



International Islamic University Chittagong

Department of Pharmacy

B.Pharm (Hons) Program

Final Examination

Spring 2018 Semester

Course Code: Pharm-1201

Course Title: Organic Pharmacy

Time: 2 hours 30 minutes

Full Marks: 50

Answers of separate groups should be given in separate script. Figures in right margin indicate marks)

Group A (Answer any two questions from the followings) **Marks: 20**

1. a) Write down the resonance behavior of benzene. What are the significances of aromaticity? 2+1
- b) Explain the Huckle's rule. 2
- c) Mention the chemical properties of benzene. 3
- d) Deduce the derivatives of benzene with the different functional groups. 2
2. a) Explain SN1 and SN2 reaction with suitable examples. 4
- b) Discuss the relative basic character of ammonia, methyl amine and aniline. 3
- c) Justify the molecular orbital structure of aromatic amines taking examples of aniline. 3
3. a) Write down the significance of word carboxylic acid? How can you prepare it? 1+2
- b) What are the reactive parts of carboxylic acid? Mention each reaction with example. 1+4
- c) Describe pharmaceutical applications of carboxylic acid. 2

Group B (Answer any three questions from the followings) **Marks: 30**

4. a) What are the classifications of lipids? 2
- b) Compare between fats and waxes. 2
- c) How can you determine quality, purity and identity of lipids? 4
- d) Write down the pharmaceutical importance of cod liver oil. 2
5. a) What is carbohydrate? What are the types of carbohydrates? Mention with structural formula. 1+2+2
- b) Deduce the bio synthesis pathway of sucrose. 3
- c) Write down the pharmaceutical applications of sucrose. 2
6. a) Describe the classification of amino acids with suitable example. 3
- b) Write down the Gabriel synthesis of amino acids. 3
- c) Mention the pharmaceutical importance of glucose and starch. 2+2
7. a) How would you convert glucose into fructose and vice-versa? 2
- b) How can you distinguish between reducing and non-reducing sugars? 3
- c) Write ring structure of any two of the following: i) Sucrose 2
ii) α -D Fructopyranose iii) α -D Fructofuranose.
- d) What happens when fructose is treated with excess phenylhydrazine? 3