

G-19-C

Roll No.....

Total No. of Questions : 21]

[Total No. of Printed Pages : 4

**XIIRJSZM17
12619-C
CHEMISTRY**

Time : 3 Hours]

[Maximum Marks : 70

(Long Answer Type Questions)

5 each

1. KMnO_4 acts as a strong oxidising agent in acidic, basic and neutral medium. Give *two* examples in each case.

Or

Describe briefly the oxidation state of 3d-transition series elements along with the paramagnetic behaviour of the ions/metals of this series.

2. How can aromatic aldehydes and ketones be prepared by the following reactions ?
- (i) Reimer-Tiemann reaction
 - (ii) Friedel-Crafts reaction

Or

What are carboxylic acids ? Describe the general methods of preparation of carboxylic acids.

3. State and explain Faraday's laws of Electrolysis.

Or

What are electrochemical cells ? Describe briefly fuel cell.

4. How is Nitric acid prepared from Ostwald's process ? Give its reaction with Zinc and Iron.

Or

What are interhalogen compounds ? Why are these named so ? Give structure of ClF_3 and ClF_5 .

(Short Answer Type Questions)

3 each

5. What is Arrhenius equation ? Discuss its importance.

6. 40 gm of NaOH are presented in one decilitre of solution. Calculate mole fraction of NaOH.

7. Explain with suitable examples the dielectric properties of solids.

8. Describe the main Postulates of Vernier's theory of Co-ordination compound.

9. Name the oxy-acids of Phosphorous. Write their structures.

10. Explain the following :

(i) Peptide bond

(ii) Denaturation of Proteins.

11. Give the reaction of Ethyl amine with :

(i) Grignards reagent.

(ii) Carbon disulphide

12. What are Phenols ? How do they differ structurally from aromatic alcohols ?

(Very Short Answer Type Questions)

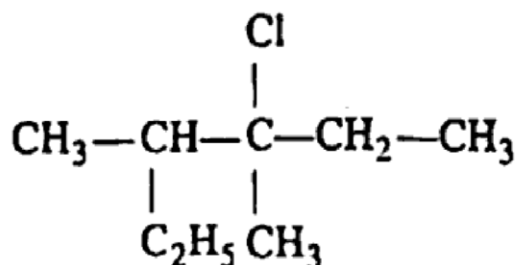
2 each

13. How is Bakelite synthesised ?
14. Why is the time saved when cooking is done in a pressure cooker ?
15. What are Antiacids ? Give examples.
16. Distinguish between multimolecular and Macromolecular colloids.
17. Briefly explain Hardy Schulze rule in colloids.
18. Explain smelting with chemical equations in the extraction of Copper from Pyrite ore.
19. Why are injectable medicines dissolved in saline water before being administered ?
20. Which can be hydrolysed easily Ethyle bromide or Bromobenzine and why ?

(Objective Type Questions)

1 each

21. (i) Give the chemical formula of the two principal ores of Aluminium.
- (ii) Give the IUPAC name of :



- (iii) The number of atoms in bcc arrangement is

(4)

- (iv) The chemical name of vitamin B₁₂ is
- (v) Penicillin is a broad spectrum antibiotic. (True/False)
- (vi) Nylon 66 is a polyamide. (True/False)
- (vii) Ethyl bromide reacts with silver nitrite to form :
- (a) Nitroethane
 - (b) Ethane
 - (c) Ethyl nitrite
 - (d) Nitroethane and ethyl nitrite
- (viii) Alcohol which is used as beverage is :
- (a) Methanol
 - (b) Ethanol
 - (c) Butan-1-ol
 - (d) Propan-1-ol
- (ix) Which of the following cannot reduce Fehling solution ?
- (a) Formic acid
 - (b) Formaldehyde
 - (c) Acetic acid
 - (d) Acetaldehyde
- (x) Ethyl amine reacts with nitrosyl chloride to give .
- (a) Ethyl chloride
 - (b) Ethyl alcohol
 - (c) Ethyl nitrite
 - (d) Nitroethane