

223



Total No. of Questions : 21
Total No. of Printed Pages : 4

Regd. No.

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Part - III
CHEMISTRY, Paper - II

(English version)

Time : 3 Hours]

[Max. Marks : 60

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 5 lines. Answer all these questions at one place in the 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 10 lines.
- (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 40 lines.
- (v) Draw labelled diagrams, wherever necessary for questions in **Sections - B and C**.

SECTION - A

10×2=20

Note :- Answer *all* the questions.

1. Define Antibiotics. Give an example.
2. What are Antacids ? Give an example.
3. Define Hormone. Give an example.

4. Give two biological functions of Lipids.
5. What is Vulcanization of Rubber ?
6. State Hess's Law.
7. Explain Enthalpy.
8. Write the formulae for the following compounds.
 - (a) Tetra ammine Copper (II) Sulphate.
 - (b) Potassium tetra Chloro platinate.
9. What is Reimer-Tiemann reaction ? Give equation.
10. Name the products A and B formed in the following reactions.



SECTION - B

6×4=24

Note :- Answer **ANY SIX** questions.

11. Define Mole fraction.

A solution contains 90 gm. of H_2O , 6.4 gm. of Methanol and 18.4 gm. of Glycerol. What is the mole fraction of Glycerol ?

(Glycerol = $\text{CH}_2\text{OH}\cdot\text{CHOH}\cdot\text{CH}_2\text{OH}$)

12. Derive Bragg's equation.

13. Write Faraday's First Law.

A current of 10 amp. is passed through molten AlCl_3 for 96.5 seconds.

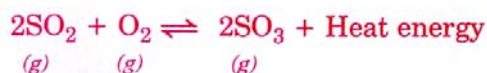
Calculate the mass of Al deposited at the cathode.

(At. wt. of Al = 27)

14. Define Buffer solution. Explain buffer action of Acid buffer solution.
15. How are Emulsions classified ? Give examples.
16. Explain the following.
 (a) Calcination
 (b) Smelting
17. How is Super phosphate of Lime prepared ? Sketch the diagram.
18. Give the Werner structures for the following complex compounds.
 (a) $\text{CoCl}_3 \cdot 6\text{NH}_3$
 (b) $\text{CoCl}_3 \cdot 5\text{NH}_3$
 (c) $\text{CoCl}_3 \cdot 4\text{NH}_3$
 (d) $\text{CoCl}_3 \cdot 3\text{NH}_3$

SECTION - C**2×8=16****Note :- Answer ANY TWO questions.**

19. State Le Chatelier's principle and apply it to the following equilibrium.



20. (a) Describe Whytlaw - Gray's method for the preparation of Fluorine.
- (b) Give the reactions of Ozone with the following :
 (i) Ag_2O (ii) H_2O_2
 (iii) BaO_2 (iv) KI

[4]

21. (a) Explain the preparation of Ethyl alcohol from molasses.

(b) How Ethyl alcohol reacts with

(i) Na metal

(ii) CH_3COOH

(iii) H_2SO_4 , 170°C

(iv) CH_3MgI
