



KERALA AGRICULTURAL UNIVERSITY
B.Tech Food Engineering 2018 Admission
I Semester Final Examination-January 2019

Bas.c.1104

Engineering Chemistry (2+1)

Marks:50
Time: 2 hours

- I Fill in the blanks: (10x1=10)**
- 1 The process of removing hardness producing salts from water is called _____
 - 2 _____ is defined as decomposition of bigger hydrocarbons into simpler ones of low molecular weights
 - 3 A polymer which can be softened on heating and hardened on cooling reversibly is called _____
 - 4 A type of chromatography using a sheet of special grade filter paper on adsorbent is termed as _____
 - 5 Nylon 6:6 is obtained by the polymerization of adipic acid with _____
- State True or false**
- 6 Wire mesh corrodes faster at the joints.
 - 7 Fluid Film lubrication is involved in delicate machines.
 - 8 On increasing the temperature, the molar conductivity decreases.
 - 9 The disinfecting action of bleaching powder is due to the chlorine made available by it.
 - 10 Spectroscopy involves the interaction between matter and electromagnetic radiation.
- II Write Short notes on ANY FIVE of the following (5x2=10)**
- 1 How is water demineralised in an ion-exchanger?
 - 2 Octane number.
 - 3 Principle of HPLC.
 - 4 Corrosion inhibitors with two examples.
 - 5 Cathodic protection.
 - 6 Retention factor.
 - 7 What is EMF of a cell? How is it related to ΔG of a cell?
- III Answer ANY FIVE of the following (5x4=20)**
- 1 What is meant by Reverse osmosis? How is it applied in the desalination of water?
 - 2 Fuels and its classification.
 - 3 Mention the important ingredients of paint and explain their functions.
 - 4 Types of polymerization with examples.
 - 5 What are secondary cells? Describe the construction of one secondary cell.
 - 6 What is a salt bridge? How is it prepared? What are its functions.
 - 7 Give the principle of column chromatography. Briefly explain the various processes involved in this method.
- IV Answer ANY ONE of the following. (1x10=10)**
- 1 Derive Nernst equation. How is a calomel electrode constructed? Sketch the electrode.
 2. Discuss in detail the properties of lubricants highlighting their importance.
