PVP 14

Code: EE2T3, ME2T3, AE2T3

I B.Tech - II Semester – Regular/Supplementary Examinations
April - 2018

ENGINEERING CHEMISTRY
(Common for EEE, ME & AE)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) How temporary hardness is removed?
b) What is chain polymerization? Give examples.
c) Mention the applications of carbon nano tubes.
d) What is green chemistry?
e) Define cathodic protection. How many types of cathodic protection?
f) Comment the type of corrosion occurring on lead pipeline passing through clay to cinders.
g) What are the advantages of liquid crystal display?
h) What is green house effect? Name the green house gases.
i) What are the ingredients of compounding of plastics?
j) What is step growth polymerization and give example?
k) Explain the basic principle of estimation of hardness by EDTA method.

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain in detail the lime soda process of external conditioning of boiler water with neat diagram. 8 M

   b) What is reverse osmosis? How will you purify the sea water by reverse osmosis? Mention its advantages. 8 M

3. a) Describe the injection moulding process for the manufacture of plastics with a neat diagram. 8 M

   b) i) Write a short note on bio degradable polymers. 4 M
   ii) What are the characteristics of FRP? 2 M
   iii) Mention the few applications of poly styrene. 2 M

4. a) What are carbon nano materials? Explain different types of carbon nano materials with suitable examples. 8 M

   b) i) Discuss the effect of nano scale on different properties of materials. 4 M
   ii) Explain green solvents with suitable examples. 4 M

5. a) How are galvanizing and tinning are carried out? Bring out the differences. 8 M

b) Why corrosion be prevented? Discuss the methods of corrosion control. 8 M

6. a) What are super conductors? Write the preparation of 1:2:3 compound. Write the applications of super conductors. 8 M

b) Write notes on Stoichiometric and Non-Stoichiometric Semi conductors. 8 M