

Seat No.	
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**SU-207**

**Total No. of Pages : 2**

**B.Sc. (Part - III) (Semester - VI) (CBCS)**

**Examination, March - 2024**

**MICROBIOLOGY (Paper-XV) (DSE F51)**

**Environmental Microbiology**

**Sub. Code : 81706**

**Day and Date : Thursday, 28-03-2024**

**Total Marks : 40**

**Time : 02.30 p.m. to 04.30 p.m.**

- Instruction :** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1) Choose the correct alternative and rewrite the sentence.**

**[8]**

- i) ..... is a measure of combined content of all inorganic and organic matter in wastewater.
- |                          |                           |
|--------------------------|---------------------------|
| a) Total solids          | b) Total dissolved solids |
| c) Total volatile solids | d) Total suspended solids |
- ii) ..... occurs when sewage is discharged into the water.
- |                       |                   |
|-----------------------|-------------------|
| a) Eutrophication     | b) Biosparging    |
| c) Increase in oxygen | d) Bioremediation |
- iii) Trickling filter contains the thin film of organisms developed over inert material, which is called as .....
- |              |               |
|--------------|---------------|
| a) paragleal | b) phytogleal |
| c) zoogleal  | d) mesogleal  |
- iv) The value of Secchi depth (metres) is usually low in case of ..... lakes.
- |                 |                               |
|-----------------|-------------------------------|
| a) oligotrophic | b) mesotrophic                |
| c) eutrophic    | d) both oligo and mesotrophic |
- v) The anaerobic biological method used in wastewater treatment is .....
- |                     |                             |
|---------------------|-----------------------------|
| a) septic tank      | b) activated sludge process |
| c) trickling filter | d) all of these             |

- vi) Biodegradable organic matter in sewage is measured by ..... test.
- |        |          |
|--------|----------|
| a) MPN | b) Flask |
| c) BOD | d) COD   |
- vii) The process of assessing the possible effects of a proposed project on environment is called as .....
- |        |        |
|--------|--------|
| a) EPA | b) EBA |
| c) EIA | d) EDA |
- viii) Root zone technology, a method of wastewater treatment contains ..... zones where biodegradation occurs.
- |              |                                  |
|--------------|----------------------------------|
| a) aerobic   | b) anoxic                        |
| c) anaerobic | d) aerobic, anoxic and anaerobic |

**Q.2) Long answer questions (Any two) :**

[16]

- i) Describe physical, chemical and biological characteristics of sewage.
- ii) Describe in detail, characteristics and treatment of waste generated by distillery industry.
- iii) Define bioleaching. Explain in detail microbiology and chemistry of bioleaching.

**Q.3) Write short notes on : (Any four)**

[16]

- i) Good laboratory practices
  - ii) Classification of hospital waste
  - iii) Root zone technology
  - iv) Process of eutrophication
  - v) Applications of bioremediation
  - vi) Clean room classification
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