

STD: XII

Time Allowed: 3.00 Hrs.

HALF PORTION EXAMINATION - I
CHEMISTRY
PART-I

Marks: 70

15 X 1 = 15

I. Choose the correct answer:

1. Which one of the following is called pseudo-first-order reaction?
 - a) Decomposition of acetaldehyde
 - b) Acid hydrolysis of an ester
 - c) Isomerisation of cyclopropane to propene
 - d) Decomposition of hydrogen peroxide
2. Phenol on oxidation with acidified $K_2Cr_2O_7$ gives
 - a) 1, 4 - dihydroxy benzene
 - b) 1,4- benzoquinone
 - c) cyclohexanol
 - d) cumene
3. 2 - methyl but -2 - ene on ozonolysis gives
 - a) ethanol
 - b) propanone
 - c) both (a) & (b)
 - d) none of the above
4. The product obtained when formaldehyde reacts with acetaldehyde in presence of dilute NaOH is
 - a) 3-hydroxy propanol
 - b) 3-hydroxy propanal
 - c) 2-hydroxy propanol
 - d) 2-hydroxy propanal
5. The coordination number of zinc sulphide is _____.
 - a) 3
 - b) 4
 - c) 6
 - d) 8
6. Glycerol can be oxidised to meso oxalic acid by
 - a) HNO_3
 - b) HIO_4
 - c) Bismuth nitrate
 - d) Fenton's reagent
7. Which one of the following is the strongest acid _____.
 - a) 2 - nitrophenol
 - b) 4 - chlorophenol
 - c) 4 - nitrophenol
 - d) 3 - nitrophenol
8. **Assertion:** 2,2 - dimethyl propanoic acid give HVZ reaction.
Reason: 2 - 2, dimethyl propanoic acid does not have a - hydrogen atom
 - a) if both assertion and reason are true and reason is the correct explanation of assertion.
 - b) if both assertion and reason are true but reason is not the correct explanation of assertion.
 - c) assertion is true but reason is false
 - d) both assertion and reason are false.
9. Wolframite ore is separated from tinstone by the process of _____.
 - a) Smelting
 - b) Calcination
 - c) Roasting
 - d) Electromagnetic separation

10. The geometry at which carbon atom in diamond are bonded to each other is _____.
- a) Tetrahedral b) hexagonal c) Octahedral d) none of these
11. P_4O_6 reacts with cold water to give _____.
- a) H_3PO_3 b) $H_4P_2O_7$ c) HPO_3 d) H_3PO_4
12. The vacant space in bcc lattice unit cell is _____.
- a) 48% b) 23% c) 32% d) 26%
13. If the initial concentration of the reactant is doubled, the time for half-reaction is also doubled. Then the order of the reaction is _____.
- a) Zero b) one c) Fraction d) none
14. The pH of 10^{-5} M KOH solution will be _____.
- a) 9 b) 5 c) 19 d) none of these
15. Which one of the following is Zeigler – Natta catalyst?
- a) $CO_2(CO)_8$ b) Rh/Ir complex c) $[TiCl_4] + Al(C_2H_5)_3$ d) Fe / Mo

PART-II

II. Answer any six questions. Question No. 24 is compulsory.

6 X 2 = 12

16. Describe a method for refining nickel.
17. Explain the Ethyl borate test
18. What are interstitial compounds? Give an example.
19. Give examples for first order reaction.
20. Discuss the Lowry – Bronsted concept of acids and bases.
21. How is phenol prepared from isopropyl benzene?
22. Explain the Fehling's solution Test for aldehyde.
23. Write any two methods of preparing ethers.
24. Calculate the pH of solution with hydronium ion concentration 1.34×10^{-3} M.

PART-III

III. Answer any six questions. Question No. 33 is compulsory.

6 X 3 = 18

25. What is catenation? What are conditions are necessary for catenation?
26. What is inter halogen compounds? Write the Properties of inter halogen compounds.
27. Give the reaction of cold and hot conc. H_2SO_4 with $KMnO_4$?
28. What are molecular crystals? Explain the classification with suitable examples.