

Roll No. ....

42006

M. Sc. Chemistry 4th Semester  
Examination – May, 2019

ORGANIC SPECIAL-V

Paper : CY(H)-402(c)/4286

Time : Three hours ] [ Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

**Note :** Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. **Compulsory Question :** 2 × 8 = 16

- (a) What is Hofmann's degradation ?
- (b) Draw the structure of Pencillamine.

P. T. O.

42006

- (c) Establish stereochemistry at C-3 and C-4 of quinine.
- (d) Write the structure of morphine and reserpine.
- (e) Give two physiological functions of Thyroxine.
- (f) What is Isoprene rule ?
- (g) Write the structure of citral with correct stereochemistry.
- (h) What are Antibiotics ? Give their two functions in human body.

**SECTION – A**

- 2. (a) Dipict the structure of Farnesol. 8
- (b) Elucidate the structure of Abetic acid. 8
- 3. (a) Establish the structure of citral in detail. 8
- (b) Write note on biogenesis of terpenoids. 8

( 2 )

**SECTION – B**

4. (a) Discuss various steps involved in structure elucidation of Morphine.  
(b) Elucidate the structure of Nicotine.
5. (a) Depict the structure elucidation of Papaverine.  
(b) Give an account of biogenesis of reserpine and quinine.

**SECTION – C**

6. (a) How the structure of Thyroxine was established.  
(b) Write one synthesis of progesterone.
7. (a) Establish the structure elucidation of Testosterone.  
(b) Give a brief account on synthetic non-steroidal oestrogens.

**SECTION – D**

8. (a) Discuss Physiological effects and synthesis of PGE<sub>2</sub>.  
(b) Discuss the structure of streptomycin.
9. (a) Establish the structure of chloroamphenicol.  
(b) Give brief classification of prostaglandins.