Reg No:

SAKTHI MATRIC HR. SEC. SCHOOL.KANIYAMOOR

CLASS : XII E/M MODEL ANNUAL EXAM-1 Time: 3.00HRS

SUBJECT : Chemistry Marks: 70

I CHOOSE THE CORRECT ANSWER: 15*1=15

1. Which of these is not likely to act as Lewis base?
   a) CO b) PF_3 c) BF_3 d) F^-
2. Which of these is not a monomer for a high molecular mass silicone polymer?
   a) Me_2SiCl_2 b) $PhSiCl_3$ c) $MeSiCl_3$ d) Me_3SiCl
3. **Assertion (A):** Sulphuric acid is highly reactive.
   Reason (R): This is due to the association of molecules together through hydrogen bonding.
   a) A and R are correct and R explains A b) A and R are correct but doesn't explains A
   c) A is correct but R is wrong d) A is wrong but R is correct
4. Which one of the following is used in chromyl chloride test?
   a) $K_2Cr_2O_7$ b) $CuSO_45H_2O$ c) $ZnCO_3$ d) $AgNO_3$
5. Which type of isomerism is exhibited by $[Pt(NH_3)_2Cl_2]$
   a)Coordination isomerism b) Linkage isomerism
   c) Optical isomerism d) Geometrical isomerism
6. The incorrect statement among the following is.
   a) Crystalline solid long range orderly arrangement of constituents.
   b) They have definite shape.
   c) Crystalline solid are isotropic like liquids.
   d) They have sharp melting points.
7. Consider the following statement:
   i) Order cannot be zero.
   ii) Molecularity can be zero (or) fractional (or) integer.
   iii) Order can be determined only by experiment.
   Which of the following statement (s) is/are not correct?
   a) (i) only b)(ii) only c)(iii) only d)(i) & (ii) only
8. Which one of the following characteristics are associated with adsorption?
   a)ΔG and $\Delta H$are negative but ΔS is positive b) $\Delta G$and ΔS are negative but ΔH is positive
   c) ΔG is negative but ΔH and ΔS are positive d)ΔG, ΔH and ΔS all are negative.
9. Among the following cells
   I)Leclanche cell II)Nickel-Cadmium cell III)Load storage battery IV)Mercury cell primary cells are
   a)I and IV b)I and III c)III and IV d)II and III
10. Semiconductors are purified by…..method
    a) Zone refining b) Electrolytic refining c) Monds process d) Beismerisation
11. Which of the following compounds on reaction with methyl magnesium bromide will givetertiary alcohol.
    a)benzaldehyde b) propanoic acid c) methyl propanoate d) acetaldehyde
12. Benedict's reagent is _____
    a)Pottasium permanganate b)rosaniline hydrochloride
    c)aniline hydrochloride d)copper sulphate +sodium citrate + NaOH
13. Which one of the following will not undergo Hofmann bromamide reaction
    a)$CH_3CONHCH_3$ b)$CH_3CH_2CONH_2$ c)CH_3CONH_2 d)$C_6H_5CONH_2$
14. Which of the following are epimers
    a)D(+) glucose and D(+) Galactose b)D(+) glucose and D(+) mannose
    c)Neither a nor b d)Both a and b
15. Chemical IUPAC name of Adipic acid is _____
    a)2-methyl buta-1,3-diene b)hexan-1,6-dioic acid
    c)2-methyl pent-1,3-diene d)2-methyl pent-1,3-diene

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

16. What is calcination Give an example?
17. What is flocculation value?
18. How cathodic protection helps to product the metal from corrosion?
19. Define linkeage isomerism? Give ex.

20.Write short note on anomalous properties of the first element of the p-block.
21.What are interstitial compounds?Give an example.
22.Write anote on Sabatier-mailhe method?
23.Why formic acid act as strong reducing agent?Give one equation to shows reducing property.
24.The rate constant for a first order reaction is 1.54 X 10^{-3} s^{-1}. Calculate the half life period.

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

25.Explain the electrometallurgy of aluminium.
26.How double salts differs from coordination compounds?
27.Calculate the number of unpaired electrons in Ti^{3+},Mn^{2+} and calculate the spin only magnetic moment.
28.Explain buffer action of acidic buffer?
29.What is zero order reaction?Derive rate law for a zero order reaction.
30.What is space lattice and unit cell?
31.What happens when 1-phenyl ethanol is treated with acidified $KMnO_4$
32.How is terylene prepared?
33. Identify A, B and C $Benzene \xrightarrow{CH3CL/AlCl3} A \xrightarrow{HNO3/H2SO4} B \xrightarrow{Sn/HCl} C \xrightarrow{NaNo2/HCl} D \xrightarrow{CuCN} E$

IV ANSWER ALL THE QUESTIONS: 5*5=25

34. a)Write a note on hydroboration.(2)
b)For the complex [Fe $(en)_2$ Cl_2]Cl_2,identify(3)
i)oxidation number of Fe ii)Hybridisation and shape iii)Magnetic behavior
iv)Whether there may be optical isomrs also? v)IUPAC name
(OR)
c)List any five compounds of Xenon and mention the type of hybridization and structure of the compounds(5)

35. a)Give the uses of borax. (2)
b)What are lewis acid and base.(3)
(OR)
c)Write any three condensation methods of preparation of colloids.(3)
d)Mention the medicinal uses of colloids.(2)

36. a)Derive expression for hydrolysis constant and pH of salt of weak acid and strong base.(5)
(OR)
b)Write a note on formation of α-Helix.(3)
c)Write the uses of nitro alkanes.(2)

37.a)How polymers are classified on the basis of structure and molecular forces,give examples each one.(5)
(OR)
b)What happens when ethanoic acid reacts with ethanol in the presence of conc.H_2SO_4.Give its mechanism(3)
c)Name the esters which has the following flavor?(2)
i)Banana ii)pineapple iii)orange iv)apricot

38. a)An atom crystallizes in fcc crystal Lattice and has a density of 10gcm^{-3} with unit cell edge length of 100pm. Calculate the number of atoms present in 1g of crystal.(5)
(OR)
b)An organic compound C_2H_6O(A) reacts with Con.H_2SO_4 at 443K and gives(B) of molecular formula C_2H_4 .(B) reacts with cold alkaline $KMnO_4$(Baeyer's reagent)to give (C) of molecular formula $C_2H_6O_2$ Which is used as antifreeze in auto mobile radiators.Compound (C) react with Con.H_2SO_4 to give cyclic compound (D). compound (A) reacts with Con.H_2SO_4 at 413K and gives(B) of molecular formula $C_4H_{10}O$.(E) Identify(A),(B), (C) ,(D).and (E).Explain the reactions.(5)

"செய்ய முடியும் என்று நம்பு. ஒன்றைச் செய்ய முடியும் என்று நீ முழுதாய் நம்பும்போது, உன் மனம் அதைச் செய்து முடிக்கும் வழிகளைக் கண்டறியும்".

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