

D 12036

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Name.....

Reg. No.....

THIRD SEMESTER (CBCSS-UG) DEGREE EXAMINATION, NOVEMBER 2021

Microbiology

MBG 3B 03—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

(2019—2020 Admissions)

Time : Two Hours and a Half

Maximum : 80 Marks

Section A*Answer atleast **ten** questions.**Each question carries 3 marks.**All questions can be attended.**Overall ceiling 30.*

1. Aerosol.
2. Anderson sampler.
3. Impingers.
4. Air-borne bacterial infections.
5. Limnetic zone.
6. Municipal water supply.
7. Eutrophication.
8. Coliforms.
9. BOD.
10. Composting.
11. Methanogenesis.
12. Petroleum hydrocarbons.
13. Recalcitrant.
14. Composition of biogas.
15. Copper leaching.

(10 × 3 = 30 marks)

Turn over

Section B

*Answer atleast **five** questions.*

Each question carries 6 marks.

All questions can be attended.

Overall ceiling 30.

16. Briefly discuss the major layers present in aquatic ecosystems.
17. Summarize the advantages and disadvantages of major air sampling devices.
18. Briefly discuss the principles and methodology involved in MPN techniques.
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 bio-magnifications in xenobiotic metabolism.
23. Discuss the major principles and approaches involved in the bioremediation of oil.

(5 × 6 = 30 marks)

Section C

*Answer any **two** questions.*

Each question carries 10 marks.

24. What are indicator micro-organisms ? Briefly discuss the major approaches used to study the microbiological quality of water.
25. Elaborate the major steps involved in the treatment of municipal water.
26. Examine the mechanisms of the biodegradation of xenobiotic compounds 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)