

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI**  
(END-SEMESTER EXAMINATION)

CLASS: B.PHARM  
BRANCH: PHARMACY

SEMESTER: III  
SESSION: MO/2018

SUBJECT: BP301T PHARMACEUTICAL ORGANIC CHEMISTRY II

TIME: 3.00 Hour

FULL MARK: 75

**INSTRUCTIONS:**

1. The missing data, if any, may be assumed suitably.
  2. Before attempting the question paper, be sure that you have got the correct question paper.
  3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
  4. This question paper consists of (03) Three parts. Read the part wise instructions before attempting the questions.
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**PART-I**

**Multiple Choice Questions (Instruction: Answer All)**

- Q1. (10 x 2 = 20 marks)
- A. Molecular formula of benzene is \_\_\_\_\_.
- B. August Kekule proposed that carbon atom can join to one another to form a chain in \_\_\_\_\_.
- C. Solubility of phenols in water is due to \_\_\_\_\_.
- D. Ester formation in phenols takes place by \_\_\_\_\_.
- E. In insects DDT opens \_\_\_\_\_.
- F. Benzoic acid has the formula \_\_\_\_\_.
- G. Benzoic acid reacts with acid chlorides to form \_\_\_\_\_.
- H. Benzaldehyde reacts with ammonia in presence of Hydrogen and Nickel to yield \_\_\_\_\_.
- I. Aniline on reaction with HCl yields \_\_\_\_\_.
- J. On oxidation naphthalene gives \_\_\_\_\_.

**PART-II**

**Short Answers**

(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 marks)

- Q2. Discuss the nitration of benzene with equations and mechanism.
- Q3. Elaborate Williamson synthesis with equations.
- Q4. Explain in brief malaria control by DDT.
- Q5. Elaborate the structure of the following: (i) p-nitrobenzoic acid (ii) phenylacetic acid (iii) benzoic acid (iv) Benzyl amine (v) Benzyl chloride
- Q6. Explain the synthesis of (i) N-methyl aniline (ii) N, N-dimethylaniline
- Q7. Originate the synthesis of an N-substituted sulfonamide and N-N disubstituted sulfonamide from an aliphatic amine.
- Q8. Elaborate the addition compounds of naphthalene.
- Q9. Create the structures of (i) Cyclopropane (ii) Cyclobutane (iii) Cyclopentene (iv) Chlorocyclopropane (v) 1,1 dimethyl cyclopentane
- Q10. Elaborate the preparation of alicyclic compounds with one example.

**PART-III**  
**Long Answers**

**(Instruction: Answer two out of three questions)**

(2 x 10 = 20 marks)

- Q11. Define Baeyer's strain theory and prove the mistakes in the theory with suitable equations and diagrams.
- Q12. Elaborate about oils and fats with proper equations.
- Q13. Discuss synthesis of organic compounds using diazotization with proper equations.

**.....26/11/2018.....E**