

223

II

Total No. of Questions – 21

Regd.

Total No. of Printed Pages – 2

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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 from Section – ‘B’ and any **two** questions from 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 **two to three** sentences. Answer all the 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 diagram, wherever necessary for questions in Section – ‘B’ and ‘C’.

SECTION – A

10 × 2 = 20

Note : Answer **all** the questions.

1. What is Vulcanization of Rubber ?
2. Name the Monomers present in the following polymers :
(a) Bakelite
(b) Buna-N
3. What are Disinfectants ? Give example.
4. What are Food Preservatives ? Give example.
5. Give the composition of following alloys :
(a) Brass
(b) German Silver
6. What is Primary Battery ? Give example.
7. How is chlorine manufactured by Deacon’s method ?

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8. What happens when Cl_2 reacts with dry slaked lime ?
9. Calculate the spin only magnetic moment of Fe^{+2} ion.
10. What are Isotonic Solutions ?

SECTION - B

 $6 \times 4 = 24$

Note : Answer any six questions.

11. State Raoult's Law. Calculate the mole fraction of H_2SO_4 in a solution containing 98% of H_2SO_4 by mass.
12. Derive Bragg's Equation.
13. What are Emulsions ? How are they classified ?
14. Explain the purification of sulphide ore by Froth floatation method.
15. Give the sources of the following Vitamins and name the diseases caused by their deficiency.
- (a) A (b) D (c) E (d) K
16. Explain Werner's theory of Co-ordination compounds with suitable examples.
17. How are XeF_2 and XeF_4 are prepared ? Give their structures.
18. Explain the following reactions :
- (a) Sandmeyer reaction
- (b) Wurtz's Fittig reaction

SECTION - C

 $2 \times 8 = 16$

Note : Answer any two questions :

19. (a) How is Nitric Acid manufactured by Ostwald's process ?
- (b) How does Ozone react with the following :
- (i) PbS (ii) C_2H_2 C_2H_4
- (iii) Ag (iv) Hg
20. Give a detailed account of the Collision Theory of reaction rates of bimolecular gaseous reactions.
21. (a) Explain the Acidic nature of phenols and compare with that of alcohols.
- (b) With suitable example, write equations for the following :
- (i) Kolbe's reaction
- (ii) Reimer-Tiemann reaction