Hemchandracharya North Gujarat University, Patan
Bachelor of Vocation
Pharmaceutical Chemistry Semester - III
End Term Examination, December, 2018
(PC 311) (Advanced Organic Chemistry)

Time: 2 hrs **Date:** **Maximum marks: 50**

Q.1 Answer any 9 questions. Each question carries 1 mark. **(9*1=9Marks)**

1. Define: Inductive Effect.
2. Which of the following will show -I effect?
   (a) CH_3- (b) $(CH_3)_2CH$- (c) -NO_2 (d) All
3. Which of the following carbocation is more stable
   (a) CH_3-CH_2^+ (b) $(CH_3)_2CH^+$ (c) NO_2-CH_2^+ (d) $(CH_3)_3C^+$
4. The SF_6 molecule will show following type of hybridization
   (a) sp^2 (b) sp^3 (c) sp^3d (d) sp^3d^2
5. Define: Acid and Base.
6. Hydrogen bond is the weakest intermolecular bond. (True/False)
7. Keto-enol Isomerism is a type of Tautomerism. (True/False)
8. Give one example of the sp^3 hybridization.
9. Define: Substitution Reaction.
10. Draw the structure of PCl_5.

Q. 2 Answer any 5 questions. Each question carries 4 marks. **(5*4=20Marks)**

1. Short note on Sigma and Pi bond.
2. Explain why BF_3 is non-polar.
3. Explain SN^1 reaction with mechanism & examples.
4. Explain why formic acid is a stronger acid compared to acetic acid.
5. Short note on cyclo-addition reaction.
6. Draw the resonance structure of Phenol.

Q.3 Answer any 3 question. Each question carries 7 marks. **(3*7=21Marks)**

1. Explain Short note on Hybridization
2. Short note on Inductive effect with example.
3. Explain sigmatropic reaction in detail.
4. Write the comparison between Elimination Reaction Vs Substitution Reaction.