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SAKTHI MATRIC HR. SEC. SCHOOL.KANIYAMOOR

MODEL ANNUAL EXAM-9

CLASS : XII E/M

Time: 3.00HRS

SUBJECT : Chemistry

Marks: 70

I CHOOSE THE CORRECT ANSWER:**15*1=15**

1. Nylon is an example of
 - a) polythene
 - b) polyester
 - c) polyamide
 - d) poly saccharide
2. Which of the following plot gives Ellingham diagram
 - a) ΔS Vs T
 - b) ΔG^0 Vs T^2
 - c) ΔG^0 Vs T
 - d) ΔS Vs $1/T$
3. The yellow colour in NaCl crystal is due to
 - a) excitation of electrons in F centers
 - b) reflection of light from Cl^- ion on the surface
 - c) refraction of light from Na^+ ion
 - d) all of the above
4. Dissociation constant of NH_4OH is 1.8×10^{-5} the hydrolysis constant of NH_4Cl would be
 - a) 1.8×10^{-19}
 - b) 5.55×10^{-10}
 - c) 5.55×10^{-5}
 - d) 1.80×10^{-5}
5. Duralumin is an alloy of
 - a) Cu, Mn
 - b) Al, Cu, Mn, Mg
 - c) Al, Mn
 - d) Cu, Al, Mg
6. When copper is heated with conc HNO_3 it produces
 - a) $Cu(NO_3)_2$ and NO_2
 - b) $Cu(NO_3)_2$ and N_2O
 - c) $Cu(NO_3)_2$, NO and NO_2
 - d) $Cu(NO_3)_2$ and NO
7. Formula for hyponitrous acid.....
 - a) $HOONO$
 - b) $H_2N_2O_2$
 - c) HNO_2
 - d) HNO_4
8. The reagent used to distinguish between acetaldehyde and benzaldehyde is
 - a) semicarbazide
 - b) Fehling's solution
 - c) 2,4 - dinitrophenyl hydrazine
 - d) Tollens reagent
9. Ammonium salt of benzoic acid is heated strongly with P_2O_5 and the product so formed is reduced and then treated with $NaNO_2 / HCl$ at low temperature. The final compound formed is
 - a) Benzyl alcohol
 - b) Benzene diazonium chloride
 - c) Phenol
 - d) Nitrosobenzene
10. Which kind of isomerism is possible for a complex $[Co(NH_3)_4Br_2]Cl$?
 - a) geometrical and ionization
 - b) geometrical and optical
 - c) optical and ionization
 - d) geometrical only
11. Hair cream is
 - a) gel
 - b) sol.
 - c) solid sol
 - d) emulsion
12. Kohlraush's law is applied to calculate
 - a) Degree of dissociation of weak electrolyte
 - b) Solubility of sparingly soluble salt
 - c) Molar conductance at infinite dilution of weak at night
 - d) All the above
13. Which of the following lanthanoid ions is diamagnetic?
 - a) Eu^{2+}
 - b) Sm^{2+}
 - c) Ce^{2+}
 - d) Yb^{2+}
14. Assertion : Phenol is more acidic than ethanol
Reason: Phenoxide ion is resonance stabilized
 - a) both assertion and reason are false.
 - b) assertion is true but reason is false
 - c) if both assertion and reason are true but reason is not the correct explanation of assertion.
 - d) if both assertion and reason are true and reason is the correct explanation of assertion.
15. In a protein, various amino acids linked together by
 - a) Dative bond
 - b) Peptide bond
 - c) α - Glycosidic bond
 - d) β - Glycosidic bond

II ANSWER ANY SIX QUESTIONS AND QUESTION NO: 24 IS COMPULSORY**6*2=12**

16. Give the uses of zinc
17. Why transition elements (d-block elements) variable oxidation state?
18. What is mean by coordination number? What is coordination number of BCC structure.
19. What are Lewis acid and bases? Give an example.
20. Write the medicinal uses of colloids.
21. Write three test for Aldehyde.
22. What is Haffmann's bromide reaction.
23. Write a note on Vulcanization of rubber.
24. $CH_3COCl + H_2 \xrightarrow{Pd/BaSO_4} A \xrightarrow{NaOH} B \xrightarrow{\Delta} C$. Identify A, B and C

III ANSWER ANY SIX QUESTIONS AND QUESTION NO: 33 IS COMPULSORY**6*3=18**

25. What is the potash alum? How is it prepared and its uses.
26. Write the molecular formula and Structure
 a) Nitric acid b) Di nitrogen pent oxide c) phosphoric acid
27. Give one test to differentiate $[\text{CO}(\text{NH}_3)_5\text{Cl}]\text{SO}_4$ and $[\text{CO}(\text{NH}_3)_5\text{SO}_4]\text{Cl}$
28. Explain the effect of catalyst on reaction with an example.
29. Write the factors affecting electrolytic conductance
30. $\text{C}_6\text{H}_5\text{OH} \xrightarrow{\text{Zn dust}} \text{A} \xrightarrow{\text{CH}_3\text{Cl/ anhydrous AlCl}_3} \text{B} \xrightarrow{\text{Na}} \text{C}$. Identify A, B and C and name it.
31. Fructose on reaction with Na/Hg gives sorbitol and mannitol
32. What are Narcotic and Non- Narcotic drugs?
33. A first order reaction is 20% completed in 10 minutes. Calculate the time taken for the reaction to go to 80% completion.

IV ANSWER ALL THE QUESTIONS:**5*5=25**

34. a) Write a note on magnetic separation.(3)
 b) What is auto reduction?(2)
 (OR)
 c) How is Cl_2 manufacture by Electrolysis of brine and Deacon's process(5)
35. a) Explain the variation of $E^\circ \text{M}^{3+}/\text{M}^{2+}$ 3d series.(5)
 (OR)
 b) Based VBT $[\text{Fe F}_6]^{4-}$, $[\text{Fe}(\text{CN})_6]^{4-}$ Explain.(5)
36. a) Explain briefly collision theory of Bimolecular reactions.(5)
 (OR)
 b) Derive the relationship between pH and pOH.(3)
 c) Define solubility product. (2)
37. a) Explain the function of $\text{H}_2 - \text{O}_2$ fuel cell.(3)
 b) Define Anode and Cathode? (2)
 (OR)
 c) Explain Kolbe's reaction.(3)
 d) Explain Kolbe's reaction.(2)
38. a) An organic compound (A) of molecular formula is $\text{C}_6\text{H}_5\text{Cl}$ on treatment with aqueous NaOH gives (B). (B) on treatment with NaOH gives (C) of molecular formula $\text{C}_6\text{H}_5\text{ONa}$. (C) on treatment with CO_2 followed by hydrolysis gives (D). Identify A, B, C and D with necessary reaction.(5)
 (OR)
 b) How will you prepare the following from propan- 1-amine? (5)
 i) butane nitrile ii) propanamide iii) 1-nitro propane

"YESTERDAY IS NOT OURS TO RECOVER, BUT TOMORROW IS OURS TO WIN OR LOSE".

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