

**D 71081**

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Name.....

Reg. No.....

**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014**

(UG—CCSS)

**Core Course—Microbiology**

**MB 5B 14—ENVIRONMENTAL AND SANITATION MICROBIOLOGY**

Time : Three Hours

**Maximum : 30 Weightage**

**Section A**

*Answer **all** the **twelve** questions.  
Each question carries 'A **weightage**.*

1. The most common **microbial contaminant of air** is \_\_\_\_\_
2. The disease **which is transmitted through drinking contaminated water** is \_\_\_\_\_
3. The form of nitrogen **which can be used by plants** is \_\_\_\_\_
4. The micro-organisms **that are primary symbiotic nitrogen fixers** are members of the genus \_\_\_\_\_
5. The form of sulfur **most usable by both micro-organisms and plants** is \_\_\_\_\_
6. Anaerobic spore **bearing soil micro-organism which is a pathogen for humans and animals** which belongs to the **genous** \_\_\_\_\_
7. The reservoir of nitrogen in earth is \_\_\_\_\_
8. An obligatory association between two species that is **beneficial to both population** is \_\_\_\_\_
9. **Phytoalexins** are \_\_\_\_\_
10. **Heterocyst** is found in \_\_\_\_\_
11. **Diazototrophs** are \_\_\_\_\_
12. **Ammonia oxidising bacteria** are \_\_\_\_\_

(12 x  $\frac{1}{4}$  = 3 weightage)

**Section B**

*Answer **all** the **nine** questions in **one or two sentences**.  
Each question carries 1 **weightage**.*

Comment on :

- |   |                                  |
|---|----------------------------------|
| 13. <b>Bioaugmentation</b> .            | 14. <b>Rhizosphere</b> effect.   |
| 15. <b>Antibiosis</b> .                 | 16. <b>Indicator organisms</b> . |
| 17. <b>Landfill</b> .                   | 18. <b>EMB</b> agar.             |
| 19. <b>Sources of microbes in air</b> . | 20. <b>Super bug</b> .           |
| 21. <b>Eutrophication</b> .             |                                  |

(9 x 1 = 9 weightage)

**Turn over**

**Section C**

*Answer briefly any **five** questions.*

*Each question carries 2 weightage.*

22. Nitrogen cycle.
23. BOD.
24. Vermicomposting.
25. Xenobiotic metabolism.
26. Microbiological sampling of air.
27. Micro-organisms of marine water systems.
28. Microbial leaching.

**(5 x 2 = 10 weightage)**

**Section D**

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

*Each question carries 4 weightage.*

29. Elaborate on waste water treatment strategies.
30. Explain the types of interaction of micro-organisms in soil and their significance.
31. Describe in detail the role of micro-organisms in **bioremediation**.

**(2 x 4 = 8 weightage)**