

SECTION – I**2. Write short answers to any EIGHT (8) questions :****16**

- (i) What do you know about period 6 of the periodic table?
- (ii) Why Na^+ is smaller than Na atom?
- (iii) What are alkali metals? Give name of alkali metals.
- (iv) Give two differences between lithium and other alkali metals.
- (v) Give chemical formulas of mica and bauxite.
- (vi) How would you prepare borax from colemanite?
- (vii) Give two uses of aluminium.
- (viii) Draw structural formulas of dinitrogen pentoxide and dinitrogen oxide.
- (ix) “ Sulphuric acid is a dehydrating agent”. Justify.
- (x) Write different steps involved in the manufacturing of urea.
- (xi) Why potassium fertilizers are important for plants?
- (xii) What reactions take place between 1 to 7 days during setting of cement?

3. Write short answers to any EIGHT (8) questions :**16**

- (i) Write any two uses of bleaching powder.
- (ii) What is disproportionation reaction? Give one example.
- (iii) Why HF is weaker acid than HCl?
- (iv) Why does damaged tin plated iron get rusted quickly?
- (v) Give the prevention of metals from corrosion.
- (vi) What are polycyclic aromatic hydrocarbons? Give examples.
- (vii) What information do we get from X-ray study of benzene?
- (viii) How does formaldehyde react with the following reagent : (a) HCN (b) $NaHSO_3$
- (ix) How will you distinguish between methanal and ethanal?
- (x) Write any two reactions of carboxylic acids in which hydrogen atom of carboxylic group is involved.
- (xi) What is meant by oxidative cleavage of alkenes? Give an example.
- (xii) Write down the mechanism of ester formation.

4. Write short answers to any SIX (6) questions :**12**

- (i) Define catalytic cracking.
- (ii) Define homocyclic and heterocyclic compounds.
- (iii) Define hydrogenolysis. Give one example.
- (iv) Why sigma bond is inert?
- (v) How are cis and trans alkenes prepared from alkyne?

(Turn Over)