

[Total No. of Questions - 15] [Total No. of Printed Pages - 2]  
(2123)

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**M. Pharmacy 1st Semester Examination**  
**Advanced Pharmaceutical Chemistry-I**  
**MP-211**

**Time : 3 Hours**

**Max. Marks : 90**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

*Attempt any one question from 1 & 2.*

1. (a) Describe various elements of symmetry with examples. (10)  
(b) Discuss optical isomerism in biphenyls and allenes. (15)
2. (a) Describe various technologies involved in chiral synthesis with examples. (9)  
(b) Discuss the asymmetric synthesis of deltrazam and dextropropoxyphen. (16)

*Attempt any three questions from 3-6.*

3. Write a detailed note on alephatic nucleophilic reactions mentioning the mechanism & evidences. Also differentiate between  $SN^1$  &  $SN^2$  reactions. (10)
4. Discuss Diels Alder and Meewin Pondorff's reactions with their significance in pharmaceutical chemistry. (10)
5. What do you understand by Franck-Condon principle. Discuss in detail: Also discuss applications of photosensitizers & oprcifers. (10)

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6. Discuss the concept of chirality & importance of chiral drugs. Also give technique for synthesis of chiral drugs with reference to enzymatic transformation. (10)

*Attempt any 7 (seven) questions from 7-15.*

7. Write on various kinds of molecules displaying optical activity. Give significance of optical activity in pharmacy. (5)
8. Write a note on elimination reactions. (5)
9. Discuss about aromatic nucleophilic substitution reactions. (5)
10. Discuss Birch reduction & its significance. (5)
11. Give asymmetric synthesis of naproxen. (5)
12. Discuss Jablonski diagram in detail. (5)
13. Discuss the process of photosensitisation. (5)
14. Write a note on microwave synthesizer. (5)
15. Write a detailed note on solvent free reactions. (5)