QB365 Student Learing Managemnet System
Exam Name: Pre Quarterly -Practice
Std: 12th Standard - Chemistry
Chapter: Metallurgy, p - Block Elements - I, p - Block Elements - II, Solid State, Chemical Kinetics, Hydroxy Compounds and Ethers, Carbonyl Compounds and Carboxylic Acids

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Questions:

Answer the following questions.

1. Explain zone refining process with an example.
2. Differentiate crystalline solids and amorphous solids.
3. Write short note on metal excess and metal deficiency defect with an example.
4. Explain briefly the collision theory of bimolecular reactions.
5. Starting from phenol how would you obtain the following compounds?
   (a) 1, 4-benzo quinone,
   (b) picric acid,
   (c) Anisole?
6. Write note on the structure of diborane.
7. Explain saytzeff rule with an example
8. Explain the following reactions
   a. Decarboxylation
   b. Kolbe's Electrolytic Reaction
   c. HVZ Reaction
9. Explain the reactions
   a. Transesterification
   b. Claisen beta Ester Condensation
   c. Hoffman Degradation Reaction
10. Explain the following reactions
    a. Perkin's Reaction
    b. Knoevenagal Reaction
    c. Benzoin Condensation Reaction

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Answer any six questions. Qn no 33 is compulsory

11. Describe a method for refining nickel. (or) Explain the Mond process of refining nickel.
12. Give the uses of helium.
13. A hydride of 2nd period alkali metal (A) on reaction with compound of Boron (B) to give a reducing agent (C). Identify A, B and C.
14. Distinguish between hexagonal close packing and cubic close packing.
15. Explain pseudo first order reaction with an example.
16. How is phenol prepared from
    i) chloro benzene
    ii) isopropyl benzene
17. Write Kolbe's reaction.
18. What is Malachite green dye? Explain its preparation?
19. In a first order reaction A → products 60% of the given sample of A decomposes in 40 min. what is the half life of the reaction?

Answer any six questions.qn no 24 is compulsory

20. What is the role of quick lime in the extraction of Iron from its oxide Fe_2O_3?
21. Write a note on Fisher tropsch synthesis.
22. What is inert pair effect?
23. Why ionic crystals are hard and brittle?
24. The rate constant for a first order reaction is $1.54 \times 10^{-3}\ s^{-1}$. Calculate its half life time.
25. What is F centre?
26. How is propanoic acid is prepared starting from
    (a) an alcohol
    (b) an alkylhalide
    (c) an alkene
27. What is metamerism? Give the structure and IUPAC name of metamers of 2-methoxy propane
28. How will you convert of ethylene glycol to 1,4 - dioxane.

Choice Correct Question

29. The metal oxide which cannot be reduced to metal by carbon is _____.
    (a) PbO (b) Al_2O_3 (c) ZnO (d) FeO
30. Which of the metal is extracted by Hall-Heroult process?
    (a) Al (b) Ni (c) Cu (d) Zn
31. Which among the following is not a borane?
    (a) B_2H_6 (b) B_3H_6 (c) B_4H_{10} (d) none of these
32. The basic structural unit of silicates is _____.

(a) $(SiO_3)^{2-}$ (b) $(SiO_4)^{2-}$ (c) $(Sio)^{-}$ (d) $(SiO_4)^{4-}$

33. The basicity of pyrophosphorous acid ($H_4P_2O_5$) is _____.

(a) 4 (b) 2 (c) 3 (d) 5

34. Which one of the following compounds is not formed?

(a) $XeOF_4$ (b) XeO_3 (c) XeF_2 (d) NeF_2

35. The fraction of total volume occupied by the atoms in a simple cubic is _____.

(a) $\left(\frac{\pi}{4\sqrt{2}}\right)$ (b) $\left(\frac{\pi}{6}\right)$ (c) $\left(\frac{\pi}{4}\right)$ (d) $\left(\frac{\pi}{3\sqrt{2}}\right)$

36. Potassium has a bcc structure with nearest neighbor distance 4.52 $\overset{o}{A}$. Its atomic weight is 39. its density will be_____.

(a) 915 kg m^{-3} (b) 2142 kg m^{-3} (c) 452 kg m^{-3} (d) 390 kg m^{-3}

37. The addition of a catalyst during a chemical reaction alters which of the following quantities?

(a) Enthalpy (b) Activation energy (c) Entropy (d) Internal energy

38. For a first order reaction, the rate constant is 6.909 min^{-1} the time taken for 75% conversion in minutes is _____.

(a) $\left(\frac{3}{2}\right)\log 2$ (b) $\left(\frac{2}{3}\right)\log 2$ (c) $\left(\frac{3}{2}\right)\log\left(\frac{3}{4}\right)$ (d) $\left(\frac{2}{3}\right)\log\left(\frac{4}{3}\right)$

39. Which one of the following is the strongest acid.

(a) 2 - nitrophenol (b) 4 – chlorophenol (c) 4– nitrophenol (d) 3 – nitrophenol

40. Which one of the following will react with phenol to give salicyladehyde after hydrolysis.

(a) Dichlo methane (b) trichloroethane (c) trichloro methane (d) CO_2

41. The reagent used to distinguish between acetaldehyde and benzaldehyde is _____.

(a) Tollens reagent (b) Fehling's solution (c) 2,4 – dinitrophenyl hydrazine (d) semicarbazide

42. In which of the following reactions new carbon – carbon bond is not formed?

(a) Aldol condensation (b) Friedel craft reaction (c) Kolbe's reaction (d) Wolf kishner reduction

43. In the body centred cubic unit cell, the radius is related to the edge length (a) of the unit cell by _____.

(a) $r = \frac{a}{2}$ (b) $r = \frac{a}{2\sqrt{2}}$ (c) $r = \frac{\sqrt{3}}{4}a$ (d) $r = \frac{\sqrt{2}}{a}$

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QUESTION BANK 365