D 111979 **(Pages : 2)** **Name.....**

Reg. No.....

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2024

Microbiology

MBG 3B 03—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

(2019—2023 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

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

Part A

Answer **all** *questions in one* **or** *two sentences.*
Each question carries 2 *marks.*

1. Droplet nuclei.
2. Anderson sampler.
3. Municipal water supplies.
4. Airborne viral infections.
5. Eutrophication.
6. BOD.
7. Coliforms.
8. Trickling filter.
9. Bioaugmentation.
10. Indicator microorganisms.
11. Anaerobic sludge digester.
12. Capillary impingers.
13. Composition of biogas.
14. Biocorrosion.
15. PCBs.

(Ceiling 25 Marks)

Turn over

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

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

(Ceiling 35 Marks)

Part C

Answer any **two** *questions in details.*
Each question carries 10 *marks.*

24. Outline the methods and devices used for the microbiological quality of air.
25. Inspect the steps involved in the treatment of waste water.
26. Discuss the relevance of eutrophication and algal blooms with suitable examples.
27. Examine the application of anaerobic sludge digester and vermi-composting in solid waste management.

(2 × 10 = 20 marks)