

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

CLASS: BPHARM  
BRANCH: PHARMACY

SEMESTER: III  
SESSION: MO/2019

SUBJECT: BP301T PHARMACEUTICAL ORGANIC CHEMISTRY-II

TIME: 3.00 Hours

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.

PART-I

Objective types questions (Instruction: Answer all questions)

Q1. (10 x 2 = 20 Marks)

- A. Structure of Benzene was established by \_\_\_\_\_ and has \_\_\_\_\_  $\pi$  electron.
- B. 2,4,6, Trinitrophenol is also known as \_\_\_\_\_ acid.
- C. Nitration of Benzene occurs due to attack of an \_\_\_\_\_ and known as \_\_\_\_\_ ion.
- D. Nitro group in Benzene is a \_\_\_\_\_ director.
- E.  $\alpha$ -Naphthols are also known as \_\_\_\_\_ naphthol and have \_\_\_\_\_ hydroxyl group.
- F. Iodine value is determined for presence of \_\_\_\_\_ fatty acids in different fixed oils.
- G. RM value is also known as \_\_\_\_\_ value and is a measure of \_\_\_\_\_ fatty acids.
- H. Phenols are \_\_\_\_\_ acidic than Aromatic acids.
- I. Aniline is \_\_\_\_\_ basic than ammonia.
- J. Amino group in Aniline is a \_\_\_\_\_ director and is a \_\_\_\_\_ group.

PART-II

Short Answers(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

- Q2. Define & Explain the term -  
(i) Aromaticity (ii) Nucleophile (iii) Acid value
- Q3. Write & explain the mechanism of Nitration of benzene.
- Q4. Establishment of structure of Benzene.
- Q5. Write a brief outline on acidity of Phenols.
- Q6. What are amines? Explain diazotization reaction & use of diazonium salts.
- Q7. What are oils? Write name & structure of 3 fixed oils.
- Q8. Write structure & chemical property of Naphthalene.
- Q9. What are cycloalkanes? Write a note on Bayers Strain theory.
- Q10. What are the effect of electron releasing group on reactivity of benzene?

**PART-III**  
**Long Answers**  
**(Instruction: Answer two out of three questions)**

(2 x 10 = 20 marks)

- Q11. Write and explain the significance of analysis of oils. Describe the method for determination of Iodine value & Saponification value of a given sample of oil.
- Q12. Describe & explain the chemistry of fused ring hydrocarbons. Describe & compare the chemical reactivity of Phenanthrene & Anthracene.
- Q13. Describe the importance of organic amines. Describe the physical & chemical property of Aliphatic & aromatic amines with suitable example.

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