

10. (a) How will you convert cholesterol into progesterone?

Or

(b) Discuss the structure of Stilboestrol.

S.No. 331

08PCH06

(For the candidates admitted from 2008–2009 onwards)

M.Sc. DEGREE EXAMINATION, APRIL/MAY 2018.

Third Semester

Chemistry

ORGANIC CHEMISTRY – III

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL the questions.

1. (a) How are alkaloids extracted?

Or

(b) Give the synthesis of Quinine.

2. (a) Explain the following reactions.

(i) Diels-Alder reaction

(ii) Epoxydation.

Or

(b) Discuss the mechanism of Wittig reaction.

3. (a) Describe the Favorski rearrangement of open chain and cyclic α haloketones.

Or

- (b) Explain the mechanism of Pinacol-Pinacolone rearrangement.

4. (a) Write the mechanism of oxidation of alcohol by using DMSO.

Or

- (b) Explain the mechanism of ozonolysis of alkenes.

5. (a) How will you establish the position of the angular methyl group in cholesterol?

Or

- (b) Explain any one synthesis method of esterone.

PART B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Elucidate the structure of Morphine.

Or

- (b) Discuss the synthesis and stereochemistry of Reserpine.

7. (a) Describe the following reactions with mechanism.

- (i) Benzoin condensation
(ii) Perkin reaction.

Or

- (b) Explain the following reactions with suitable examples.

- (i) Michael addition
(ii) Hydroboration
(iii) Strecker synthesis. (3+3+4)

8. (a) Discuss the mechanism of Bayer-Villiger and Hofmann rearrangement reactions.

Or

- (b) Explain the mechanism of the following rearrangements

- (i) Fries rearrangement
(ii) Claisen rearrangement.

9. (a) Discuss the mechanism of Clemmensen and Wolff-Kishner reductions.

Or

- (b) Write the mechanism of following reactions.

- (i) Birch reduction
(ii) MPV reduction.