

## **BIOCHEMISTRY AND MICROBIOLOGY**

Semester	Subject Code	Category	Lecture	Theory	Practical		Credits
III	21CAMB21	Allied Practical - I	0	0	3 hrs per week	90	2

### **COURSE OBJECTIVES:**

- To get basic knowledge about the microbial techniques in an aseptic environment and demonstrate competency in documenting laboratory results. The students should be able to understand, media preparation, sterilization procedures, isolation and pure culture techniques

### **EXPERIMENT LISTS:**

1. Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Xylose, and Starch)
2. Qualitative analysis of aminosciids (Tyrosine, Tryptophan, Histidine, Arginine, Methionine)
3. Colorimetric estimation of proteins by Lowry's method
4. Colorimetric estimation of DNA by Diphenyl amine method
5. Estimation of glycine by formal titration method
6. Estimation of ascorbic acid using dichlorophenol indophenols as link solution
7. Media preparation and sterilization
8. Isolation and Enumeration of microorganism – Spread and Pour
9. Observation of Colony morphology and Characteristics
10. Pure culture technique – Streaking techniques (Simple, T-streak & Quadrant)
11. Measurement of growth of bacteria
12. Antibiotic sensitivity test -Kirby Bauer method

### **REFERENCE BOOKS**

1. <http://www.dbtindia.nic.in/wp-content/uploads/E-MANUAL.pdf>
2. [https://www.researchgate.net/publication/306018042\\_Microbiology\\_Laboratory\\_Manual](https://www.researchgate.net/publication/306018042_Microbiology_Laboratory_Manual)
3. <https://faculty.washington.edu/korshin/Class-486/MicrobiolTechniques.pdf>
4. [https://www.researchgate.net/publication/306034920\\_Laboratory\\_Manual\\_of\\_Biochemistry](https://www.researchgate.net/publication/306034920_Laboratory_Manual_of_Biochemistry)

### **Syllabus Designer :**

Dr. C.Suganthi, Assistant Professor