

PART - I**Q.2** Write short answers to any Five (5) questions: 10

- i Define industrial chemistry and analytical chemistry.
- ii Explain why hydrogen and oxygen are considered as elements whereas water as a compound?
- iii Write two properties of neutron.
- iv How many maximum electrons can be accommodated in K, L, M, N shells?
- v What is the trend of ionization energy in period and why?
- vi Define electronegativity. Which one halogen has highest electronegativity value?
- vii Write names of elements of first period.
- viii Write down the name of elements of group-I (any two).

Q.3 Write short answers to any Five (5) questions: 10

- i Define duplet and octet rule.
- ii Why ice floats over water?
- iii Define metallic bond.
- iv What is meant by standard atmospheric pressure?
- v Define dynamic equilibrium.
- vi What is diffusion? Explain with an example.
- vii How molar solution is prepared?
- viii Why are colloids quite stable?

Q.4 Write short answers to any Five (5) questions: 10

- i Define oxidation number.
- ii What is meant by electrolysis?
- iii What are weak electrolytes? Give at least one example.
- iv Define rusting. Write its important condition.
- v What do you mean by 22 carat gold?
- vi Write down chemical reaction of Mg with O_2 and N_2 .
- vii What is the trend of electropositivity in a group and a period?
- viii Write any two physical characteristics of metals.

PART - II**Note:** Attempt any TWO questions.**Q.5(a)** List five differences between compound and mixture.**(b)** Describe four properties of canal rays.**Q.6(a)** Describe types of covalent bonds.**(b)** Define evaporation. Explain factors affecting evaporation.**Q.7(a)** How can we prepare sodium hydroxide (NaOH) on commercial scale? Discuss its chemistry along with diagram.**(b)** What is saturated solution and how it is prepared?