

PARUL UNIVERSITY
FACULTY OF PHARMACY
B.Pharm. Winter 2019-20 Examination

Semester: 4**Subject Code: 08101251****Subject Name: Pharmaceutical Chemistry IV (Organic Chemistry II)****Date: 03/12/2019****Time: 2:00 pm to 5:00 pm****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. Explain S_N1 reaction and mechanism along with supporting evidences. Comment on orientation and reactivity of it.
2. Explain reaction mechanism of Hofmann elimination of amines and Hofmann degradation of amides in detail.
3. What are carboxylic acid derivatives? Give any two chemical reactions and preparations of each.

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

1. Explain Friedal craft reactions with mechanism.
2. Write a note on phase transfer catalysis.
3. Give principle of retrosynthesis. Explain synthesis of any one drug using retrosynthesis approach.
4. Explain Riemen Tieman reaction with mechanism.
5. Write any three reactions of amines and two reactions of alcohols.
6. Write a short note on combinatorial chemistry.
7. Explain mechanism of following reactions:
 - a) Fries rearrangement
 - b) Pinacol rearrangement
8. Explain Benzil-Benzilic acid rearrangement reaction with its mechanism.
9. Give preparations of alkenes.

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

1. Define the term green chemistry with one application.
2. Give any two chemical reactions of alkynes.
3. Justify: Aliphatic amines are more basic than aromatic amines.
4. Give any two chemical reactions of phenol.
5. Define the term microwave chemistry with one application.
6. Write any two chemical reactions involving diazonium salts.
7. Give any two applications of combinatorial chemistry.
8. Explain any two principle of green chemistry.
9. Give any two preparations of alkanes.
10. Give any two reactions of aldehydes.