Q1. 21 January Shift 2

By usual analysis, 1.00 g of compound (X) gave 1.79 g of magnesium pyrophosphate. The percentage of phosphorus in compound (X) is : (nearest integer) (Given, molar mass in $gmol^{-1}$: $O = 16, Mg = 24, P = 31$)

(1) 30 (2) 50 (3) 40 (4) 20

Q2. 24 January Shift 1

Consider three metal chlorides x, y and z, where x is water soluble at room temperature, y is sparingly soluble in water at room temperature and z is soluble in hot water. x, y and z are respectively

(1) $CuCl_2$, AgCl and $PbCl_2$ (2) $AlCl_3$, $PbCl_2$ and $BaCl_2$

(3) $MgCl_2$, AgCl and $AlCl_3$ (4) AgCl, Hg_2Cl_2 and $PbCl_2$

Q3. 24 January Shift 2

In the Group analysis of cations, Ba^{2+} & Ca^{2+} are precipitated respectively as

(1) sulphide & sulphide (2) chromate & sulphide

(3) carbonate & carbonate (4) hydroxide & carbonate

Q4. 28 January Shift 2

A student has been given 0.314 g of an organic compound and asked to estimate Sulphur. During the experiment, the student has obtained 0.4813 g of barium sulphate. The percentage of sulphur present in the compound is ____.

(Given Molar mass in $gmol^{-1}$ S : 32, $BaSO_4$: 233)

(1) 21.05 % (2) 63.15 % (3) 42.10 % (4) 48.24 %

ANSWER KEYS

1. (2) **2.** (1) **3.** (3) **4.** (3)