

II B.Tech I Semester(R05) Supplementary Examinations, May/June 2010
APPLIED CHEMISTRY AND BIOCHEMISTRY
(Bio-Medical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Define electrolyte and non-electrolyte with suitable examples.
(b) Define strong and weak electrolytes
(c) Explain Arrhenius ionic theory along with postulates. [5+5+6]
2. (a) How are phenol and formaldehyde manufactured commercially?
(b) How is phenol made in the laboratory?
(c) What are the chief uses of bakelite? [6+6+4]
3. (a) What are demineralizers? Give examples. Explain softening of hard water by ion-exchange method for boiler feed water.
(b) Calculate the hardness of the sample of water. [8+8]
4. (a) Describe Oxidative Phosphorilation.
(b) Write the differences between Prokaryotes and Eukaryotes. Give suitable examples on each of the above. [8+8]
5. (a) How the enzymes are classified? Explain different types of enzymes with one example for each.
(b) Explain the properties of an enzyme. [8+8]
6. What do you mean by intermediary metabolism? Give an account of protein metabolism. [16]
7. Write a brief account of:
(a) Electrophoresis
(b) Blood proteins
(c) Clotting factors. [6+5+5]
8. Discuss about High performance liquid Chromatography (HPLC) and Thin layer Chromatography (TLC) with the help of required diagrams. [16]
