TIME : 3hrs

TIRUVANNAMALAI DT - MHS GIRITHARAN PET CHEMISTRY FULL PORTION TEST STANDARD X-SCIENCE PAPT I

MARKS : 75

PART-I Answer all the questions $(12 \times 1 = 12)$ 1. Which of the following has the smallest mass? a) 6.023×10^{23} atoms of He b) 1 atom of He c) 2 g of He d) 1 mole atoms of He 2. In the nucleus of 17Cl³⁵, there are a) 17 protons and 35 neutrons b) 17 protons and 17 neutrons d) 17 protons and 17 electrons c) 35 protons and 35 electrons 3. The number of periods and groups in the periodic table are_____. c) 8,18 a) 6.16 b) 7,17 d) 7,18 4. is an important metal to form amalgam. b) Hg c) Mg d) Al a) Ag 5. Which of the following is the universal solvent? a) Acetone b) Benzene c) Water d) Alcohol 6. Solubility of NaCl in 100 ml water is 36g. If 35g of salt is dissolved in 100 ml of water how much more salt is required for saturation a) 1g b) 11g c) 16g d) 20g 7. The chemical equation Na₂ SO₄(aq) + BaCl₂(aq) \rightarrow BaSO₄(s) \downarrow + 2NaCl(aq) represents which of the following types of reaction? a) Neutralisation b) Combustion c) Precipitation d) Single displacement 8. Chemical volcano is an example for _____ _____type of reaction. b) Decomposition c) Combustion a)Combination d) Double displacement 9. The secondary suffix used in IUPAC nomenclature of an aldehyde is c) - al b) – oic acid d) - one a) – ol 10. In IUPAC name, the carbon skeleton of a compound is represented by _____ a) root word b) prefix c) suffix) 11. TFM in soaps represents _____ content in soap a) mineral b) vitamin c) fatty acid d) carbohydrate 12. When pressure is increased at constant temperature the solubility of gases in liquid _____. b) increases c) decreases d) no reaction a) No change PART-II Answer any seven questions. Questions No.22 is compulsory. $(7 \times 2 = 14)$ 13. Define: Atomicity 14. Calcium carbonate is decomposed on heating in the following reaction $CaCO_3 \rightarrow CaO + CO_2$ How many moles of CO_2 are there in this equation? 15. Match the following 1. Galvanisation Noble gas element
Coating with Zn Noble gas elements 2. Calcination 3. Redox reaction
4. Dental filling
- Silver-tin amalgam
- Alumino thermic process - Heating in the absence of air 16. What is rust? Give the equation for formation of rust. 17. True or False: (If false give the correct statement) a) All ores are minerals; but all minerals cannot be called as ores b) On dipping a pH paper in a solution, it turns into yellow. Then the solution is basic. 18. Define Volume percentage 19. Assertion: Alkanes are saturated hydrocarbons. J.VANITHA MUTHUKUMAR. BT ASST (PHYSICS)

Kindly send me your questions and answerkeys to us : Padasalai.Net@gmail.com

Reason: Hydrocarbons consist of covalent bonds.

- i) A and R are correct, R explains the A.
- ii) A is correct, R is wrong.
- iii) A is wrong, R is correct.
- iv) A and R are correct, R doesn't explains A.

20. Match the following

Functional group -OH	-	Benzene
Heterocyclic	-	Potassium stearate
Unsaturated	-	Alcohol
Soap	-	Furan
	-	Ethene

- 21. Name the acid that renders aluminium passive. Why?
- **22**. Calculate the pH of 1×10^{-9} molar solution of NaOH.

PART-III

Answer any seven questions. Questions No.32 is compulsory.

- 23. Give the salient features of "Modern atomic theory".
- 24. The electronic configuration of metal A is 2,8,18,1. The metal A when exposed to air and moisture forms B a green layered compound. A with con. H2 SO4 forms C and D along with water. D is a gaseous compound. Find A,B,C and D.
- 25. Name the acid that renders aluminium passive. Why?
- 26. Write notes on various factors affecting solubility.
- 27. Classify the following substances into deliquescent, hygroscopic. (Conc. Sulphuric acid, Copper sulphate penta hydrate, Silica gel, Calcium chloride, and Gypsum salt)
- 28. Differentiate reversible and irreversible reactions
- 29. a) Explain the types of double displacement reactions with examples.

b) Can a nickel spatula be used to stir copper sulphate solution? Justify your answer.

- 30. Classify the following compounds based on the pattern of carbon chain and give their structural formula: (i) Propane (ii) Benzene (iii) Cyclobutane (iv) Furan
- 31. Differentiate soaps and detergents.
- 32. Calculate the % of each element in calcium carbonate. (Atomic mass: C-12, O-16, Ca -40)

PART-IV

Answer all the questions

- 33.a) Derive the relationship between Relative molecular mass and Vapour densityb) Explain smelting process.
- 34.a) What happens when MgSO4. 7H2 O is heated? Write the appropriate equation (OR)
 - b) How does pH play an important role in everyday life?
- 35.a) How is ethanol manufactured from sugarcane?
 - b) An organic compound 'A' is widely used as a preservative and has the molecular formula CH4O2. This compound reacts with ethanol to form a sweet smelling compound 'B'.
 - (i) Identify the compound 'A'.
 - (ii) Write the chemical equation for its reaction with ethanol to form compound 'B'.
 - (iii) Name the process.

J.VANITHA MUTHUKUMAR. BT ASST (PHYSICS)

 $(7 \times 4=28)$

 $(3 \times 7 = 21)$

 (\mathbf{OR})