



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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Value Added Course

Blood Banking


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Annexure-52C of BOM-62-2020

10 D Blood Banking (Pathology, Aurangabad)

- 1. Topic :**BLOOD BANKING
- 2. Goals :**To provide special training & practical exposure to 2nd year MBBS students in Blood banking
- 3. Objectives :**At the end of the course the student should know :
 - A . Basics of different blood groups systems
 - B. Various components & it's uses
 - C. Donor Selection
 - D. Adverse blood transfusion reactions
 - E. Administration in a Blood bank
 - F. Apheresis
- 4. Course Co-Ordinator :** Dr. Archana Bidari& Dr. Rohini Shewale
- 5. Course Duration:** 1 Month
- 6. Eligibility:** MBBS
- 7. Course Content:**

THEORY

Sr.	Topic	Learning Objective	Duration
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no.			
1	History of blood banking	To study evolution of different blood groups.	1 hour
2	Blood grouping, typing and complement system	To study basics of different blood groups & complement system	1 hour
3	Identification of antibodies and antibody screening	To identify various antibodies in blood group systems & methods of screening antibodies	1 hour
4	Various blood components and their functions	To have knowledge of blood components and their functions and uses	1 hour
5	Coagulation and hemostasis	To know basics of coagulation pathways and hemostasis	1 hour
6	Immune hemolytic anaemias and Hemolytic disease of newborn	To know types of hemolytic anaemias along with details of hemolytic disease of newborn	1 hour

7	Cross matching & compatibility testing	To know major & minor cross matching and compatibility testing	1 hour
8	Donor selection	To know criteria of selection of donor	1 hour
9	Pre-transfusion serologic testing	To know different tests used for pre transfusion serologic testing	1 hour
10	Donor recruitment, phlebotomy and Donor reactions	To know how to perform phlebotomy and different donor reactions	1 hour
11	Adverse blood transfusion reactions	To have complete knowledge of adverse blood transfusion reactions	1 hour
12	Investigations of transfusion reactions	To know how to investigate a blood transfusion reaction	1 hour
13	Apheresis	To know what is apheresis & its importance	1 hour

14	Preparation and storage of blood components and their uses	To know procedure of preparation of blood components & their uses	2 hours
15	Record keeping, quality control and blood bank Inspections	To know importance of record keeping & preparation for inspection of blood banks according to the protocol	1 hour
16	Guidelines for safe blood transfusion	To know the guidelines for safe blood transfusions	1 hour
17	Safety procedures in blood banking	To know the safety procedures in blood banking to avoid serious hazards	1 hour
18	Safe storage and transportation of blood and its components	To know how to store components, procedure for transportation of blood components	1 hour
19	Safe disposal of lab waste in blood bank	To know in detail how to dispose lab waste in blood bank and its importance	1 hour

20	Medicolegal aspects of blood banking	To know the importance of blood banking from medico-legal point of view	1 hour
21	Administration of blood bank	To know different ways of administration in a blood bank	1 hour

PRACTICALS

Sr. no.	Topic	Learning Objective	Duration
1	Blood grouping(ABO), Rh typing	To perform procedure of ABO & Rh blood groups.	2 hours
2	Other methods of blood grouping	To perform blood grouping by forward & reverse grouping methods	2 hours
3	Cross matching	To perform major & minor cross matching	2 hours

4	Pretransfusion serologic testing	To perform pre transfusion testing on serum samples of donors	2 hours
5	Antihuman globin(Coombs) test	To perform direct & indirect Coomb's test	2 hours
6	History taking for donor	To take history for selection of donor	2 hours
7	Phlebotomy (blood donation camp)	To perform phlebotomy under guidance of BTO in a blood donation camp	2 hours
8	Management of donor reactions in Blood donation camp	To enumerate steps in management of reactions in donor at camp site	2 hours
9	Component preparation	To observe various steps in procedure for component preparation & enumerate them	2 hours
10	Investigating a transfusion reaction	To enumerate various steps in investigating a transfusion	2 hours

		reaction	
11	Conduction of blood donation camp	To perform MOCK conduction of blood donation camp & later attend a blood donation camp	2 hours
12	Documentation in blood bank	To write down all the steps point wise on various documents required in blood bank and updation of these.	2 hours

6. ASSESMENT:

THEORY PAPER = 50 marks

MCQ = 10 marks

SAQ= 5 out of 6 (4 marks each) = 20 marks

LAQ = 2 out of 3 (10 marks each) = 20 marks

PRACTICAL EXAM = 50 MARKS

Estimation of Blood groups = 10 marks

Demonstration of Coombs test = 10 marks

Case on investigating blood transfusion reaction = 10 marks

Viva = 20 marks

TOTAL MARKS = 100

7. READING MATERIAL :

1. ABC of transfusion – III edition, Author = Marcela Contreras
2. The Clinical Transfusion Practice – WHO manual (Guidelines for Interns)
3. The Clinical Use of Blood (Handbook) – WHO Handbook
4. Hospital Associated Infections, Epidemiology , Prevention & Control , Author= Nita Patwardhan
5. Blood Transfusion in Clinical Medicine , Author= Mollison
6. Standards for Blood bank & Blood Transfusion Services – NACO (Govt. of India, New Delhi)