



DWW-003-010312 Seat No. _____

M. Sc. (Sem. - III) (CBCS) Examination

May / June - 2015

C-OP-304: Organo-pharmaceutical Chemistry
(*Chemistry of Natural Products: ELE-I*)

Faculty Code : 003

Subject Code : 010312

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions:** (1) All questions are compulsory.
(2) All questions carry equal marks.

- 1** Answer the followings (Any seven). 14
- (a) Differentiate "RNA" and "DNA".
 - (b) Give the synthesis of Hexosterol.
 - (c) Discuss briefly the role of F-moc protecting group in solid phase synthesis.
 - (d) Write the synthesis of Santonine.
 - (e) Give the synthesis of Vitamin-K₁.
 - (f) Give the synthesis of Lumichrome.
 - (g) Write the synthesis of Pyridoxine.
 - (h) Give the synthesis of reserpine.
 - (i) Discuss the oxidative products of zingiberene.
 - (j) Give the synthesis of lysergic acid.
- 2** Answer the following.
- (a) Answer the following (any two). 5
Define the term Steroids and
 - (I) Discuss the nature of side chain or position of angular methyl group in Cholesterol. 5
 - (II) Discuss the structure of nucleus or position of double bond and hydroxyl group in Cholesterol. 5

- (III) Define the term Hormones. Classify them with suitable example of each class with their structures. Give the synthesis of progesterone or testosterone. 5
- (b) Answer the following (any one).
- (I) Give the partial synthesis of androsteron from Dehydro epiandrosterone. 4
- (II) Give the synthesis of steroidal drugs 4
(i) Hydrocortisone (ii) Prednicarbate.
- 3** Answer the following. 14
Define the term Nucleic acid and discuss the constitution of
(I) Nucleoside
(II) Nucleotide
(III) Final structure of Nucleic acid
- OR**
- 3** Answer the following. 14
(I) Discuss the general structure elucidation of terpenoids.
(II) Give analytical evidences for structure elucidation of Coniine.
(III) Write the synthesis of Lonsgifolene.
- 4** Answer the following (Any Two).
(a) Discuss the synthesis of Oxytocin by C-activation and N-protection. 7
(b) Discuss the synthesis of Gastrin by C-activation and N-protection. 7
(c) Discuss the protection and deprotection of functional groups of organic compounds citing suitable examples in acidic and alkaline media. 7
- 5** Answer the following (Any Three)
(a) Write the synthesis of Vitamin A₁. 5
(b) Give importance of γ -hydroxy acid and structure of Vitamin-E. 5
(c) Write the synthesis of α -tocopherol. 4
(d) Prove that Lumiflavin is isoalloxazine and not alloxazine. 4