

**K-405**

Total Pages : 3

Roll No. ....

## **MCH-603**

### **NATURAL PRODUCT/ ENZYME & BIOGENESIS**

M.Sc. Chemistry (MSCCH)

3rd Semester Examination, 2023 (Dec.)

**Time : 2 Hours]**

**[Max. Marks : 35**

**Note :** This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **SECTION–A**

#### **(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. Write notes on the folio wings :
  - (a) Citric acid cycle.
  - (b) Classification of alkaloids.
  
2. Write notes on the followings :
  - (a) Transamination and deamination.
  - (b) Lipogenesis.
  
3. What are the differences between laboratory synthesis and biosynthesis? Give suitable examples.
  
4.
  - (a) Outline the biosynthesis of shikimic acid.
  - (b) Explain Wick feeding and hydroponic feeding methods.
  
5.
  - (a) Explain the term rotenone. Give synthesis of rotenone.
  - (b) What is reserpine? Write note on structure determination of reserpine.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. Write a note on steroids and hormones.

2. How will you prove the position of double bond and hydroxyl group in cholesterol?
  3. Write a short note on structure determination of morphine.
  4. Write notes on the following :
    - (a) Classification of prostaglandins
    - (b) PGE<sub>1</sub>.
  5. What are the physiological activity of vitamin A, C, E and K groups? What are the sources of these vitamins?
  6. Formulate the degradation of rotenone to resic acid.
  7. Briefly explain the structure of chlorophyll.
  8. What are enzymes inhibitor? Discuss briefly about the types of enzyme inhibitors.
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