



GCC-2101 Seat No _____

M. Sc. (Sem. IV) Examination

April/May - 2017

CHN - 701 (O) Organic : Paper - I

Time : 3 Hours] [Total Marks 70

1 Answer any two : 14

- (1) Describe chemical relationship between α -Amylose and β -Amylose
- (2) Write a short note on photosynthesis of carbohydrates
- (3) Write a synthesis of thymine and uric acid
- (4) Discuss the attachment of sugar to base in purine nucleoside.

2 Answer any two : 14

- (1) Describe stereochemistry of bicyclo [2.2.2] octane and bicyclo [2, 1, 1] hexane.
- (2) Discuss conformational analysis of benzene hexa chloride.
- (3) Discuss the conformational analysis of cyclohexane 1,2 dicarboxylic acid.
- (4) Describe conformation of 2-OH-methyl-1-cyclo propane dicarboxylic acid and cyclohexanone system.

3 - Answer any two : 14

- (1) Describe the structure of progesterone.
- (2) Write a synthesis of cortisone.

- (3) Explain proof for the position of nature of side chain in Ergosterol
- (4) Write in detail the general biosynthesis of steroids.

4 Answer any two :

- (1) Write a short note on nuclear overhauser effect.
- (2) Explain the TOCSY spectrum information of β -lactose.
- (3) Give a brief account on NMR shift reagents
- (4) Explain about H-¹³C cosy, and H-H cosy

5 Answer any seven

- (1) Draw a structure of cellulose.
- (2) Write synthesis of adenine.
- (3) What is perbiotic chemistry ?
- (4) Draw only structure of bicyclo (1.1.1) pentane.
- (5) Define Conformer and draw a conformer of monocyclic compound cyclopropane.
- (6) Give any one difference between oestrone and oestriol.
- (7) Draw a structure of lanosterol
- (8) What is the meaning of spin decoupling ?
- (9) Write the main difference between CW and FT NMR
- (10) Write full form of HMBC and HMQC.