

**FIFTH SEMESTER B.Sc. DEGREE (SUPPLEMENTARY/IMPROVEMENT)  
EXAMINATION, NOVEMBER 2016**

(UG-CCSS)

Microbiology

MB 5B 12 – FOOD AND AGRICULTURAL MICROBIOLOGY

Time : Three Hours

Maximum : 30 Weightage

**Section A**

*Answer all the **twelve** questions.*

1. \_\_\_\_\_ are micro-organisms which prefer low temperatures.
2. The red colour of meat can be maintained by \_\_\_\_\_, ~~which is a preservative.~~
3. Most of the spoilage bacteria prefer \_\_\_\_\_ pH.
4. Expand TDT.
5. Coliforms are Gram negative bacteria, indicators of \_\_\_\_\_
6. The time required for HTST pasteurization at 71.7° C is \_\_\_\_\_
7. Halophiles prefer high \_\_\_\_\_ concentrations.
8. \_\_\_\_\_ ~~is a gram positive anaerobic sporulating~~ bacterium which can fix nitrogen non-symbiotically.
9. \_\_\_\_\_ ~~is the relationship between~~ organisms in which one species of a pair is benefitted.
10. \_\_\_\_\_ ~~is the conversion of nitrates to nitrogen by~~ micro-organisms.
11. \_\_\_\_\_ is the differentiated cell that fixed nitrogen in cyanobacteria.
12. *Rhizobium* is a \_\_\_\_\_ ~~nitrogen fixer.~~

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

**Section B**

*Answer all the **nine** questions in one **or** two sentences.*

- |                              |                                    |
|------------------------------|------------------------------------|
| 13. <i>Phytophthora</i> .    | 14. Brucellosis.                   |
| 15. Mercaptans.              | 16. <i>Staphylococcus aureus</i> . |
| 17. Tobacco Mosaic Virus.    | 18. Heterocyst.                    |
| 19. Protoplasmic resistance. | 20. Azola-Anabaena system.         |
| 21. Pascalization.           |                                    |

(9 x 1 = 9 weightage)

**Turn over**

**Section C**

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

22. Food preservation by high temperature.
23. Endomycorrhizae.
24. HACCP.
25. Infectious hepatitis.
26. Fungal diseases of plants.
27. Production of wine.
28. Spoilage of milk and milk products.

(5 x 2 = 10 weightage)

**Section D**

*Answer any **two** questions in detail.*

29. Discuss the factors affecting growth of micro-organisms in food.
30. Give an account of biofertilizers.
31. Discuss food borne infectious and food intoxications by micro-organisms.

(2 x 4 = 8 weightage)