

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2016

(CUCBCSS-UG)

Core Course—Micro-Biology




MBY 3B 04—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer **all** questions.Each question carries $\frac{1}{2}$ mark.

1. BOD of water would be most directly affected by the presence of :
(a) Salt concentration. (b) PH decrease.
(c) Mineral drainage. (d) Organic waste.
2. The micro-organisms that grow optimally at high pressure is called :
(a) Mesophiles. (b) Piezophiles.
(c) Halophiles. (d) None of these.
3. A fish predator primitive protistal algae is
(a) *Pfiesteria piscicida*. (b) *Pseudo-nitzschia*.
(c) *Marinobacter*. (d) *Psychroflexus*.
4. An airborne viral infection is :
(a) H_1N_1 fever. (b) Dengue fever.
(c) Yellow fever. (d) Poliomyelitis.
5. The chlorination of water can lead to the formation of potential carcinogen called 
6. Hirst spore trap is based on  method of air sampling.
7. The filter used in laminar air flow is 
8. _____ is a mixture of different gases produced by the breakdown of organic matter anaerobically.
9. Give an example for recalcitrant pesticides.
10. Name the manure worms used in vermicomposting.
11. Name the second lowest layer of earth's atmosphere.
12. Name a device using micro-organisms for clearing controlling air pollutants.

(12 x Y2 = 6 marks)

Turn over

Section B

*Answer **all** questions.
Each question carries 2 marks.*

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|-------------------------|----------------------|
| 13. Droplet nuclei. | 14. COD. |
| 15. Ozonation. | 16. Biogas. |
| 17. Winogradsky column. | 18. DDT. |
| 19. 'Red tide'. | 20. Ingoldian fungi. |
| 21. Indicator organism. | 22. Cometabolism. |

(10 x 2 = 20 marks)

Section C

*Write short notes on any **six** of the following.
Each question carries 5 marks.*

23. Air Sampling devices.
24. **Bioremediation** of oil spills.
25. Composting.
26. Alkyl benzyl sulfonates.
27. Techniques for study of aquatic micro-organisms.
28. **Methanogenesis.**
29. Air-borne infections.
30. Qualitative method for **coliform** detection in water.

(6 x 5 = 30 marks)

Section D

*Answer any **two** of the following questions.
Each question carries 12 marks.*

31. Write a note on solid-wastes. Describe various methods used for solid-waste disposal.
32. What is meant by **bioleaching** ? Discuss the role of micro-organisms and types of **bioleaching** methods.
33. What are the characteristics of sewage ? Write a note on sewage treatment and disposal.

(2 x 12 = 24 marks)