



Course Name: Master of Science

Discipline : Microbiology

CHOICE BASED CREDIT SYSTEM

(For those who join in June 2022 and after)

Course Scheme:

II M.Sc. Microbiology – III Semester

Self-Learning Course:

Subject	Credit	Ext =Tot	Subject Code
Microbiology of Water	5	100 = 100	P22MBSL31

SELF LEARNING

Microbiology of Water

Credit : 5

Subject Code: P22MBSL31

Total Marks: 100

Objectives:

- To know about the safety and quality of drinking water.
- To know about the sources of water contamination.
- To brief the methods to prevent water contamination
- To study the techniques to diagnose the presence of waterborne pathogens.

Unit I

Types of water and Importance of water quality checking. An introduction to waterborne pathogens – bacteria, Fungi, Protozoan's, etc.

Unit II

Pathogenesis and treatment of Waterborne protozoal infections: Amoebiasis and Giardiasis. Waterborne parasitic infections: Taeniasis and Schistosomiasis. Preventive measures for waterborne diseases.

Unit III

Pathogenesis and treatment of Waterborne bacterial infections: Typhoid, Cholera and Botulism. Waterborne viral infections: Polio, Hepatitis A and SARS.

Unit IV

Microbiological quality of drinking water: Coliforms and MPN technique. An introduction to laws related to food products – Voluntary national standards: BIS and AGMARK.

Unit V

BIS procedures for microbiological analyses of drinking water: Coliform bacteria, faecal streptococci, sulphite reducing anaerobes, *Pseudomonas aeruginosa*, aerobic microbial count, yeast and mould count, *Salmonella* and *Vibrio* species.



REFERENCES:

1. Jawetz *et al.*, 2013, Medical Microbiology, 26/e, McGraw Hill Education.
 2. <http://bis.org.in/sf/fad/FAD25%282047%29C.pdf>
 3. www.who.int/water_sanitation_health/dwq/gdwq0506.pdf
 4. http://www.who.int/water_sanitation_health/dwq/guidelines/en/
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