BSP458 APPLIED MICROBIOLOGY LAB

Course Outcomes:

After successful completion of the course, students will be able to :

CO 1. Carry out quantitative and qualitative assessments of microflora of soil, water andair.
CO 2. Selectivelyisolateand identify microbes using morphological and biochemical tools.
CO 3. Understand the symbiotic association of microorganisms throughexperiments.
CO 4. Assess microbial quality of drinking water andmilk.
CO 5. Perform microbiological assays for antibiotics and aminoacids.

1. Quantitative and qualitative assessment of microflora of soil, water and air by direct and indirectmethods.
2. Selective isolation of microbes (bacteria, actinomycetes, yeasts andfungi)
3. Studies on symbiotic association of microorganisms (rhizobia, cyanobacteriaandarbuscularmycorrhizae)
4. Simple and special morphological and biochemical tests for identification of bacteria, fungi
5. Assessment of microbial quality of drinking water andmilk
6. Microbiological assays (antibiotics and aminoacids)

BSP459 AQUATIC BIOLOGY LAB

Course Outcomes:

After successful completion of the course, students will be able to :

CO 1. Perform qualitative analyses of water samples for various parameters.
CO 2. Identify freshwater, marine and benthic organisms
CO 3. Estimate the productivity of aquaticecosystems.
CO 4. Understand the food and feeding habits infish.

1. Water qualityparameters
2. Freshwater, marine and benthicorganisms.
3. Preparation of temporary and permanent slides ofplankton.
4. Estimation ofproductivity.
5. Hydrophytes, halophyes and seaweeds.
6. Food and feeding habits infish.
7. Sewageorganisms.
8. Instrumentation in aquaticbiology and field trips

BSP460 METABOLISM AND BIOENERGETICS

Course Outcomes:

After successful completion of the course, students will be able to :

CO 1. Perform spectrophotometric estimation of variousmetabolites.
CO 2. Diagnose some of the metabolic diseases through biochemicaltests.
CO 3. Quantify vitamins and phenolics in plantsamples.
CO 4. Calculate standard free energy change, redox potential, and mitochondrialrespiration.

1. Spectrophotometric estimation of metabolites: serum protein, sugar, creatinine, urea, uric acid
2. Colorimetric analysis of vitamins, ascorbic acidetc.,
3. Estimation of plantphenolics
4. Tests to measure glycosuria, proteinuria etc
5. Calculations in Bioenergetics: standard free energy change, redox potential, mitochondrial respirationetc