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**PERIODIC TEST**

**GRADE – XI MARK - 40**

**SUBJECT – CHEMISTRY TIME – 1 hr 30 mins**

**GENERAL INSTRUCTIONS:**

1. All Questions are compulsory.
2. Question number 1 to 10 carry 1 mark.
3. Question number 11 to 14 carry 2 marks.
4. Question number 15 to 18 carry 3 marks.
5. Question number 19 and 20 carry 5 marks.

1. What is the number of significant figures in 1050 × 104?

2. What is one a.m.u. or one u?

3. Write down the empirical formula of benzene.

4. Vanadium metal is added to steel to impart strength. The density of vanadium is 5.96 g/cm3. Express this in the SI unit.

5. If in the reaction HgO(s) → Hg(l) + 12O2(g) 100.0 g of HgO on heating in a closed tube gives 92.6 g of Hg, what is the weight of oxygen formed?

6. What is the relationship between molecular weight and vapor density of a gas?

7. Why atomic masses are the average values?

8. What is the mass of 2 moles of CO2?

9. Define the limiting reagent with an example

10. Balance the equation  
Fe(s) + O2(g) → Fe2O3(s)

11. What is the number of oxygen atoms in one mole of CuSO4.5H2O?

12. What is the percentage composition of Ca in CaCO3?

13. How many total electrons are present in 1.4 g of nitrogen gas

**(OR)**

What is the mass in gms of 11.2 L of N2 at STP?

14. What is the mass of 3.01 × 1022 g of SO2?

15. Distinguish between an atom and a molecule.

16. How many molecules approximately do you expect to be present in a small crystal of sugar which weighs 10 mg?

17. Two containers of equal capacity A1 and A2 contain 10 g of oxygen (O2) and ozone (O3) respectively. Which of the two will have greater no. of O-atoms and which will give greater no. of molecules?

18. Define Avogadro’s number. What is its equal to?

**(OR)**

State the law of Constant Composition. Illustrate with two examples.

19. A sample of NaNO3 weighing 0.83 g is placed in a 50,0 mL volumetric flask. The flask is then filled with water upon the etched mark. What is the molarity of the solution?

20. A crystalline salt on being rendered anhydrous loses 45.6% of its weight. The percentage composition of the anhydrous salt is Aluminium = 10.50%, Potassium = 15.1% Sulphur = 24.96%, Oxygen = 49.92%. Find the simplest formula of the anhydrous and crystalline salt.