

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)  
B. Pharm. Sem-III : WINTER- 2022  
SUBJECT : PHARMACEUTICAL ORGANIC CHEMISTRY-II

Day : Tuesday

Time : 02:00 PM-05:00 PM

Date : 31-01-2023

W-20666-2022

Max. Marks : 75

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

3) Answer to each section should be written in **SEPARATE** answer books.

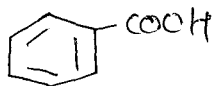
Q.1

Answer all questions:

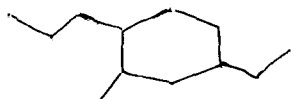
**SECTION -I**

**(20)**

- a) Explain Kekule's model of benzene.
- b) Why phenol is a very weak acid?
- c) Differentiate between anti-aromatic and non-aromatic compounds.
- d) What happens when phenol is treated with formaldehyde? Explain with reaction.
- e) Give some important uses of amines.
- f) Write resonating structures of the following compound.



- g) Explain limitations of Bayer's angle strain theory.
- h) Give IUPAC name of the following cycloalkane.



- i) Explain: [10]-annulene satisfy Huckel's rule but it is not an aromatic compound.
- j) Explain Sachse Mohr's theory of cycloalkanes.

Q.2 Answer **ANY TWO** of the following:

**(20)**

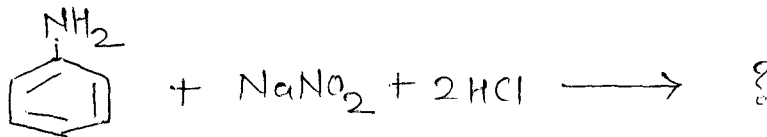
- a) How existing substituents on benzene affect electrophilic aromatic substitution? Explain with suitable examples.
- b) Explain five reactions of benzoic acid with mechanism.
- c) Give different methods of preparation and chemical reactions of anthracene.

**SECTION -II**

Q.3 Answer **ANY SEVEN** of the following:

**(35)**

- a) Explain different properties of phenol as an acid with suitable reactions.
- b) Give different methods of preparation of benzoic acid.
- c) Predict the product. Give the mechanism of the reaction.



- d) Explain how resonance energy of benzene is calculated?
- e) Define the following terms:
  - i) Acid value
  - ii) Saponification value
  - iii) Iodine value
  - iv) Ester value
  - v) Acetyl value
- f) Explain different conformations of cyclohexane.
- g) Give methods of preparation and reactions of diphenylmethane.
- h) Write structure and uses of DDT and BHC.
- i) Give synthetic uses of aryl diazonium salt.

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