PC-003-1103014 Seat No. _____

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

June / July - 2018

COP - 304 : Organopharmaceutical Chemistry

(Chemistry of Natural Products) (New Course)

Faculty Code : 003

Subject Code : 1103014

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All five questions are compulsory.
(2) All questions carry equal marks.
(3) Attempt all questions.

1 Answer the following questions : (any **seven**) **14**

(a) Give the synthesis of Pantothenic acid.

(b) Discuss the role of Nitrosoyal chloride for the structure elucidation of terpenoids.

(c) Write the synthesis of Santonine.

(d) Discuss the physiology of Prostaglandins.

(e) Write the synthesis of Sceletium A_4.

(f) Differentiate: Nucleoside and Nucleotide.

(g) Write the classification of Hormones with suitable examples.

(h) Discuss the reaction of Hydroiodic acid with Vitamin E_3-E_4.

(i) Write the synthesis of Colchicine.

(j) Discuss the classification of proteins.

2 Answer the following questions : (any **three**) **14**

(a) Define the term 'Vitamins'. Give its classification with proper examples.

(b) Explain F-MOC protecting group synthesis over a solid phase.

(c) Define the term "Steroid" and discuss the chemistry of Progesterones.

(d) Write the synthesis of ACTH.

3 Answer the following questions : 14

(a) Discuss the point of attachment of sugar with Pyrimidine and Purine bases.

(b) Discuss the constitution of Testosterone.

OR

3 Answer the following questions : 14

(a) Give the analytical evidences of Reserpine.

(b) Discuss the structure elucidation of Zingiberine.

4 Answer the following questions : (any **three**) 14

(a) Write the synthesis of Longifolene.

(b) Discuss the synthesis of Niacin.

(c) Give the synthesis of Riboflavin.

(d) Give the synthesis of strychnine.

5 Answer the following questions : (any **two**) 14

(a) Discuss the structure elucidation of Eudesmol. Also write its synthesis.

(b) Give a brief account on Prostaglandins.

(c) Give analytical evidences for β- Tocopherol and its synthesis.
