

Bachelor of Science (B.Sc.) II Fourth Semester
B.Sc. 2462 - Microbiology : Paper-II (Applied Microbiology)

P. Pages : 2

Time : Three Hours



GUG/W/18/1299

Max. Marks : 50

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

1. Describe room sterilization technique with respect to 10
i) Radiation ii) Fumigation

OR

Give the MTDT technique for bacteriological analysis of water. 10

2. Explain the construction and working mechanism of filter Rapid sand. 10

OR

Describe in detail bioremediation. 10

3. a) Give the diagrammatic representation of nitrogen cycle. 2½
b) Add a note on collection and handling of water. 2½
c) Write a note on BOD determination. 2½
d) Give an account of microbial leaching of Uranium. 2½

OR

- e) Give construction and working principle of laminar air flow. 2½
f) Give an account on Imhoff tank. 2½
g) Write a note on activated sludge. 2½
h) Write a note on MEOR. 2½
4. a) Describe liquid impingement technique by Lemon sampler. 2½
b) Write about confirmed test to detect coliform. 2½
c) Write a note on oxidation pond. 2½
d) Describe the process of desulfurization of coal. 2½

OR

- e) Write in a brief about Sulphur cycle. 2½

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| f) | Describe Indole test for coliform identification. | 2½ |
| g) | What are the objective of sewage treatment. | 2½ |
| h) | Write a note on biogas plant. | 2½ |

5. Solve **any ten** of the following :-

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| a) | What is direct radiation used for room sterilization? | 1 |
| b) | What is the mechanism of bactericidal action of glycol? | 1 |
| c) | What is HEPA filter. | 1 |
| d) | Give one example of faecal and Non faecal coliform. | 1 |
| e) | Which reagent used in VP test? | 1 |
| f) | What is residual chlorine? | 1 |
| g) | What is alkalinity of water? | 1 |
| h) | What is flocculation? | 1 |
| i) | What is biofilm? | 1 |
| j) | What is bio-accumulation? | 1 |
| k) | Name microbes used in bioleaching of Uranium. | 1 |
| l) | What is MEOR? | 1 |
