

SECTION – D

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.

 $2 \times 8 = 16$ 1. *Compulsory Question* :

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

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8. (a) Discuss Physiological effects and synthesis of PGE₂. 8
- (b) Discuss the structure of streptomycin. 8
9. (a) Establish the structure of chloroamphenicol. 8
- (b) Give brief classification of prostaglandins. 8

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- (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) Depict 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

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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. 10
- (b) Write one synthesis of progesterone.
- 7. (a) Establish the structure elucidation of Testosterone. 4
- (b) Give a brief account on synthetic non-steroidal oestrogens. 12

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