



RAN-2103000206021104

T.Y.B.Sc. (Sem. - VI) Examination September - 2025

Bioscience (Microbiology)

BS - 604 - Environmental Microbiology

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

T.Y.B.Sc. (Sem. - VI)

Name of the Subject :

Bioscience (Microbiology) BS - 604 - Environmental Microbiology

Subject Code No.: 2103000206021104

Seat No.:

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Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labeled diagrams whenever necessary.

Q. 1 Multiple choice question:

08

- Sewage is a waste/used water of a _____
a. Community b. Industry
c. Slaughter house d. All
- Major fecal contaminant in potable water is
a. Escherichia coli b. Streptococcus faecalis
c. both a and b d. Escherichia coli only
- IMViC test is carried out to distinguish the presence of
a. E. coli from Clostridium
b. E. coli from Enterobacter aerogenes
c. E. coli from Streptococcus
d. E. coli from other bacteria
- Biological treatment of sewage includes: _____
a. Trickling filters b. Activated sludge
c. Oxidation ponds d. All

5. _____ is a mutual relationship between plant & fungi.
 - a. Phyllosphere
 - b. Rhizosphere
 - c. Rhizoplane
 - d. None
6. Which of the following are nitrogen fixing bacteria?
 - a. Rhizobium
 - b. Azotobacter
 - c. Clostridium
 - d. All
7. Which of the following are types of Phytoremediation?
 - a. Phytoextraction
 - b. Phytodegradation
 - c. Phytostabilization
 - d. All
8. Which of the following are types of biofuel?
 - a. Liquid fuel
 - b. Solid fuel
 - c. Petrol
 - d. All

Q. 2 [A] Answer as directed: 04

1. Enlist the various fecal indicator
2. Define: Biofertilizer.
3. Give the full name of MPN, DCT
4. Enlist the nitrifying bacteria.

Q. 2 [B] Write short notes on: (Any Two) 10

1. Fecal indicator.
2. Wetland system.
3. Water quality.

Q. 3 Answer the following questions. (Any Two) 14

1. Write a note on membrane filtration technique.
2. Explain in detail secondary treatment of sewage.
3. Describe in detail about DCT.

Q. 4 Explain- Biogeochemical cycle. Describe in detail nitrogen cycle its significance in soil fertility. 14

OR

Q. 4 Answer of the following question. 14

1. Write a note on - Phytoremediation.
2. Describe in brief biodegradation process & types.