

**B.Sc. DEGREE EXAMINATION, ODD SEMESTER 2020**  
**II Year III Semester**  
**Allied Chemistry-I**

**Max.marks :25**

Answer any **FIVE** questions ( $5 \times 5 = 25$ ) Marks

1. Draw the M.O. diagram of  $N_2$  and  $O_2$  molecules and calculate the bond order.
2. What are interhalogen compounds? Explain the preparation and structure of  $BrF_3$  and  $IF_7$ .
3. Write notes on (a) Van Arkel process and (b) Zone refining of metals
4. Using Carnot cycle prove that the efficiency of heat engine is less than unity.
5. Explain the principle of TLC. How is it performed? Write any one application of TLC.
6. (a) Explain  $sp$  hybridisation with reference to carbon compound (b) Discuss the isomers of lactic acid.
7. Describe the Haworth synthesis of naphthalene and write any two chemical properties of naphthalene.