

Roll No.

76056

**M.Sc. 3rd Semester Chemistry
Examination-December, 2015**

ORGANIC SPECIAL-II

Paper : CH-502 P-XII

Time : 3 hours

Max. 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 the examination.

Note : Attempt **five** questions in all. Q. No. 1 is **compulsory**. Further attempt **one** question from each Section. All questions carry equal marks.

1. (a) How the cryptopyrrole was synthesized ? 2
(b) Give the effect of hydroxylation in band I of flavone. 2
(c) Discuss role of coenzyme II in organic reaction. 2
(d) Give the structure of vitamin D₂ and its biological importance. 2

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(1)

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7. (a) Discuss structure of diadrin alongwith its synthesis. 6
(b) Write a note on biosynthesis of flavonoids. 5
(c) How was the point of attachment of sugar was established in anthocyanins. 5

SECTION - D

8. Write short notes on :

- (i) NAD⁺ 4
(ii) Thiamine phosphate 4
(iii) FMN 4
(iv) Pyridoxal phosphate 4

9. (a) Discuss nomenclature and classification of enzymes. 10
(b) Give an account of enzymes capable of bringing about methylation, acylation and epimerisation reactions with proper examples. 6

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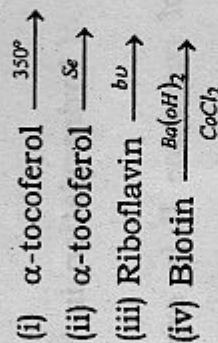
(4)

- (e) Give one synthesis of flavonol. 2
- (f) What is biological importance of vitamin C? 2
- (g) How are dipyrromethenes related to porphyrins? 2
- (h) What is the difference between Pyrrolophyrin and Phylloporphyrine? 2

SECTION - A

2. (a) Give the synthesis of vitamin C and pantothenic acid. 10
- (b) Write the structure of vitamin B₂, B₆ and thiamine with their biological importance. 6

3. (a) Complete the following reactions: 4



- (b) Discuss the structure of vitamin A, alongwith its synthesis 12

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SECTION - B

4. (a) Give an account of biosynthesis of carotenoids. 6
- (b) Discuss the general methods for synthesis of porphyrine. 7
- (c) What are the products when: 3
- (i) Haemin is reduced with HI and acetic acid
- (ii) Chlorophyll-a is treated with cold dil KOH.
- (iii) Chlorin-e is oxidised with CrO₃

5. (a) Describe the structure of lycopene alongwith its synthesis. 10
- (b) How the position of two additional hydrogen atoms in one of pyrrole ring and position of vinyl group was established in chlorophyll-a? 6

SECTION - C

6. (a) Give the structure of cyanidin chloride with its synthesis. How it shows colour change with pH? 13

- (b) Write a brief account of xanthones. 3

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