



Sacs.1103

Engineering Chemistry (2+1)

Marks:50
Time: 2 hours
(10x1=10)

I Fill in the blanks

- 1 Temporary hardness arises due to -----salts of calcium and magnesium.
- 2 When Fe and Zn are connected through a wire -----metal will be protected.
- 3 The monomer of natural rubber is -----
- 4 Scattering of light by the colloidal particles are called-----
- 5 Milk is an example of -----type colloidal system.
- 6 α -glucose molecules undergo polymerization to give -----
- 7 The prosthetic group of a nucleoprotein is-----
- 8 Give an example for a class II preservative -----
- 9 If the concentration of the solution is doubled, its absorbance will be-----

State True or False

- 10 For machines working at high temperature, lubricants having lower flash point are preferred.

II Write Short notes on ANY FIVE of the following

(5x2=10)

- 1 What are zeolites? Explain the use of zeolites in water treatment.
- 2 Differentiate between Gross calorific value and Net calorific value.
- 3 Explain the term Electrophoresis.
- 4 Explain microbial corrosion.
- 5 How Nylon-66 is prepared?
- 6 Give the names and functions of four oil soluble vitamins.
- 7 Explain the mechanism of enzyme activity.

III Answer ANY FIVE of the following

(5x4=20)

Describe

- 1 i Ion-exchange resin method
ii Reverse osmosis method for reducing water hardness
- 2 Describe any three methods for the purification of colloidal solutions.
- 3 What is knocking? How it is minimized? Explain the term octane number.
- 4 Give an account on types of polymerization with suitable examples.
- 5 Explain cloud and pour point of a lubricant? Explain its significance. How it is measured?
- 6 Give an account on the classification of carbohydrates
- 7 Classify proteins based on their shape and function

V Write an essay on ANY ONE of the following

(1x10=10)

- 1 Give a detailed account on the types of corrosion
- 2 a What are lipids? Explain their classification
b Explain the manufacture of ethanol and acetic acid
