Name: _____ R. No.___ Class/ Sec:_____ Date:_____ Invig. Sign_____

ATOMIC ENERGY CENTRAL SCHOOL, NARORA

CLASS XI CHEMISTRY PERIODIC TEST FIRST 2018-19

MM: 40 TIME: 1:30 Hr.

General Instructions:

- All questions are compulsory and marks are mentioned in front of each question.
- Electronic devices are prohibited to use in the examination.
- Use Blue or Black Pen only.
- Don't write answer or objectionable things on question paper.

Q1- Fill in the blanks (20)

(a) One mole of sulphur molecule contains _____ mole of sulphur atom.

(b) Mass of 5 atoms of Na is _____ u.

(c) 5 molecules of Co_2 contains _____ gram atoms of oxygen.

(d) One mole of NH_4^+ ion has _____ neutrons.

(e) 10^{40} molecules of Co_2 contain _____ mole of Co_2.

(f) 0.5 mole of H_2SO_4 contain _____ gram atoms of oxygen.

(g) 70 grams of nitrogen represents _____ molecules of NH_3.

(h) Mass of 100 electrons is _____ gram.

(i) 10 gram atom of hydrogen represents _____ molar volume at NTP.

(j) 5 moles of SO_4^{2-} ions contain _____ gram atoms of sulphur.

Q2- Define Molarity , Molality and Mole Fraction. Find the molarity of a solution containing 4 kg of NaOH in 10 L of the solution. (5)

Q3- 49% solution of H_2SO_4 has density 1.02 g/ cm^3. Find the molality of the solution. (3)

Q4- State law of multiple proportion with suitable example. Define unified mass and mole. (3+2)

Q5- Write electronic configuration of the following ions- (5)

Zn^{2+}, P^{3-}, cl^-, Ar , Fe^{3+}

Q6- Write the n and l values for the following sub shell and also calculate their (n + l) values-

3s , 4p , 3d , 4f (2)

Q7-Write Balmer equation to calculate wave number. Find the wave length when an electron jump from 1st energy level to 6th energy level. (5)

Q8- Write n_1 and n_2 values for the 1st, 2nd and 3rd Lyman , Balmer and Paschen series of spectral lines for hydrogen atom respectively. And

Write any two limitations of Bohr's atomic model (5)

OR

State and explain dual nature of matter and Heisenberg uncertainty principle.
