid (CH_3COOH) in 75 gms of Benzene.

13. Explain the structures of XeF_4 and XeF_6.

14. Explain Werner's theory with examples.

15. Give the sources of the vitamins A, B, K and D and name the diseases caused by their deficiency .

16. Explain froth floatation process.

17. Write short notes on Tyndall effect and Brownian movement.

18. Explain S_N2 reaction with an example.

SECTION C

$2 \times 8 = 16$

Note : Answer **any two** questions.

19. Give a detailed account of the Collision theory of reaction rates of bimolecular gaseous reactions.

20. Write the preparation of chlorine in the laboratory. Explain the reactions of chlorine with the following compounds.

    a) Cold $NaOH$ b) Hot $NaOH$ c) Excess of NH_3

21. Explain the following reactions with suitable examples.

    a) Kolbe's reaction

    b) Reimer – Tiemann reaction

    c) Williamson's Synthesis

    d) Aldol condensation