

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 3 EXAMINATION – WINTER -2019**

**Subject Code: BP301TP****Date: 14-11-2019****Subject Name: Pharmaceutical Organic Chemistry II****Time: 10:30AM TO 01:30PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write down the methods of preparation and uses of benzoic acid. **06**  
(b) Halogens are deactivators but *o*, *p*- directors. Justify with suitable examples. **05**  
(c) Write the principle and significance of Iodine number. **05**
- Q.2** (a) Write a short note Fries Rearrangement and Carbylamines reaction. **06**  
(b) Write the mechanism Friedal Craft alkylation with its limitations. **05**  
(c) Enumerate the influence of substituents on acidity of Aromatic acids. **05**
- Q.3** (a) Convert these followings: **06**  
I. Phenol to Phenyl acetic acid  
II. *p*- cresol to *p*-NO<sub>2</sub> benzyl tolyl ether  
III. *o*- cresol to *N*- nitroso 2- methyl Phenol
- (b) Describe in detail about Bayer's strain theory with its limitation **05**  
(c) Write an informative note on Huckel's rule of aromaticity. **05**
- Q.4** (a) Comment these followings: **06**  
I. Why Benzene undergoes Substitution reaction instead of addition reaction? Justify  
II. Why reactivity of NO<sub>2</sub> benzene is slow in comparison to Benzene.
- (b) Why animal fats are solids and Vegetable oils are Liquids? Justify with examples **05**  
(c) Describe three different reactions of fatty acids with examples. **05**
- Q.5** (a) What happens when Anthracene reacts with these following? Write the reaction. **06**  
I. Maleic anhydride  
II. Na/C<sub>2</sub>H<sub>5</sub>OH  
III. Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>
- (b) Write down any five methods of Preparation of Phenol **05**  
(c) Write down methods of Preparation of Naphthalene. **05**
- Q. 6** (a) Convert these followings: **06**  
I. Chloro benzene to Benzene  
II. Styrene to 2-Phenyl Ethanol  
III. Benzene to *m*- nitro benzaldehyde
- (b) Write the synthesis and utility of Diazonium salts. **05**  
(c) What do you mean by Rancidity? Explain in detail with example. **05**

- Q.7** (a) Describe the various qualitative tests of phenol. **06**
- (b) Write down the structure and uses of these followings: **05**
- a) DDT b) Saccharin c) Diphenylmethane d) Phenanthrene e) Cresol
- (c) Write a short note on Sachse Mohr's theory. **05**

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