

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

CLASS: MPHARM
BRANCH: PHARMACY

SEMESTER : II
SESSION : SP/18

SUBJECT: MPH2013 ADVANCED ORGANIC CHEMISTRY
TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Demonstrate microwave reactions in water with examples. [6]
Q.1(b) Explain the advantages of ultrasonic reactions and enumerate the equipments used for such reactions. [6]
- Q.2(a) Distinguish between electrocyclic and cycloaddition reactions with the help of examples. [6]
Q.2(b) Explain the mechanism of sigmatropic rearrangement by help of equations and orbitals. [6]
- Q.3(a) Illustrate the sequence rule in details with examples. [6]
Q.3(b) Elaborate the following terms (i) Optical activity (ii) meso compounds (iii) specific rotation. [6]
- Q.4(a) Give the components of a classical reactor for SPPS. [8]
Q.4(b) Give synthesis of Glutathione. [4]
- Q.5(a) What are advantages of SPPS over solution phase synthesis when the principle involved uses coupling in both. [6]
Q.5(b) Give the role of protecting groups and linkers in SPPS. [6]
- Q.6 Define and explain with suitable examples (i) Asymmetric synthesis (ii) Chiral pool (iii) Enantiopure separation (iv) Stereoselective synthesis. [12]
- Q.7(a) Define (i) pseudoasymmetric centres (ii) Specific Rotation. [6]
Q.7(b) Write a detailed note on catalysis. [6]

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