

APPLIED CHEMISTRY-I
1st Exam/2555/Common/May'18

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Do as directed.

10x1.5=15

- The chemical formula of ferric sulphate is _____.
- A chemical equation in which heat is evolved is called _____.
- Proton was discovered by _____
- There are _____ periods in periodic table.
- Cations are _____ charged ions.
- The reaction of an acid with a base to form salt and water is called _____
- The functional group of amide is _____
- Ions are neutrals particles. (T/F)
- Ethylene is unsaturated in nature. (T/F)
- Reduction involves the loss of electrons. (T/F)

SECTION-B

Q2. Attempt any ten questions.

10x3=30

- What are the limitations of a chemical equation?
- Define the terms Electron, Proton and Neutron.
- Differentiate between an orbit and orbital.
- Define chemical bond. What is the cause of chemical combination?
- What are the advantages of long form of periodic table?
- Differentiate between temporary and permanent hardness of water.
- Explain scale and sludge formation.
- State and explain Boyle's law.
- What are electrolytes and non electrolytes?
- How will you define indicator, titration and end point?
- Explain Faraday's second law of electrolysis.
- What are primary and secondary cell?
- What is the functional group of (a) Alcohols (b) Amide (c) Ketone?

SECTION-C

Attempt any three questions.

3x10=30

- Q3.** a) Give main features of Bohr's atomic model. **5**
 b) Balance the following equation by hit and trial method. **5**

$$\text{Fe} + \text{H}_2\text{O} \longrightarrow \text{Fe}_3\text{O}_4 + \text{H} \longrightarrow$$
- Q4.** a) State and explain Heisenberg's uncertainty principle and Aufbau Principle. **5**
 b) Name the four quantum numbers and explain the significance of each quantum numbers. **5**
- Q5.** a) What are the various factors affecting the degree of ionization? **5**
 b) what is a buffer solution? Explain the types of buffer solution **5**
- Q6.** a) How will you remove hardness of water by permutit process? **5**
 b) Differentiate between reversible and irreversible reactions. **3**
 c) Explain the term catenation. **2**
- Q7.** a) Differentiate between alkene and alkyne. **5**
 b) What is the purpose of electroplating? **3**
 c) Explain the concept of redox reaction. **2**