

**SAKTHI MATRIC HR. SEC. SCHOOL.KANIYAMOOR**

MODEL ANNUAL EXAM-7

CLASS : XII E/M

Time: 3.00HRS

SUBJECT : Chemistry

Marks: 70

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

- 1.The most unsymmetrical and symmetrical system respectively
a)Tetragonal,cubic b)triclinic,cubic c)Rhombohedal,hexagonal d)Orthorhombic,cubic
- 2.Wolframite ore is separated from Tinstone by the process of
a)Smelting b) Electromagnetic separation c) Roasting d) Calcination
3. An aqueous solution of borax is
a)neutral b) basic c) acidic d) amphoteric
- 4.The basicity of pyrophosphorous acid ($H_4P_2O_5$) is
a) 2 b) 4 c) 3 d) 5
5. The IUPAC name of anisole
a) Ethoxy benzene b) Methoxy benzene c) Methyl phenyl ether d)Phenol
- 6.The magnetic moment of Mn^{2+} ion is
a) 8.95BM b) 2.80BM c) 5.92BM d) 3.90BM
- 7.Solid CO_2 is an example of
a)Covalent solid b) molecular solid c) metallic solid d) ionic solid
- 8.Assertion: rate of reaction doubles when the concentration of the reactant is doubles if it is a first order
Reason: rate constant also doubles
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.
9. Aniline is treated with strong acid medium aniline is protonated to form
a) Anilinium ion b) $C_6H_5NH_3^+$ c) Both a & b d) $C_6H_5NH_2$
- 10.Which of the following can act as Lowry – Bronsted acid as well as base?
a) HCl b) HPO_4^{2-} c) SO_4^{2-} d) Br^-
11. The interconversion of α -D glucose and β -D glucose via open chain form occurs until equilibrium is established giving constant specific rotation $+53^\circ$ is called ____
a) Anomers b) Mutarotation c) Epimers d)None of these
- 12.The most effective electrolyte for the coagulation of As_2S_3 Sol is
a)NaCl b) $Al_2(SO_4)_3$ c) $K_3[Fe(CN)_6]$ d) $Ba(NO_3)_2$
- 13.Which one of the following reduces tollens reagent
a)formic acid b) acetic acid c) benzophenone d) none of these
- 14.Which one of the following is most basic?
a)2,4 – dichloroaniline b) 2,4 – dibromoaniline
c) 2,4 – dinitroaniline d) 2,4 – dimethyl aniline
- 15.Which one of the following is a bio-degradable polymer?
a)HDPE b) PHBV c) Nylon 6 d) PVC

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

- 16.What is auto reduction?
- 17.What are inter halogen compounds?Give an ex.
- 18.What are point defects.
- 19.Define buffer index?
- 20.Give three uses of emulsions.
- 21.Give chemicaltests to distinguish between propan-2-ol and 2-methyl propan 2-ol
- 22.How the following conversions are effected?
i)Aniline \rightarrow benzene diazonium chloride ii) Tert butyl amine \rightarrow 2-Methyl-2-nitro propane

23. What is TFM?

24. KF crystallizes in fcc structure like sodium chloride. Calculate the distance between K^+ and F^- in KF
(Given Density of KF is 2.48 g cm^{-3})

III ANSWER ANY SIX QUESTIONS AND QUESTION NO: 33 IS COMPULSORY

6*3=18

25. Write the preparation of Borazole?

26. What are inner transition elements?

27. Define optical isomerism? Give ex.

28. Difference between order and molecularity.

29. State Faraday's 1st Law and Second law?

30. Write a note on Swern Oxidation.

31. Write a short note on peptide bond?

32. What are enzymes? Explain mechanism of enzymes catalyst?

33. An organic compound (A) of molecular formula is C_3H_6O on reduction with $LiAlH_4$ gives B. Compound (B) gives blue colour in Victor Meyer's test and also forms a chloride (C) with $SOCl_2$. The chloride on treatment with alcoholic KOH gives (D). Identify A, B, C and D with necessary reaction.

IV ANSWER ALL THE QUESTIONS:

5*5=25

34. a) Explain with principle of Electrolytic refining with an example?(3)

b) Define Hydraulic wash. (2)

(OR)

c) Give the uses of Boron. (2)

d) Write a note on Zeolites. (3)

35. a) Difference between Lanthanides and Actinoids. (3)

b) Describe the position of Lanthanides and Actinides in the periodic table. (2)

(OR)

c) Write the postulates of Werner's theory. (5)

36. a) Explain briefly seven types of unit cell. (3)

b) Write a note on Bragg's equation (2)

(OR)

b) Explain rate determining step with ex?. (3)

c) Show that in case of first order reaction the time required for 99.9% completion is nearly 10 times the time required for half completion of the reaction. (2)

37. a) Describe the electrolysis of Molten NaCl using inert electrodes. (3)

b) What is an Electrochemical series. (2)

(OR)

c) Explain common ion effect? (3)

d) Define ionic product of water? (2)

38. a) Write a note on Vulcanization of rubber? (2)

b) Write a note on buna-N and buna-S?. (3)

(OR)

c) An organic compound (A) of molecular formula is C_6H_7N on treatment with sodium nitrite and hydrochloric acid gives (B). (B) on treatment with cuprous cyanide gives (C) of molecular formula C_7H_5N . (C) on reaction with sodium and ethanol gives (D) C_7H_9N . (D) on reaction with nitrous acid gives (E) of molecular formula C_7H_8O Identify A, B, C, D and E with necessary reaction. (5)

“POSITIVE ANYTHING IS BETTER THAN NEGATIVE NOTHING.”

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