Winter Vacation Homework

sub - Science (chemistry)

class - 9th

Q1. Give one word for the following:

(a) A group of atoms carrying a charge.

(b) positively charged ion.

Q2. The atomic number of three elements A, B and C are 9, 10 and 13 respectively. Which of them will form a cation?

Q3. Calculate the formula mass of Sodium carbonate ($Na_2CO_3 \cdot 10H_2O$)

Q4. How many moles are present in 4g of sodium hydroxide?

Q5. Write the cations and anions present in the following compounds:

(a) CH_3COONa (b) NaCl (c) H_2 (d) NH_4NO_3

Q6. Calculate the Molecular mass of the following:

(a) H_2CO_3 (b) C_2H_5OH (c) $MgSO_4$

Q7. What are ionic and Molecular compounds? Give examples.

Q8. Calculate the number of particles in each of the following:

(a) 46g of Na atom (b) 8g of O_2 Molecules

(c) 0.1 Moles of carbon atom.

Q9. Frame the chemical formulae by using following

(a) Calcium and oxygen (b) Sodium and carbonate

(c) potassium and dichromate (d) Ammonium (NH_4^+) and chlorine (e) calcium and Hydroxyl ion (OH^-)

(f) potassium and Nitrate ion (NO_3^-).

Q10. Write down the electron distribution of chlorine atom. How many electrons are there in the L shell? (atomic number of chlorine is 17).

Q11. Define the following terms and Give examples of each

(a) Isotopes (b) Isobars (c) Isotone

Q12. Why do Helium, Neon and Argon have a zero valency?

Q13. What are the postulates of Bohr's model of an atom.