Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (Civil) (Sem.–1)

ENGG. CHEMISTRY

Subject Code : CH-101

Paper ID : [A0110]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A

Q1 Answer briefly :

a) Give specification of boiler feed water.

b) What is meant by wet corrosion?

c) Name the different types of liquid chromatography.

d) What do you mean by thermodynamics of a cell?

e) Explain the term masers.

f) Give one example each for photochemical reactions with high and low quantum yields.

g) What do you mean by finger print in IR spectroscopy?

h) How many signals are observed in ethanol (CH_3CH_2OH)? Explain.

i) What is the difference between triple point and eutectic point?

j) What is degree of freedom? Explain with suitable example.

SECTION-B

Q2 What do you mean by desalination of water? Describe any one method for desalination of water.

Q3 What do you mean by corrosion? What are the protective measures used against the corrosion?

Q4 Discuss the general and fundamental concepts of chromatography. Explain the applications of chromatography.

Q5 Derive Nernst equation. Explain how it can be utilized to find the EMF of an electrolyte concentration cell?

SECTION-C

Q6 Differentiate primary and secondary photochemical processes. Explain with suitable examples.

Q7 Discuss the Frank-Codon principle.

Q8 How number of signals and chemical shifts are useful for differentiate the molecules with NMR spectroscopy?. Give suitable examples.

Q9 Draw and discuss phase diagram of lead-silver system.