CHEMISTRY MODEL QUESTION PAPER

CHEMISTRY GENERAL

SEMESTER-I

COURSE NAME - CHEMGT-1

Each question carry two marks

1. Who discovered the fundamental particles neutron, electron and proton?
2. What is meant by atomic number of an element? Does the atomic number of an element change when its atoms form ions?
3. What is relation between atomic number and mass number?
4. What do you mean by valence electrons?
5. Define the term valency.
6. What do you mean by redox indicator?
7. "Sodium hydrogencarbonate is a basic salt". Justify the statement**.**
8. What do you mean by Standard electrode potential and formal potential?

Each question carry five marks

1. When we move left to right along a period in periodic table, ionisation energy increases explain.
2. The decreasing order of rate of $S_N1$reaction is t-BuX > iso-PrX > EtX > MeX. Explain.
3. Chlorine has greater electron affinity than fluorine. Explain. Compare the size of Na and Na^+.
4. Why the nucleophilic substitutions do not occur in haloarenes?
5. Which one of these has a higher concentration of H^+ ions? 1 M HCl or 1 M CH_3COOH. Explain.
6. Balance the following equation by oxidation number method.

$Fe^{2+} + H^+ + Cr_2O_7^{2-} \rightarrow Fe^{3+} + H_2O + Cr^{3+}$

7. Explain with example Saytzeff and Hofmann eliminations.

Each question carry ten marks

1. Write a short note on

i. Wurtz reaction,

ii. Kolbe's synthesis,

iii. Grignard reagent

iv. Birch reduction

2.

i. What is Rutherford's Nuclear Model of atom?

ii. What is Bohr's model of atom?