

<u>Marking Scheme</u>: Questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question 1:

- A. Define the following terms:
 - a. Polyatomic ion b. Atomic mass unit
- B. Give the atomicity of following elements: Argon, nitrogen, chlorine, phosphorus, helium, ozone

C. Give the names of elements present in following molecules

- a. Baking powder
- b. Ammonia

Question 2:

A Calculate the molar mass of the following substances. [Na=23, C=12, O=16, N=14, S=32, H=1, Mg=24, Cl=35.5]

a.	Na ₂ CO ₃	d. Mg (NO ₃) ₂
b.	(NH ₄) ₂ SO ₄	e. CH₃Cl
c.	KNO₃	f. C₂H₅OH

B. What is the mass of following?

- a. 6 moles of water
- b. 2 moles of nitrogen gas

C. Solve the following:

- a. Calculate the number of moles in 128 g of oxygen gas
- b. Calculate the number of moles in 22 g of carbon dioxide

Question 3:

A. State the postulates of Daltons atomic theory.

- B. Give the formulae of following:
 - a. Aluminium chloride
 - b. Magnesium hydroxide
 - c. Calcium carbonate

C. Calculate the number of particles of the following:

- a. 46 g of sodium atom [Na=23]
- b. 0.1 mole of carbon atom [C=12]