Seat No: _____ Enrollment No:_____

PARUL UNIVERSITY

FACULTY OF PHARMACY

B.Pharm. Summer 2018-19 Examination

Semester: 3 **Date: 22/04/2019**
Subject Code: 08101201 **Time: 10:00am To 01:00pm**
Subject Name: Pharmaceutical Chemistry-III (Organic Chemistry-I) **Total Marks: 75**

Instructions:
1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) **(20)**

1. Write a short note on hybridization and hybrid orbitals with examples of SP^3 hybridization.
2. Give a brief note on a Relative configuration (L and D), and Absolute configuration (R and S) with examples.
3. Explain aromatic character of benzene with theory of orientation and reactivity.

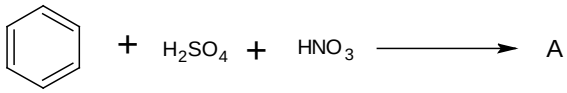
Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) **(35)**

1. Write a short note on Racemic mixture and its resolution methods.
2. Give a short note on a various acid base theory.
3. Give a brief note on a Reactive intermediates.
4. Explain bonding and antibonding molecular orbitals with examples.
5. Give a brief account on Chirality.
6. Write Haworth synthesis for preparation of Naphthalene.
7. Write a short note on a Factors affecting acid base character, pka value and its significance.
8. Write reaction of Fridal crafts alkylation of benzene and explain its mechanism.
9. Explain various intermolecular and intramolecular forces, with particular examples.

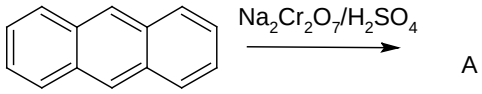
Q.3 Answer in short. (2 marks each) **(20)**

1. Explain in brief about the conformational isomers with examples.
2. **Complete the reaction:**

1.

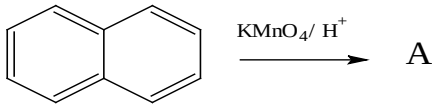


2.

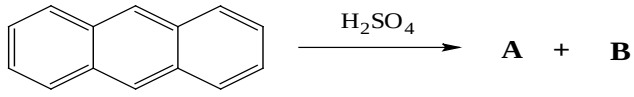


3. Explain concept of oxidation and reduction with examples.
4. Complete the reaction:

1.



2.



5. Define: 1. Stereochemistry 2. Free radical
6. Define: 1. Electronegativity 2. Bond dissociation energy
7. Define: 1. Enantiomer 2. Diastereomer
8. Explain steric effect with example.
9. Write applications of organic chemistry
10. Write short note on types of catalysis.