

E- 2 APR 2019

B.Sc. Semester – III Examination
MICROBIOLOGY

Paper: MIC-CC-304 Soil and Water Microbiology & Environmental Pollution

Time: 2:30 Hours

Paper Code: 20672
Total Marks: 70

Instructions: (a) Figures to the right indicate total marks of respective questions.
(b) Draw neat, clean and labeled diagram wherever necessary.

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| 1 | (a) Write on: Types of soils. | 07 |
| | (b) Write briefly on: Interaction of plant roots and fungi. | 07 |
| OR | | |
| 1 | (a) Write on: Winogradsky's column and its ecological significance. | 07 |
| | (b) Discuss: Physico-chemical characteristics of soil. | 07 |
| 2 | (a) Write a note on: Phosphorus cycle (with suitable diagram). | 07 |
| | (b) Write briefly on: Humus. | 07 |
| OR | | |
| 2 | (a) Write a note on: Carbon cycle (with suitable diagram). | 07 |
| | (b) Write on: Symbiotic nitrogen fixation. | 07 |
| 3 | (a) Write on: Symptoms, diagnosis and causative agent of cholera. | 07 |
| | (b) Discuss: Microbial indicators of pollution other than coliforms. | 07 |
| OR | | |
| 3 | (a) Explain any two methods of municipal water purification. | 07 |
| | (b) Write on: IMViC profile of <i>E. coli</i> . | 07 |
| 4 | (a) Write on: Pollution due to disposal of untreated waste water. | 07 |
| | (b) Explain: COD and TOD as indicators of water quality. | 07 |
| OR | | |
| 4 | (a) Write on: Composting. | 07 |
| | (b) Explain: Imhoff tank (with suitable diagram). | 07 |
| 5 | (a) Write briefly on: Pollution by radiation. | 07 |
| | (b) Write on air pollution. Mention its causes, effects and preventive steps. | 07 |
| OR | | |
| 5 | (a) Write on water pollution. Mention its causes, effects and preventive steps. | 07 |
| | (b) Write briefly on: Thermal Pollution. | 07 |
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