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Paper Id: 2 3 8 3 0 4 Roll No. 2 2 0 1 6 0 0 5 7 6 0 0 3

M.PHARM
(SEM II) THEORY EXAMINATION 2022-23
ADVANCED ORGANIC CHEMISTRY-II

Time: 3 Hours **Total Marks: 75**

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper-specific instruction.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

(a) Define optical purity.
(b) What do you mean by biocatalysts?
(c) Write the name and structure of any two solid supports used in SPPS.
(d) Define superafacial and antarafacial interactions.
(e) What do you mean by quantum yield (Φ)?
(f) Definethe conrotatory and disrotatoty process.
(g) What do you mean by supported catalysts?
(h) Differentiate between the racemic mixture and meso compounds.
(i) Explain the differences between solution phase and solid phase peptide synthesis.
(j) What do you mean by enantiomerism?

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

(a) Define green chemistry. Elaborate on all the principles of green chemistry in detail.
(b) Define racemic modification and explain various methods for the resolution of racemic modification.
(c) Explain in detail the use of homogenous catalysts in different organic reactions with examples.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

(a) Write a detailed note on the element of symmetry in organic compounds.
(b) Discuss stereoisomerism in biphenyl compounds.
(c) Elaboratepericyclic reactions with suitable examples.
(d) Explain in detail about basic principles of photochemistry. Elaborate Jablonski diagram.
(e) Discuss in detail the applications of Wilkinson catalysts &Ziegler-natta catalysts.
(f) Explain catalyst deactivation and regeneration with examples.
(g) Discuss in detail various side reactions in solid phase peptide synthesis.