

FACULTY OF TECHNOLOGY**B.Tech. (Bridge Course) II - Semester (Backlog) Examination, April 2016****Subject: Engineering Chemistry****Time : 3 Hours****Max. Marks: 75****Note: Answer all questions from Part-A and answer any five questions from Part-B.****PART – A (25 Marks)**

- 1 Define standard electrode potential. Give its significance. (3)
- 2 What is galvanic corrosion? Explain with an example. (3)
- 3 What are the requirements of a good Fuel? (3)
- 4 Define octane number of a fuel. Give its significance. (3)
- 5 What are the conditions of precipitation? (3)
- 6 Draw the structures of chair and boat form of cyclohexane. (2)
- 7 Draw the D & L configuration of glyceraldehyde. (2)
- 8 Write the reactions for the formation of glucosazone. (2)
- 9 What are essential amino acids? Give two examples. (2)
- 10 What are proteins? Explain with an example. (2)

PART – B (50 Marks)

- 11 (a) Define corrosion. Explain the mechanism of electrochemical corrosion. (6)
(b) Explain the corrosion control method by sacrificial anodic protection. (4)
- 12 (a) What are chemical fuels? Give their classification with examples. (4)
(b) Describe the fractional distillation of crude petroleum with a well labeled diagram. (6)
- 13 (a) Discuss the principle, method and applications of complexometric titration. (6)
(b) What are enantiomers and diastereomers? Explain with an example. (4)
- 14 (a) Write a note on Bayer's strain theory and its importance. (6)
(b) What are sequence rule for R & S configuration? (4)
- 15 (a) What are the evidences for open chain and cyclic structure of D (+) Glucose. (5)
(b) Give any two methods of synthesis of amino acids. (5)
- 16 (a) Describe the method of analysis of flue gases by Orsat apparatus. (6)
(b) What is electrochemical series? Give its applications. (4)
- 17 (a) What are peptides? Explain the determination of structure of peptides. (6)
(b) What is Waterline and Soil corrosion? Explain. (4)