

BOARD OF INTERMEDIATE EDUCATION:: ANDHRA PRRADESH
MODEL QUESTION PAPER (w.e.f IPE 2027)
CHEMISTRY - II

TIME: 3 Hrs

Max. Marks: 85

SECTION-A

I. Answer all the following questions. Each question carries one mark.

9×1=9

1. Human blood is isotonic with _____.
2. Lead storage battery is an example of _____ cell.
3. The number of collisions per second per unit volume of the reaction mixture is known as _____.
4. Which of the following coordination compound contains cobalt metal?
1) Chlorophyll 2) Haemoglobin 3) Vitamin B₁₂ 4) Myoglobin
5. Which of the following is the suitable medium for preparing Grignard reagents?
1) Dry acetone 2) Dry ether 3) Concentrated HCl 4) Alcoholic KOH
6. Glycerol is a:
1) dihydric alcohol 2) monohydric alcohol
3) hexahydric alcohol 4) trihydric alcohol
7. What is Rochelle salt?
8. What is the IUPAC name of ethyl methyl amine?
9. Which linkage connects two monosaccharide units?

SECTION-B

II. Answer all the following questions. Each question carries two marks.

14×2=28

10. State Henry's law.
11. Define osmotic pressure.
12. State Faraday's first law of electrolysis.
13. What is metallic corrosion? Give one example.
14. What is a pseudo first order reaction? Give one example.
15. Why Zn²⁺ is diamagnetic whereas Mn²⁺ is paramagnetic?
16. Calculate the 'spin only' magnetic moment of Fe²⁺(aq) ion.
17. What is an ambidentate ligand? Give example.
18. What are enantiomers?

19. Give the reagents used for the preparation of phenol from chlorobenzene.
20. List the reagents suitable to reduce carboxylic acid to alcohol.
21. Arrange the following bases in increasing order of their basic strength. Aniline, *P* - nitroaniline and *p* - toluidine.
22. What are essential and non-essential amino acids? Give one example for each.
23. Differentiate between globular and fibrous proteins.

SECTION-C

III. Answer any eight of the following questions. Each question carries four marks.

$$8 \times 4 = 32$$

24. What is meant by positive deviations from Raoult's law and how is the sign of " $\Delta_{\text{mix}}H$ " related to positive deviation from Raoult's law?
25. State and explain Kohlrausch's law of independent migration of ions.
26. What is molecularity of a reaction? How does it differ from the order of a reaction? Name one bimolecular and one trimolecular gaseous reaction.
27. What are galvanic cells? Explain the working of a galvanic cell with a neat sketch taking Daniell cell as an example.
28. Write the characteristic properties of transition elements.
29. What are homoleptic and heteroleptic complexes? Give one example for each.
30. Explain the mechanism of SN^1 with example.
31. Explain the acidic nature of phenols and compare with that of alcohols.
32. Give the equations for the preparation of phenol from cumene.
33. What is Tollen's reagent? Explain its reaction with aldehydes.
34. Explain the following named reactions:
i) Sandmeyer reaction ii) Gattermann reaction
35. Give the dietary sources of the following vitamins and name the diseases caused by their deficiency:
a) A b) D c) E and d) K

SECTION-D

IV. Answer any two of the following questions. Each question carries eight marks.

2×8=16

36. Give a detailed account of the collision theory for reaction rates of bimolecular gaseous reactions.
37. a) Write four postulates of Werner's theory of coordination compounds.
b) Explain cis-trans isomerism in $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$ complex.
38. Explain the following reactions.
- a) Aldol reaction b) Esterification
c) H.V.Z. reaction d) Bromination of Benzoic acid