First Term Examination,
Odd Semester 2018-19

Program: B.Tech Year: First **Univ. No.** ----------
Subject: Engineering Chemistry **Subject Code:** BCHS-0101
Time: 1 Hour **Max. Marks: 15**

Section-A

Note: ***Attempt All Questions*** **3 x 2 = 6 Marks**

1. Explain the Cloud and Pour point of lubricants
2. Differentiate Higher Calorific and Lower calorific value of a fuel.
3. What is hydrogen bond? Explain different types of hydrogen bonds with suitable examples

Section-B

Note: ***Attempt All Questions*** **3 x 3 = 9 Marks**

1. With the help of Molecular Orbital Theory, draw the MO diagram of F_2. Calculate bond order & magnetic behavior also.
2. A gaseous fuel has the following composition by volume: H_2=32%, CH_4=14%, N_2=40% and O_2=14%. If 25% excess air is used, find the weight of air actually supplied per m^3 of this gas.
3. What are conformers? Explain conformation in n- butane with suitable diagrams. Discuss their stability order by giving Energy Level diagram.