O.P.JINDAL SCHOOL,SAVITRINAGAR

PERIODIC TEST -I (2025-26)-R-1 SET-A

CLASS-XI **MAX.MARKS-20**

SUBJECT-CHEMISTRY **MAX.TIME-1HOUR**

General Instruction:-

(i)All questions are compulsory .There are 12 questions in this question paper with internal choice.

(ii)**SECTION –A:** Question numbers 1 to 6 are MCQs , carrying 1 mark each.

(iii) **SECTION –B:** Question numbers 7 to10 are short answer questions carrying 2 marks each.

(iv)**SECTION –C:** Question numbers 11 and 12 are long questions carrying 3marks each.

(v)Use of calculator is not permitted. However, you may use log tables, if necessary.

SECTION-A

Q-1.A gas is found to have formula$(CO)_x$ .Its vapour density is 70.The value of x will be:

(a)7 (b)4

(c)5 (d)6

Q-2. How many number of aluminium are present in 0.051 g of aluminium oxide?

(a)6.023X 10^{23} ions (b)3 ions

(c)6.023X10^{20} ions (d)9 ions

Q-3. Molarity of pure water is

(a)55.56 (b)18

(c)49.87 (d) 81

Q-4. An electron is moving in Bohr's fourth orbit.Its de-Broglie wave length is λ .Calculate the circumference of fourth orbit.

(a)2λ (b)4 λ

(c)4/λ (d)2/λ

Q-5. The number of radial nodes for 3p orbital is:

(a)3 (b)4

(c)2 (d)1

Q-6. The pairs of ions having same electronic configuration is :

(a)Cr^{3+} ,Fe^{3+} (b)Fe^{3+} ,Mn^{2+}

(c)Fe^{3+} ,Co^{3+} (d)Sc^{3+} ,Cr^{3+}

Q-7. The empirical formula and molecular mass of a compound are CH_2O and 180g respectively. What will be the molecular formula of the compound?

Q-8. Calculate the total number of electrons present in 1.6 g of methane.

Q-9. Yellow light emitted from a sodium lamp has a wavelength of 580 nm.Calculate the frequency and wave number of the yellow light.

Q-10. How many subshells and orbitals arecassociated with n=4.

Q-11.A 25 watt bulb emits monochromatic yellow light of wave length 300 nm.Calculate the rate of emission of quanta per second.

OR

What is the wave length of the light emitted when electron in a hydrogen atom undergoes a transition from an energy level with n=4 to an energy level with n=2.

Q-12.A compound contains 4.07% hydrogen,24.27% of carbon and 71.65% chlorine.Its molar mass is 98.96 g. Determine its empirical formula and molecular formula.

OR

1.41 g of glucose are dissolved in 60g of water. Calculate the
(i) molality (ii)mole fraction of glucose and water.
