

The H.N.S.B.Ltd. Science College, Himatnagar
Internal Examination September-2017

B.Sc. Semester: III
Marks: 40

Subject: Microbiology
Paper No.: MB: 302
(Soil and Water Microbiology)

Date: 12 /09 /2017
Time: 11:30 to 1:00

PART: A Answer any Five of Following.

05

1. PGPR stands for _____
(A) Plant growth private rhizo bacteria. (B) Plant growth promoting Rhizobacteria.
(C) Plant growth permit Rhizobacteria. (D) Plant growth private Rhizosphere.
2. Which is positive association?
(A) Antagonism (B) Mutualism (C) Parasitism (D) Competition
3. Which elements are present in biogeochemical cycling ?
(A) Hydrogen, Carbon (B) Phosphorus, Boron
(C) Magnesium, Gold (D) Carbon, Nitrogen.
4. Which method is microbiological monitoring for environment
(A) APHA (B) CPF (C) APA (D) AWWA
5. What is MPN test
(A) SPC test (B) Qualitative test (C) Quantitative test (D) Filtration technique
6. What are the results of enterobacter SPP in Irmic test?
(A) +, -, +, - (B) +, +, -, - (C) -, -, +, + (D) -, +, -, -

PART: B Answer any Five of Following.

05

7. Define: - Assimilation.
8. Which bacteria contribute in N_2 fixation?
9. Define: enrichment culture.

10. Enlist the diversity of soil micro flora.
11. Full name of IMVIC test?
12. Cholera caused by which microorganism.

PART: C Answer any Three of Following.

06

13. Differentiate between gram +ve and gram -ve bacteria.
14. What is Bacteriological examination of drinking water?
15. Explain any two methods of studying soil micro flora.
16. Explain mineralization of elements.
17. Draw nitrogen cycle.

PART: D Answer any Four of Following.

12

18. Explain all tests of IMYIC test.
19. Explain any test in qualitative analysis of drinking water?
20. Explain any two steps of N₂ cycle.
21. Write short note on composition of soil.
22. Enlist factors affect on diversity in soil-micro flora.

PART: E Answer any Two of Following.

12

23. Brief notes on SPC.
24. Explain diversity of soil micro flora.
25. Types of microbial association found in soil and explain positive association.
26. Write down multiple tube fermentation.