Model questions for Engg. Chemistry (Theory 2-B)

(Common to all Branches)

Chapter 1-Basic Concepts of Chemistry

Short Questions

1. Write electronic configuration of Cr, P.
2. Calculate equivalent weight of $Al_2(SO_4)_3$,$Ca(OH)_2$

Long questions

1. Explain Aufbau's principle.
2. How does Bohr rectify the defects of Rutherford's atomic model?
3. How many grams of Calcium Chloride are required to prepare two litre of its semimolar solution?
4. Explain the postulates of Bohr's atomic theory?

Chapter-2- Chemical Bonding

1.Mention the conditions for formation of ionic bond?

2. What is a chemical bond?

3. Explain the formation of covalent bond in CH_4 and H_2O.

4. Differentiate covalent and coordinate bond?

Chapter 3- Acid based Theory

1. Write down the conjugate acid of HCO_3^-, CH_3COO^-.
2. What are complex salts? Give two examples.
3. Explain Bronsted-Lowry theory for acid and base.

Chapter-4- Solution

1. Define molarity. Mention its unit.

2. 11.2 gram of Caustic potash are present in 5 litre of its solution. Find its $P^{H.}$

3. Write the importance of P^H in industrial sectors.

Chapter-5- Electrochemistry

1. How many grams of silver will be deposited at the Cathode by the passage of 10 amp of current through silver nitrate solution for half an hour?
2. Write the reactions that take place during electrolysis of molten NaCl.
3. What is electrolysis? State and explain Faraday's law of electrolysis.

Chapter-6 Corrosion

1. Explain the mechanism of corrosion.
2. What are the methods to protect iron from corrosion?

Chapter-7 Metallurgy

1. What are flux and slag?
2. Define calcination, roasting, smelting, leaching?

Chapter-8- Alloys

1. Define alloy. Write the composition and uses of Bronze, Steel, Alnico and Duralulin.

Chaprer-9- Hydrocarbons

1. Differentiate saturated and unsaturated hydrocarbons.

2. Define Aromaticity.

3. Write some common uses of Benzene, naphthalene, BHC in daily life.

Chapter-10- Water Treatment

1. Define hard water.

2. Explain ion exchange process of removing hardness from water.

3. Write down the advantages of hot lime soda process over cold lime soda process?

Chapter-11- Lubricants

1. What are lubricants, classify lubricants and explain the purpose of lubrication.

Chapter-12- Fuel

1. Define calorific value of fuel?
2. What are the characteristics of good fuel?
3. Explain the composition and uses of producer gas and water gas?

Chapter-13- Polymer

1. Explain the composition and uses of PVC and Bakelite.

2. Give a comparison between thermosetting and thermoplastics polymers.

Chapter-14- Chemicals in Agriculture

1.Write the examples and uses of pesticides, insecticides, herbicides and fungicides.

2.Define bio-fertilizers and give two examples.