

**C 31140**

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Name.....

Reg. No.....

**THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2017**

(CUCBCSS—UG)

Microbiology

MBY 3B 04—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer all questions.*

*Each question carries ½ mark.*

1. Most widely recommended method for hospital solid waste disposal is \_\_\_\_\_.
2. Halotolerant bacteria means \_\_\_\_\_.
3. In a deep fresh water lake benthic zone will be dominated by \_\_\_\_\_ bacteria.
4. Membrane filtration method is used for \_\_\_\_\_.
5. Chlorination is most commonly used method for \_\_\_\_\_ water distributed for consumption.
6. Psychrotrophic bacteria means \_\_\_\_\_.
7. Removing toxic waste from soil and water using micro-organisms are known as \_\_\_\_\_.
8. E-waste means \_\_\_\_\_.
9. Sudden upward movement of deep cold water to the surface of ocean is called \_\_\_\_\_.
10. *Pseudomonas putida* is widely utilized for \_\_\_\_\_ degradation.
11. *Thermus aquaticus* is a \_\_\_\_\_ bacteria that are seen in \_\_\_\_\_.
12. Dioxins are produced during burning of certain type of plastics. Why they are considered to be dangerous toxins ?

(12 × ½ = 6 marks)

**Section B**

*Answer all questions.*

*Each question carries 2 marks.*

13. Comment on nitroaromatic compounds.
14. Comment on sources of micro-organisms of air.
15. Comment on windrow composting.
16. Comment on vermin composting.

**Turn over**

17. What is meant by air borne infections ?
18. What is meant by trickling filters ?
19. What is meant by indicator micro-organism ?
20. Comment on anaerobic sludge digester.
21. Define BOD.
22. Comment on bio leaching.

(10 × 2 = 20 marks)

### Section C

*Write short note on any six of the following.*

*Each question carries 5 marks.*

23. Briefly discuss the design of a sanitary landfill.
24. What is meant by Eutrophication and algal bloom ?
25. What are alkyl benzyl sulphonates ? Discuss briefly about the characters that make them recalcitrant.
26. Discuss the influence of Hydrostatic pressure on growth and distribution of micro organisms in marine environment.
27. With example discuss different classes of solid waste.
28. With example explain co metabolism.
29. Discuss briefly about the characters and distribution of microorganisms in estuarine aquatic environment.
30. Majority of infectious diseases of the world can be controlled by providing good quality water to the public. Discuss.

(6 × 5 = 30 marks)

### Section D

*Answer any two of the following questions.*

*Each question carries 12 marks.*

31. Discuss various methods and devices of microbiological air sampling. Give a note on its applications.
32. What is meant by biomagnifications ? With suitable example discuss the consequences.
33. Discuss the principle design and management of a Biogas plant. Give a note on methanogenesis.

(2 × 12 = 24 marks)