

Code No. : 20440 E Sub. Code : AMMI 63

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Sixth Semester

Microbiology — Core

ENVIRONMENTAL MICROBIOLOGY

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

- The natural place of an organism or community is known as _____.
(a) Niche (b) Biome
(c) Habitat (d) Habit
- Fungi produces which one of the following inhibitory toxic product?
(a) Cyanide (b) Fatty acids
(c) Methane (d) Sulphides
- Bio augmentation involves _____.
(a) Eliminating sludge
(b) Plants usage for bioremediation
(c) Addition of microbes to clean up a site
(d) Bio venting
- Bioremediation is _____.
(a) Usage of microbes to create a new organism
(b) Usage of anaerobic bacteria to create new antibiotics
(c) Usage of microbes to destroy environmental pollutants
(d) Usage of aerobic bacteria to create new vaccines
- Which of the following is not used as a standard test battery for measuring bioaccumulation?
(a) Algae (b) Zooplanktons
(c) Fish (d) Birds
- An increased concentration of a toxic chemical the higher an animal is on the food chain is known as _____.
(a) Bioaccumulation (b) Biomagnification
(c) Biocatalyst (d) Biotransformation

- The moisture contained in clouds and precipitated as snow, hail, rain etc constitutes _____.
(a) Surface water (b) Atmospheric water
(c) Ground water (d) Subterranean water
- The microorganisms from lakes and rivers can grow at a salt concentration of _____.
(a) 2.5-4% (b) 5%
(c) Below 1% (d) Above 1%
- Which of the following solid waste describes the term "Municipal Solid Waste?"
(a) Toxic (b) Hazardous
(c) Non toxic (d) Non hazardous
- The organic material of the solid waste will decompose _____.
(a) By the flow of water
(b) By the soil particles
(c) By the action of Microorganisms
(d) By Oxidation

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

- (a) Explain in detail of Air Sampling devices with neat sketch.
Or
(b) Write short notes on Microbial enumeration in air.
- (a) Write an account on water purification steps and explain its significance.
Or
(b) Comment on Eutrophication process.
- (a) Give a short notes on Ethanol production.
Or
(b) Explain in detail of Production of Yeast from liquid waste.
- (a) Describe about bioremediation of marine oil pollutant.
Or
(b) Discuss in detail of metal corrosion.

15. (a) Write a short notes on Biotransformation.

Or

(b) Comment on application of biosensor in environmental monitoring.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe about Microbial interactions of microbes with their environment and explain it.

Or

(b) Discuss about air borne disease with examples.

17. (a) Explain in detail of Food chain with illustration.

Or

(b) Give a short notes on Microbial assessment of Water Quality.

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18. (a) Discuss in detail of solid waste treatment with neat illustration.

Or

(b) Describe about SCP production process and its applications.

19. (a) Elaborate the deterioration of Paper and Leather and write its applications.

Or

(b) Give an account on bioremediation of contaminated soil.

20. (a) Explain in detail of principle and working mechanism of bioaccumulation process.

Or

(b) Discuss about definition, purpose and importance of Bioassay.

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