

Grade XI**Microbiology (Theory)****Total Periods= 61****1 Period= 45min**

S.No	Topics	Main Points	References	Periods
1	History, Classification and Morphology Of Bacteria	Introduction, History Of Microbiology (Brief) Differences Between Prokaryotes And Eukaryotes, Diagram Of Bacterial Cell, Composition, Location And Functions Of Different Structures Of Bacteria.	1,2	12
2	Nutrition Of Bacteria	Definition, List Of Nutritional Factors, Detail Of Different Nutritional Requirements Of Bacteria.	1	04
3	Physical Factors For The Growth Of Bacteria	Detail Of Oxygen, Temperature, Osmotic Pressure, Ph, Light	1,2	04
4	Culture Media	Definition, Classification, Preparation Of Nutrient Agar, Selective Media, Differential Media, Selective And Differential Media, Transport Media, Enriched Media	1	04
5	Microbiology Of Water	Water Sources, Pollution Of Water, Testing Of Drinking Water, Water Born Diseases, Purification Of Water (Municipal And Domestic Method)	2	05
6	Microbiology Of Sewage	Definition, Types Of Micro Organism In Sewage, BOD Of Sewage, Anaerobic Treatment Of Sewage	1,3	04
7	Microbiology Of Milk	Composition, Types Of Bacteria, Biochemical Changes In Milk, Milkborn Diseases, Preservation Of Milk	1,2	05

8	Preservation Of Different Foods	List Of Physical And Chemical Methods Of Food Preservations (High Temperature,Low Temperature,High Osmotic Concentration,Dehydration, Radiation,Use Of Preservatives And Wood Smoke	1	06
9	Micribiology Of Air	Difference Between Indoor And Outdoor Air And Air Born Infections	1	03
10	Diseases	Typhoid,Cholera,Bacillary Dysentery,Diphtheria.	4,5	07
11	Human Physiology	Animal Cell ,Digestive System, Respiratory System,Excretory System Circulation Of Blood With In The Heart,Human Eye And Air	6	07

BOOKS RECOMMENDED

1. Microbiology By Pelczar And Reid
2. Fundamentals Of Micribiology By Probisher
3. Microbiology By Wistreich
4. Microbiology By Jawetz
5. Microbiology By Mackie And Mccartney
6. Physiology By Tokay, Elbert

S.No	Microbiology (Practicals)	Periods
1	To Study Triple Beam Balance	02
2	To Prepare The Cleaning Solution	02
3	To Study Sterilization	02
4	Preparation Of Nutrient Agar	02
5	Inoculation Of Petri Plates	04
6	Compound Microscope	02
7	Simple Staining	02
8	Gram's Staining	02
9	Checking Of Manuals	02
10	Spore Staining	02
11	Spirochaete Staining	02
12	Checking Of Manuals	02
13	Qualitative And Quantitative Analysis Of Water	04
14	Qualitative And Quantitative Analysis Of Milk	04
15	Physiology Diagrams Checking	04
16	Viva Voce	06
17	Certification Of Manuals	04