

M.Sc. (Part-II) Semester-IV (CBCS) Examination
PHARMACEUTICAL CHEMISTRY
Paper—4SA2
(Advanced Organic Chemistry—II)

Time : Three Hours]

[Maximum Marks : 80

Note :— ALL questions are compulsory and carry equal marks.

1. (a) Comment on :—
 - (i) Biomimetic Approach.
 - (ii) Linear Synthesis and convergent synthesis. 8
- (b) Explain chemoselectivity with suitable examples. 8
- OR**
- (p) Discuss with examples one group disconnections. 8
- (q) Explain with examples :—
 - (i) Synthetic equivalent
 - (ii) Strategy and planning of a synthesis. 8
2. (a) Explain with examples stereospecific synthesis. 8
- (b) Explain the terms in brief :—
 - (i) Concept of eutomer
 - (ii) Chiral drug. 8
- OR**
- (p) Outline the synthesis of :—
 - (i) Ibuprofen
 - (ii) Ramiiril. 8
- (q) Explain enantioselective and diastereoselective synthesis with suitable examples. 8
3. (a) Explain the terms :—
 - (i) Green catalyst
 - (ii) Solid state reaction. 8
- (b) Discuss twelve principles of green chemistry. 8
- OR**
- (p) Explain the terms :—
 - (i) P.T.C. in green synthesis
 - (ii) Williamsons synthesis. 8
- (q) Give a brief account of :—
 - (i) Green Reagent
 - (ii) Wittig Reaction. 8

4. (a) Discuss Phase Transfer catalysis in epoxides and sulphides. 8
(b) Explain orbital symmetry rules and application of photochemical reaction. 8

OR

- (p) What is quantum yield ? Give the basic theory of photochemical reactions with their application. 8
(q) Discuss : Phase transfer catalysis in anhydride and reduction reactions. 8
5. (a) What is cycloaddition reaction ? Give its applications. 8
(b) Explain with example, sigmatropic migration of hydrogen. 8

OR

- (p) Explain thermal and photochemical ring opening in the system in which product has $(4n + 2)\pi$ electrons. 8
(q) Discuss the pericyclic reactions in $(2 + 2)\pi$ cycloaddition reaction. 8