

D 31825

(Pages : 2)

Name.....

Reg. No.....

**THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2022**

Microbiology

MBG 3B 03—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

(2019 Admission onwards)

Time : Two Hours and a Half

Maximum : 80 Marks

Wherever needed answers must be supported by structural illustration and diagrams.

Part A (Short Answer Type Questions)

Each question carries 2 marks.

1. Infectious dust.
2. Rotorod sampler.
3. Impingers.
4. Air-borne viral infections.
5. Benthic zone.
6. Municipal water supply.
7. MPN.
8. COD.
9. Algal bloom.
10. Landfills.
11. Methanogenesis.
12. Petroleum hydrocarbons.
13. Novel pollutants.
14. Composition of biogas.
15. Copper leaching.

(Ceiling 25 marks)

Turn over

Part B (Short Essay Type Questions)

Each question carries 5 marks.

- 16 Briefly discuss the composition of indoor and outdoor air.
- 17 Discuss the principles of hirst spore trap and Anderson samplers for air purification study.
- 18 Briefly discuss the application of membrane filter techniques in water quality studies.
- 19 Elucidate the major steps involved in the purification of municipal water.
- 20 Discuss the principles, methodology and applications of vermi-composting.
- 21 Elaborate the design and management of biogas plant.
- 22 Examine the relevance of biomagnifications in xenobiotic metabolism.
- 23 Discuss the major principles and approaches involved in bioleaching of sulphur.

(Ceiling 35 marks)

Part C (Essay Type Questions)

*Answer any **two** of the following.*

Each question carries 10 marks.

- 24 Investigate the methods and devices used for the microbiological quality of air.
- 25 Elaborate the major steps involved in the treatment of waste water.
- 26 Narrate the relevance of eutrophication and algal blooms with suitable examples.
- 27 Critically discuss the utility and application of anaerobic sludge digester and vermi-composting in solid waste management.

(2 × 10 = 20 marks)