

Subject Code: 1SC2060204	Subject Title: BLOOD BANKING
COURSE TYPE: CORE COURSE	

Course Objective: The students aware about Blood, collection, transfusion and immunological tests.

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
4	--	4	--	4	60	40	--	--	100

Unit	Content	Lectures	Weightage
1	Blood and it's component - Composition & function of Blood, , Red blood cells, White blood cells, Platelets Blood Collection - Collection of Blood: Capillary and venous blood, Anticoagulants, Plasma and Serum, blood collection-donor criteria, Phlebotomy, Blood processing tests, Blood preservation,	15	25%
2	Blood Group Systems Introduction, human blood group systems, inheritance of the ABO blood groups, Rhesus blood group system, Inheritance of blood group system genetics, Blood grouping and Rho (D) typing and routine experiments	15	25%
3	Blood transfusion Introduction, Quality control in Blood bank procedures, transfusion medicine, selection of blood components, techniques used for the separation of blood constituents, Apheresis, Hemapheresis, Blood & it's component transfusion, Massive blood transfusion, exchange transfusion, solid organ transplantation transfusion, transfusion reactions & it's investigations, prevention of disease transmitted through blood transfusion, Erythroblastosis fetalis	15	25%
4	Immunological reactions Precipitation and agglutination reaction, Latex agglutination test, RIA, ELISA, Skin test, Chemiluminescence	15	25%

Learning Outcome: Students will learn the regarding methods of blood collection and aspects of transfusion. In addition, they will also gain knowledge of different immunological reactions.

Reference Books:

1. Text book of Medical Laboratory Technology, P.B. Godkar 2nd Edn. 2003 Bhalani Publication.
2. Anathanarayana & Panikar. A Text Book of Medical Microbiology. Universities Press.
3. Willey et al. Prescott's Microbiology. Mc Graw Hill Publishing Co.
4. Bain B., Bates I. & Laffan M. Dacie and Lewis Practical Haematology. Elsevier.
5. Immunology by IM Roitt, J. Brostoff and DK Male (1993) BMP, London.
6. J Kuby (1991). Immunology freeman and company
7. Basic Immunology by Jacqueline Sharon.
8. Pelczar et al. Microbiology. Tata Mc Graw Hill Publishing Co.