

**D 11706**

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Name

Reg. No. ....

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

(UG—CCSS)

Microbiology

MB 5B 14—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

Time : Three Hours

Maximum : 30 Weightage

Section A

*Answer all the twelve questions.*

1. *Vibrio cholera* is an example of ~~\_\_\_\_\_ since they grow best~~ at alkaline pH.
2. An organism that uses inorganic compounds as electron donors and relies on chemical compounds for energy are called \_\_\_\_\_
3. The phenomenon of ~~\_\_\_\_\_ refers to a relationship~~ between organisms in which one species of a pair benefits; the other is not affected.
4. Lichens are examples of ~~\_\_\_\_\_ relationship.~~
5. ~~\_\_\_\_\_ zone is composed~~ of soft mud or ooze at the bottom of a water body.
6. *Desulfuromonas* is an example of ~~\_\_\_\_\_ bacteria.~~
7. ~~\_\_\_\_\_ is an anaerobic system~~ used for the treatment of sewage of limited volume or a single dwelling.
8. ~~\_\_\_\_\_ is the killing and~~ eating of an individual of one species by individual of another species.
9. Poly chlorinated bipheniles, when released in to the environment, they remain there for a long period without biodegradation so they are best example of \_\_\_\_\_ chemicals.
10. Aerated piles are one of the ~~\_\_\_\_\_ process used in~~ solid waste treatment.
11. \_\_\_\_\_ and \_\_\_\_\_ are two important physical factors that can influence aquatic life.
12. MPN is a procedure used for \_\_\_\_\_

(12 x 1A = 3 weightage)

**Turn over**

**Section B**

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

Comment on :

13. Profundel zone.
14. Pasture of the sea.
15. Anaerobic sludge digesters.
16. Water born diseases.
17. Xenobiotics.
18. Co-metabolism.
19. Humus.
20. Parasitism.
21. Infection thread.

(9 x 1 = 9 weightage)

**Section C**

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

Write brief note on :

22. Eutrophication.
23. Methanogenesis.
24. Hyper thermophilic bacteria.
25. Droplet nuclei.
26. Positive interactions of Microbial communities.
27. Energy flow in an ecosystem.
28. Soil horizon.

(5 x 2 = 10 weightage)

**Section D**

*Answer briefly any **two** questions.*

29. What is meant by **Biomagnification** ? Discuss briefly about the biodegradation of petroleum hydrocarbons.
30. Discuss briefly about the Nitrogen cycle.
31. What do you 'meant by **BOD** ? Discuss briefly about the secondary treatment of waste water.

(2 x 4 = 8 weightage)