

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

CLASS: BPHARM
BRANCH: PHARMACY

SEMESTER: II
SESSION: SP/2019

SUBJECT: BP202T PHARMACEUTICAL ORGANIC CHEMISTRY -I

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.
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PART-I

Objective types questions (Instruction: Answer all questions)

Q1. (10 x 2 = 20 Marks)

- A. Write the structure of isopentene.
- B. Write the structure of cyclohexanone.
- C. Write the structure of benzaldehyde.
- D. What is the IUPAC nomenclature of chloroform?
- E. What is the IUPAC nomenclature of isopropanol?
- F. What is the IUPAC nomenclature of isoprene?
- G. Methane has Hybridization.
- H. Alkynes have Hybridization.
- I. Write the structural formula of cyclopentene.
- J. State whether cyclohexane and aniline are aromatic.

PART-II

Short Answers

(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

- Q2. Distinguish between ionic and covalent bond.
- Q3. What are markonikov's and antimarkonikov's rule? Give examples of each.
- Q4. What are SN¹ and SN² mechanisms? Show with the help of examples.
- Q5. Give structure and uses of chloroform, glycerol and hexamine.
- Q6. What are hybridized orbital? Explain the tetrahedral nature of carbon.
- Q7. Distinguish between the physical and chemical properties of enantiomer and diastereomers.
- Q8. Write and explain the chemical reactivity of carboxylic acid.
- Q9. Give the preparation of ethyl alcohol.
- Q10. Describe free radical substitution reaction in alkanes.

PART-III

Long Answers

(Instruction: Answer two out of three questions)

(2 x 10 = 20 marks)

- Q11. What are the various reactions of alkenes?
- Q12. Give eliminations and substitution reactions of alkyl halides.
- Q13. Write a detailed note on carbonium ion giving examples of the reactions where they are involved.