

Q.2 Attempt any 8 questions of the following:

- i) Differentiate between Physical chemistry and Analytical chemistry.
- ii) What do you mean by atomic number of an atom? Give at least two examples.
- iii) Give the electronic configuration of the following:
(a) ${}_6\text{C}^{12}$ (b) ${}_{11}\text{Na}^{23}$
- iv) Noble gases occupy the last group (viii) in periodic table. Why?
- v) What is the shielding effect? Does it vary in period?
- vi) H_2S is a gas while H_2O is liquid at room temperature. Why?
- vii) What do you understand by Hydrogen bonding?
- viii) Diamond is a bad conductor of heat and electricity while graphite is good. Why?
- ix) What do you mean by molarity of solution?
- x) What are weak and strong electrolytes? Give at least two examples of each.
- xi) Write any four uses of sodium.

SECTION - C

Marks: 24

Note: Attempt any 3 questions. Each carry 8 marks.

- Q3 (a) What do you understand the term mole and Avogadro's number? Give example.
- (b) How many moles of CO_2 are present in 60g CO_2 ?
- Q4 (a) What is the difference between polar and non-polar bond? Explain your answer with examples.
- (b) Describe the bond formation in sodium chloride.
- Q5 (a) Explain the types of solids with examples.
- (b) Calculate the molarity of 5% by mass of NaOH
- Q6 (a) What are oxidizing and reducing agents? Explain your answer with examples.
- (b) What do you mean by electro plating? Give its purpose as well.