



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS) (Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120

Seat No. : _____
Examiner sign : _____



Bachelor of Science (Semester 4) Internal Examination - 2026
US04MAMIC02: Environmental Microbiology

Date: 09 March 2026, Monday
Time: 02:45 PM to 04:15 PM

Total marks : 30

Q-1 Answer the following Multiple Choice Questions

(06)

1. The organisms that grow well in an environment with pressure is known as :
A. Barophiles B. Halophiles C. Thermophiles D. Acidophiles
2. The stage of biofilm development characterized by the adhesion and aggregation of microbes is known as :
A. Dispersion B. Attachment C. Maturation D. Detachment
3. This is an example of symbiotic nitrogen fixing bacteria.
A. Escherichia coli B. Rhizobium meliloti C. Bacillus subtilis D. Staphylococcus aureus
4. Microorganisms present in the bottom of sea is known as :
A. Benthos B. Plankton C. Zooplankton D. None of these
5. _____ is an example of coliform bacteria .
A. Enterobacter B. Escherichia coli C. Klebsiella D. All of these
6. Uranium is a fuel required by _____ industry .
A. Pharmaceutical B. Textile C. Food D. Nuclear power



Q-2 Write a note on the control of Bioaerosol .

OR

(06)

Q-2 Enlist various method used for enumeration of microorganisms in air. Explain any two in brief . (06)

Q-3 Write a note on microbial flora of soil .

OR

(06)

Q-3 Discuss sulfur cycle in soil .

(06)

Q-4 Explain Presumptive test in detail .

OR

(06)

Q-4 Write note on " Activated sludge process" .

(06)

Q-5 What is MEOR ? Explain it in detail with appropriate diagram .

OR

(06)

Q-5 Write in detail the commercial method for bioleaching .

(06)



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Quiz

Q-1 Fill in the blank

08

- 1) _____ is the study of living microbes which are suspended in the air . (Aeromicrobiology / Soil microbiology)
- 2) Microorganisms that grow optimally at temperature above 60 degree are known as _____.
(Thermophiles / Mesophiles)
- 3) Microbial interaction in which both the partners are harmed is called _____. (Mutualism / Competition)
- 4) This is a nitrite oxidizing bacteria . _____ (Nitrosomonas / Nitrobacter)
- 5) Higher BOD of waste in water indicates high _____ waste in water . (Organic / Inorganic)
- 6) Liquid waste or sewage is also known as _____. (Effluent / Compost)
- 7) _____ alkyl benzyl sulfonates are easily biodegradable . (Linear / Non linear)
- 8) Commercial bioleaching involves _____ method . (In-situ / Ex-situ)

Q-2 TRUE OR FALSE

07

- 1) The organisms that grow well in an environment with NACL is known as Barophiles . (True / False)
- 2) Biofilms can form on both medical and food processing equipment . (True / False)
- 3) The immediate product of proteolysis is CO₂ . (True / False)
- 4) Denitrification process is a nonbeneficial process for soil fertility . (True / False)
- 5) Composting is the method of solid waste management . (True / False)
- 6) Ponds and lake represent surface water . (True / False)
- 7) In every MEOR process, only one type of microorganism . (True / False)