

Roll No.....

Total No. of Units : 04

Total No. of Printed Pages : 03

Code No. : 03/202

Third Semester Examination, Dec. 2018

M.Sc. CHEMISTRY

Paper - II

BIO-ORGANIC CHEMISTRY

Time : 3 Hrs.

Max. Marks : 80

- Part A and B of each question in each unit consist of very short answer type questions which are to be answered in one or two sentences.
- Part C (Short answer type) of each question will be answered in 200-250 words.
- Part D (Long answer type) of each question should be answered within the word limit 400-450.

**Unit - I**

- Q.1 A. What is biological catalysis? (2)
- Q.1 B. Write E.C. number with one example. (2)
- Q.1 C. Explain Koshland's induced fit model of enzyme. (4)

**OR**

How does pH and temperature affect enzyme catalysis?

- Q.1 D. Explain reversible and irreversible enzyme inhibition. (12)

**OR**

Write a note on kinetics of enzyme catalyzed reactions.

**P.T.O.**



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**Unit - II**

Q.2 A. Which metal ions generally form part of active sites of enzymes? (2)

Q.2 B. What is affinity labelling? (2)

Q.2 C. Write the mechanism of covalent catalysis. (4)

**OR**

Write a note on orientation and steric effect.

Q.2 D. Explain how Lysozyme catalyzes the polysaccharide hydrolysis? (12)

**OR**

How enzymes catalyze the isomerization and rearrangement reactions? Explain.

**Unit - III**

Q.3 A. What is holoenzyme? (2)

Q.3 B. Write the names of any two co-enzymes. (2)

Q.3 C. Explain the term 'molecular recognition' with one example. (4)

**OR**

Write a note on synthetic enzymes and their applications.

Q.3 D. Discuss the structure, function and mechanism of co-enzyme A. (12)

**OR**

Write a note on cyclodextrin based enzyme models.

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**Unit - IV**

Q.4 A. Name the enzyme which is used in the manufacture of cheese. (2)

Q.4 B. Name any two enzymes which are used in medical diagnosis. (2)

Q.4 C. Explain, how enzymes are purified? (4)

**OR**

Write a note on microbial enzymes.

Q.4 D. Discuss the applications of immobilized enzymes in detail. (12)

**OR**

Explain the functions and structure of proteins.

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