

FIRST PERIODIC TEST-2019-20

SUBJECT-CHEMISTRY

CLASS-XI

TIME : 90 min

Max.Marks : 50

All questions are compulsory.

Q1. Choose the option which is correct :- [1 x 5]

{a} How many significant figures are there in 4.00×10^6 ?

(i) 2 (ii) 3 (iii) 6 (iv) 9

(b) What is the S.I. unit of density ?

(i) kg/m^3 (ii) g/cm^3 (iii) kg/litre (iv) all of these(c) The energy associated with the first orbit in the hydrogen atom is -2.18×10^{-18} J/atom. What is the energy associated with the fifth orbit in J/atom :-(i) $-2.18 \times 10^{-18} / 25$ (ii) $-2.18 \times 10^{-18} / 5$ (iii) -2.18×10^{-18} (iv) none of these(d) How many atoms in 4 u of H_2 :- (i) 4 (ii) 4 moles (iii) 2 moles (iv) none of these(e) The number of neutrons in $^{38}\text{Sr}^{88}$ are :-

(i) 40 (ii) 50 (iii) 88 (iv) 38

Q 2 . Answer the following :- [1 x 5]

(a) What is the mass of electron in kg ?(b) What is the charge on 1 mole of proton?

(c) Express 2808 into scientific notation .

(d) Convert 1 mg into kg and ng.

(e) Write de Broglie's equation.

Q 3.Calculate energy of photon of radiation whose frequency is 5×10^{14} hertz. ($\text{h} = 6.626 \times 10^{-34}$ Js) [2]

Q 4.Write short note on photo electric effect . [2]

Q 5. Define:- [i] atomic mass unit [ii] mole. [2]

Q 6. The energy of electron in hydrogen atom has negative value. What does it mean ? [2]

Q 7. Calculate the amount of carbon dioxide formed when two moles of carbon are burnt in Oxygen . [2]

Q 8.Calculate the percentage composition of oxygen in $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$. [3]

[At wt :- Cu =63.5 ,S =32,O = 16 ,H=1]

Q.9. How many grams of NaCl should be dissolved to make 100 ml of 0.15 M NaCl ? [3]

Q 10. State Gay Lussac's law of gaseous volume .Explain with suitable example . [3]

Q 11. Q 4.Calculate number of atoms in each of the following :- (atomic wt of He = 4)

(i) 52 moles of He (ii) 52 u of He (iii) 52 gm of He [3]

Q 12. Complete the following table ;-

[3]

Name of the particle	Atomic no. (Z)	Mass No. (A)	No. of electron (e)	No. of proton (p)	No. of neutron (n)
Aluminium ion		27	10		
Sodium ion			10		12

Q 13. 80 gm H_2 reacted with 80 gm of O_2 to form water. Find out the mass of water formed. Which one is the limiting reagent. Which reactant will remain unreacted and what would be its mass? [5]

Q.14. A compound contains 4.07% Hydrogen, 24.47%Carbon & 71.65 % Chlorine. Its molar mass is 98.96 gm. What is its empirical formula and molecular formula? [5]

Q 15. Write the postulates of Bohr's model of atom and its limitations. [5]