

B.Sc. II (With Credits)-Regular-Semester 2012 Sem IV  
**B.Sc.2462-Microbiology-II : Paper-II (Applied Microbiology)**

P. Pages : 2

Time : Three Hours



**GUG/W/16/5613**

Max. Marks : 50

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

1. Describe the room sterilization techniques with respect to
- a) Radiation. 5
  - b) Fumigation. 5

**OR**

Write note on-

- a) Different methods of water collection and handling. 5
  - b) Indicators of excretal pollution are coliforms but why not pathogens. 5
2. What is sewage? Describe in detail how sewage is characterised. 10

**OR**

Describe in detail bioremediation.

3.
  - a) Write significance of analysis of air for the presence of micro-organisms. 2½
  - b) Give an account on RSF. 2½
  - c) Discuss about objectives of sewage treatment. 2½
  - d) Describe about biogas plant. 2½

**OR**

- e) Describe carbon cycle with the help of diagrammatic representation. 2½
  - f) Differentiate between faecal and nonfaecal coliforms. 2½
  - g) Write preliminary treatment of sewage. 2½
  - h) Give an account on acid mine drainage. 2½
4.
  - a) Give construction and working principle of laminar air flow. 2½
  - b) Describe Eijkmann test. 2½
  - c) Discuss Imhoff tank with the help of suitable diagram. 2½
  - d) Give an account on microbial leaching of copper. 2½

**OR**

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| e) Draw a well labelled diagram of nitrogen cycle. | 2½ |
| f) Write about confirmed test to detect coliforms. | 2½ |
| g) Define ThOD, BOD, COD.                          | 2½ |
| h) Give an account on MEOR.                        | 2½ |

**5. Answer in one sentence any ten.**

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| a) What is aerosol?                                    | 1 |
| b) Define denitrification?                             | 1 |
| c) What is Hydrosphere?                                | 1 |
| d) Name the differential media used in completed test. | 1 |
| e) Who suggested IMViC classification?                 | 1 |
| f) What is superchlorination?                          | 1 |
| g) What is rotating biological contractor?             | 1 |
| h) Write two methanogenic bacteria .                   | 1 |
| i) What is Floc?                                       | 1 |
| j) Name two microbes involved in copper bioleaching.   | 1 |
| k) What is desulfurization of coal?                    | 1 |
| l) Define the term environmental biotechnology.        | 1 |

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