

M.Sc. (Biotechnology) (CBCS Pattern) Semester-IV  
**PSBIT-114 - Paper-II : Applied Environmental Biotechnology & Ecology**

P. Pages : 1

Time : Three Hours



**GUG/S/25/11352**

Max. Marks : 80

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Notes : 1. All questions are compulsory and carry equal marks.

1. Explain the principle and procedure of multiple tube fermentation technique for the detection of coliforms in water. **16**

**OR**

- a) What is COD? Explain the mechanism & procedure for COD determination. **8**
- b) Explain the principle & procedure of MR – VP test. **8**
2. Explain working mechanism of anaerobic activated sludge method of waste water treatment. **16**

**OR**

- a) Explain the treatment scheme for waste coming from paper – pulp industry. **8**
- b) Write note on waste water treatment by biofilms. **8**
3. What are xenobiotics? Explain biodegradation of hydrocarbons and surfactants. **16**

**OR**

- a) Explain the impact of bioabsorption of Heavy metals on environment. **8**
- b) Write note on –  
Biomethylation mercury **8**
4. Describe the protective and exploitative theories for forest conservation. **16**

**OR**

- a) Explain the role of biotechnological process in the conservation of biodiversity. **8**
- b) Give brief idea about land use planning & management. **8**
5. Write an account on –
- a) BOD **4**
- b) Rotating biological contractor. **4**
- c) Advantages & disadvantages of bioleaching. **4**
- d) Tiger reserve in India. **4**

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