

PC-396-CV-19
M.Sc. (3rd Semester)
Examination, Dec.-2020
MICROBIOLOGY
Paper-IV

ENZYMOLGY AND INDUSTRIAL MICROBIOLOGY

Time : Three Hours]

[Maximum Marks : 80

[Minimum Pass Marks : 29

नोट : दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note : Answer from both the Sections as directed. The figures in the right-hand margin indicate marks.

Section-A

1. Answer the following questions:-

1x10=10

- (a) Define enzyme.
- (b) Name any one enzyme inhibitor.
- (c) What is isoenzyme?
- (d) Name any one secondary metabolite.
- (e) Name any one chemical mutagen.
- (f) Write expand form of HPTLC.
- (g) Name any one toxic inhibitor.
- (h) Is methane a biofuel? Why.
- (i) Name any one algal bio-fertilizer.
- (j) Name any one microbial bio-preservative.

2. Answer the following questions in brief:-

2x5=10

- (a) Write a note on isolation of enzymes.
- (b) Write about enzyme sensors for clinical processes.
- (c) Write a note on maintenance of industrial strains.
- (d) Explain in brief about Batch kinetics.
- (e) Write a note on production of bio-pesticides.

Section-B

15x4=60

Answer all question.

3. Write an essay on nomenclature and classification of enzymes.

OR

Write notes on the following:-

- (a) Enzyme activity (b) Enzyme inhibition

4. Write an essay on coenzyme catalysis.

OR

Write notes on the following:-

- (a) Enzyme engineering (b) Mechanism of action of thiamine pyrophosphate enzyme

5. Write an essay on large scale production using recombinant microorganisms.

OR

Write notes on the following:-

- (a) Downstream processes (b) Strategies for selection of industrial strains

6. Write an essay on Antibiotics.

OR

Write notes on the following:-

- (a) Proteases (b) Xanthan