PRACTICE PAPER- II

CLASS XI, CHEMISTRY

Time—3 hrs M.M—70

General instruction :-

1. All question are compulsory
2. Q.1 to Q.5 carry 1 mark each
3. Q.6 to Q.10 carry 2 marks each
4. Q.11 to Q.22 carry 3 marks each
5. Q.23 carry 4 marks
6. Q.24 to Q.26 carry 5 marks each

Q.1 What are the empirical formula of (i) N2O4 , (ii)C4H10

Q.2. Which two quantum numbers determine the energy of a subshell in case of multielectron atom?

Q.3. Which element has the maximum electron gain enthalpy: F,Cl, O and I

Q.4Explain how boiling point of a liquid is related to its vapour pressure

Q.5. Express first law of thermodynamics mathematically

Q.6. In the reaction

2Al(s)  + Fe2O3(s)----------🡪2Fe(s) + Al2O3(s)

What is mass of Al2O3 produced when 5oo g of Al metal reacted.

Q.7.Briefly describe the Bohr’s theory and its various drawbacks.

Q.8. Starting with the thermodynamic relation H=U+pV, derive the following relationship

ΔH=ΔU +Δn(g)RT

Q.9.Write conjugate acid and base for the following species :

CH3C00-- and HNO2

Q.10. Complete the following reaction and balance it

(i) NaH + H2O------🡪

(ii) Na2CO3 + CO2 + H2O-----🡪

Q.11.(i) Write reactions to justify amphoteric nature of aluminium

(ii) CCl4 cannot be hydrolysed however SiCl4 undergoes hydrolysis. Explain

Q.12. Write the IUPAC name of the following compounds

(i)CH3---CH2----CH2-----CH2-----CH3(Ii)CH2=C---CH2----CH=CH2

Q.13. Write the structure of the following compounds

(i) 2—Bromo –3---hydroxybutanoic acid

(ii) But—3—en ---2---one

Q.14. (I) Describe Wurtz reaction with example

(ii) what is the nitrating mixture? What happens when benzene is treated with it?

Q.!5.(i) How does the acid rain affect the statues?

(ii) Why does sea level rise due to global warming

Q.16. How does atomic radius vary in a period and in a group? How do you explain the variation?

Q.17. Predict the formulae of the stable binary compound that would be formed by the combination of the following pairs of element : (a) Magnesium and nitrogen (b) element 71 and fluorine

Q.19 At 00 c the density of a gaseous oxide at 2 bar is same as that of distinguish at 5 bar What is the molecular the mass of oxide ?

Q.20 Explain:

(a) Evaporation leads to cooling of a liquid

(b) Drops of liquid assume spherical shape.

Q.21What happens when:

(a) borax is heated stongly?

(b) aluminium is treated with dil.NaOH ?

(C) sodium metal is dropped in water?

Q.21 (a)Balance the following equation in basic medium

P(s) + OH---(aq)-----🡪PH3(g) +H2PO2\_(aq)

Q.22 (i) what are interstitial hydrides? Give example

(ii)Carbon monoxide is highly poisonus gas. Why?

(III)What do you mean by the term “10 Volumes of H2O2?

Q23 A compound X contains hydrogen and oygen elements . It covers about 75% of Earth’s surface. It is also a major part of all living organism . Human body contains about 65% of X. A unique feature of X is that X in solid state floats over X in liquid state

Answer the following questions

1. What is the chemical formula of X
2. What ecological significance is associated with the fact that X(s) floats over X(l)?
3. Only a very small percentage of total X on earth is available for human consumption .Why?

Q.24 (a)H2O2 is a better oxidising agent than H2O

(b)Aqueous solution of borax is used as cleansing agent

(c)B2H6 is an electron deficient molecule

(d)SiCl4 is easily hydrolysed as compared to CCl4 Give reason.

(e) How much copper can be obtained from 100 g of copper sulphate.

Q.25 Write mechanism of the following reaction

(a)CH3---CH=CH2 +HBr-------------------🡪CH3----CHBr-----CH3

(b) How will you convert ethanoic acid into benzene?

Q.26



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