

**2203000205026004**  
**EXAMINATION FEBRUARY-MARCH 2024**  
**BACHELOR OF SCIENCE (FIFTH SEMESTER)**  
**MICROBIOLOGY-XIV (MB-504-APPLIED ENVIRONMENTAL**  
**MICROBIOLOGY) LEVEL 2**

[Time: As per schedule]

[Max. Marks: 50]

**Instructions:**

**1. Fill up strictly the following details on your answer book**

- a. Name of the Examination : **BACHELOR OF SCIENCE (FIFTH SEMESTER)**
  - b. Name of the Subject : **MICROBIOLOGY-XIV (MB-504-APPLIED ENVIRONMENTAL MICROBIOLOGY) LEVEL 2**
  - c. Subject Code No : **2203000205026004**
2. Sketch neat and labelled diagram wherever necessary.  
3. Figures to the right indicate full marks of the question.  
4. All questions are compulsory.

Seat No:

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Student's Signature

**Q.1 Give specific answer.**

**8**

1. Why microorganisms such as yeast and mold are commonly found in air?
2. Which is the best method applicable for suppression of dust?
3. Define mesophiles.
4. Give two examples of acidophiles.
5. What is biodegradation?
6. How does phytovolatilization differ from phytoextraction?
7. State the causative agent of diarrhea in human.
8. Define granular sludge.

**Q.2 Comment/Justify [Any two]:**

**14**

1. "Sequential reaction occurs in anaerobic digester"-Justify
2. Justify- "Bioaugmentation accelerates the microbiological process of degradation".
3. Extremophiles has wide range of application in biotechnological aspects.

**Q.3 Explain in brief [Any two]:**

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1. Explain different type of samplers used for bioaerosol sampling
2. State the difference between coliforms and fecal coliforms. Explain the methods used to evaluate microbiological characteristics of water.
3. Explain the habitat, biochemistry and physiology of adaptation of Hyperthermophiles.

**Q.4 Write short notes [Any two]:**

**14**

1. Enumeration of microorganisms in air
2. Solid waste processing
3. Microbes assisted Phytoremediation

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