

C108

Total Pages : 3

Roll No.

MCH-603

Natural Product/Enzyme and biogenesis

M.Sc. Chemistry (MSCCH-20)

3rd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 40

Note : This paper is of Forty (40) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Ten (10) marks each. Learners are required to answer any Two (02) questions only.

(2×10=20)

1. Write synthesis of reserpine. 10

2. How will you determine the following in Cholesterol :
 - (a) Cholesterol is having cyclopenteno phenanthrene ring system. 10
 - (b) The position of double bond and –OH groups in cholesterol. 10
3. What are enzymes? Describe the mechanism of enzyme catalysis. 10
4. Discuss protein metabolism in detail. 10
5. Give the biosynthesis of acetyl coenzyme A. 10

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Five (05) marks each. Learners are required to answer any Four (04) questions only. (4×5=20)

1. Write short notes on Shikmic acid path way. 5
2. Give the evidence for the hydrophenanthrene ring system in morphine. 5
3. Write a short note on the classification and physiological importance of prostaglandins 5

4. Draw the skeletal structure of the following vitamins and also discuss their physiological activity :
- (a) Vitamin A group.
 - (b) Vitamin C group.
 - (c) Vitamin E group. 5
5. What are Porphyrins? Explain briefly with examples and their structures. 5
6. What are the factors affecting the enzymatic catalysis? 5
7. Draw the TAC or citric acid cycle. Discuss various steps involved. 5
8. Write down the steps involved in fatty acid metabolism. 5
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