BACHELOR OF SCIENCE IN BIOTECHNOLOGY
SEMESTER – II

Laboratory Course-IV

Paper Code: BTP-206

BTP 206: ***Laboratory course- IV: Microbiology & Human genetics*** **(Max. marks 80+20=100)**

1. Sterilization techniques
2. Aseptic techniques- Culture transfer from solid to solid, solid to liquid and liquid to liquid: Checking of possible contamination
3. Culture media preparation- Nutrient broth, nutrient agar slant, potato dextrose agar.
4. Culture techniques- Streak plate, pour plate and spread plate
5. Isolation of pure culture by streak plate method.
6. Viable count of bacteria by serial dilution and pour plating.
7. Turbidometry measurement of bacterial growth.
8. Observation of microorganisms
    a) Wet mount
    b) Monochrome staining
    c) Gram staining
    d) Spore staining
    e) Fungal staining
9. Isolation of microorganisms from air, water and soil samples.
10. Dilution and pour plating.
11. Antibiotic sensitivity of microbes, use of antibiotic discs.
12. Testing of water quality.
13. Problems on modification in ratio due to interaction of genes– Complementary factors, Supplementary factors, Inhibitory factors, duplicate genes (Explain with the help of plastic beads).
14. Study of chromosomes abnormalities in man: Down's syndrome, Klinfelter Syndrome, Turner Syndrome with the help of Photograph/ Charts/ Karyotype.
15. Human pedigree analysis – various symbols used and problems.

Teachers will supply printed detailed instructions, procedure of the experiments.

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