



HDY-003-1193003

Seat No. _____

M. Sc. (Microbiology) (Sem. III) (CBCS) Examination

November / December – 2017

MICRO-315 : Environment Biotechnology - I

(ELE.)

Faculty Code : 003

Subject Code : 1193003

Time : Hours]

[Total Marks : 70

- 1** Answer any seven of the following : (2 Marks each)
- (a) What is FISH ?
 - (b) Enlist various nutritional types of microbes.
 - (c) Define the terms allochthonous and autochthonous.
 - (d) How negative feedback interactions benefit the species?
 - (e) What is the significance of colony formation in positive interaction?
 - (f) What is parasitism? Give suitable example.
 - (g) What are xenobiotic compounds?
 - (h) Enlist preservatives that can be used to control wood biodeterioration.
 - (i) What is mineralization?
 - (j) What is biotransformation? Give suitable example.
- 2** Answer any two of the following : (7 Marks each)
- (a) Explain the significance of microorganisms as geochemical agents.
 - (b) Discuss molecular techniques used to assess microbial community.
 - (c) Describe various nutritional types of microbes.
- 3** Answer the following : (7 Marks each)
- (a) What is Allee's principle? Discuss positive interactions within a single microbial population.
 - (b) Give an account of mutualism observed in nature.

OR

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(a) Explain competitive exclusion principle and give a brief account on outcomes of ecological competition.

(b) Explain Iron Cycle.

4 Answer the following : (7 Marks each)

(a) Give an account on types of biodegradation reactions.

(b) Discuss methods used to study biodegradation.

5 Write short note on any two of the following : (7 Marks each)

(a) Biodeterioration of wood.

(b) General principles of Biodeterioration.

(c) Phosphorus Cycle.

(d) Biodeterioration of plastic.
