

Mode of Examination: Online (Set A)

| | |
|--------------------|---|
| Unique Paper Code | : 32167601 |
| Name of the Paper | : Industrial and Environmental Microbiology |
| Name of the Course | : B.Sc. (H) Botany: DSE-3 |
| Semester | : VI |
| Duration | : 2 hrs + 1 hr for uploading answer sheet |
| Maximum marks | : 75 |

Instruction for Students

1. Write your Roll No., Name of the paper, Course, Semester, and Date of examination on the first page of answer sheet.
2. Draw diagrams to support your answer wherever necessary.
3. Attempt **ANY FOUR** questions. All questions carry equal marks.

Questions

1. Why the carbon content is important for determination of pollution load in domestic wastewater? Explain the specific relevance and procedure of measuring the carbon content by applying BOD, COD and TOC test? **18.75**
2. Describe steps involved in BOD analysis with principal behind each step. Why appropriate dilution and the incubation period of 5 days are crucial for BOD test? **18.75**
3. Describe various indicator microorganisms for determination of the load of faecal matter in wastewater? Which one would be the best faecal indicator in case of domestic wastewater and why? **18.75**
4. 'Mycorrhizal association is inevitable for sustenance of grassland/forest ecosystems across the latitude and longitude'. Justify the statement in the light different nutritional types of mycorrhizal association. **18.75**
5. Describe molecular mechanism of arbuscular-mycorrhizal infection and illustrate the colonisation of AM fungi in the host. **18.75**
6. What is the principal behind microbial remediation of polluted soil? Describe various techniques for accelerating microbial remediation process in the soil. **18.75**