ST.JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM VII SEMESTER BIOTECHNOLOGY TIME: 2 Hrs/ Week BTH 7753 (2) MICROBIOLOGY AND IMMUNOLOGY Max. Marks: 50 (Core course)

W.e.f 20AH Batch

OBJCECTIVE: To enable the students to

- 1. Able to locate and separate lymph organs
- 2. Determine blood group typing
- 3. Differentiate the blood samples with Rh + and Rh -
- 4. Learn the skill of antiboby purification

COURSE OUTCOMES: Students will

- **CO1:** Be able to list out different types of nurseries and beds
- **CO2:** Indentify the nursery tools, implements and containers.
- CO3: Develop skill on potting media preparation and plant production
- **CO4:** Learn the technique of establishing cutting, layering, grafting etc.

PRACTICAL COURSE:

- 1. Isolation of thymus from mice
- 2. Separation of spleen from experimental mice
- 3. Bone marrow location and separation
- 4. Blood group typing
- 5. Identification of Rh factor
- 6. Serum separation
- 7. Enumeration of microbial cells by hemocytometer
- 8. Separation and Quantification of microbial biomass from fermented media

REFERENCES

- 1. Microbiology: concepts and Applications. Michael J. Pelczar, Jr., E.C.S., Chan, Noel R. Krieg, 1993. Me. Graw Hill, Inc.
- 2. Introductory Microbiology. 1995, by Trevor Gross.
- 3. Fundamentals of Microbiology. 4ltled. 1994. I.E.Alcamo. Scientific Publication,
- 4. Microbiology, 1990. 4th Ed.B.D. Davis, R. Dulbeco, H.N. Eisen and H.S. Ginsberg and J.B. Lippincott Company.
- 5. Fundamental Principles of Bacteriology. 1994. A.J. Sake. Tata McGraw Hill.
- 6. Laboratory Experiments in Microbiology. 3rd ed. Brief Version. 1992. T.R. Johnson and C.L. Case. Addision Wesley International Publications. PP 350.
- 7. Essentials of Immunology by Roit (ELBS).
- 8. Immunology by Roit et.al (Harper Row).
- 9. Text book of Immunology by S.T,Barrot (Mosby).
- 10. Immunology by Kubay.

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