18CY101

Hall Ticket Number:

I/IV B.Tech (Regular) DEGREE EXAMINATION

DECEMBER, 2018 — Computer Science and Engineering

First Semester — Engineering Chemistry

Time: Three Hours — Maximum : 50 Marks

Answer Question No.1 compulsorily. (1X10 = 10Marks)

Answer ONE question from each unit. (4X10=40Marks)

1. Answer all questions (1X10=10Marks)

a What is alkalinity of water?
b Write any two examples for coagulants.
c What is meant by colloidal conditioning?
d Define entropy.
e What is ''Pilling-Bedworth rule''?
f Define Anti knocking agent. Give an example
g Define calorific value of fuel.
h Write the main constituents of LPG.
i What is Markownikoff''s rule?
j What is conducting polymer?

UNIT – I

2.a Distinguish between hard water and soft water. 3M

2.b Explain the following i).Boiler corrosion ii). prevention methods of scale 7M

(OR)

3.a Explain any three disinfection methods. 5M

3.b Explain the method of treatment of brackish water by Electro dialysis 5M

UNIT – II

4.a Derive Nernst equation for single electrode potential. 4M

4.b Explain Chemical or Dry corrosion and its mechanism 6M

(OR)

5.a Explain how corrosion of a material is controlled by Cathodic protection method. 6M

5.b Write short note on Electroless plating of Nickel. 4M

UNIT – III

6.a Discuss the determination of calorific value of solid fuel by Bomb calorimeter. 7M

6.b Write short note on cetane number 3M

(OR)

7.a Write short note on refining of crude petroleum. Write various fractions obtained from petroleum. 7M

7.b What are Bio Fuels? Write any one method for the preparation of Bio diesel. 3M

UNIT – IV

8.a Explain with mechanism of SN^1 and SN^2 reactions 6M

8.b Explain a method of synthesis of ''Aspirin'' 4M

(OR)

9.a Distinguish between Thermoplastic and Thermosetting polymers 6M

9.b Explain the preparation and applications of any one of Biodegradable polymers. 4M