0105N100

Candidate's Seat No :_____

MSc Sem.-2 Examination

407

MLT

Time : 2-30 Hours] **May-2025** **[Max. Marks : 70**

Q1A	Differentiate between granulocytes and agranulocytes with suitable examples. Highlight the morphological features of neutrophils, eosinophils, and lymphocytes.	7 Marks
Q1B	Outline the process of hemostasis, including vascular phase, platelet plug formation, coagulation phase, clot retraction, and fibrinolysis.	7 Marks
	OR	
Q1A	Describe the structure and function of platelets. Discuss the intrinsic and extrinsic coagulation pathways of blood coagulation.	7 Marks
Q1B	Explain and classify the anaemias based on red cell morphology.	7 Marks
Q2A	Explain in detail about Haemoglobin C Diseases.	7 Marks
Q2B	Describe in detail about thalassemia on the basis of genetic mutation, clinical manifestations and laboratory diagnosis.	7 Marks
	OR	
Q2A	Explain the forward scatter (FSC) and side scatter (SSC) in flow cytometry.	7 Marks
Q2B	Enlist the various Hemoglobinopathies.	7 Marks
Q3A	Write down in detail about Chronic Myeloid Leukemia.	7 Marks
Q3B	What are the indications show that bone marrow examination has to be done?	7 Marks
	OR	
Q3A	Write down in detail about Lymphoma.	7 Marks
Q3B	Write down the Bone Marrow Aspiration and Biopsy procedures and staining.	7 Marks
Q4A	Compare the ABO and Rh blood group systems in terms of antigens and antibodies with clinical significance.	7 Marks
Q4B	Explain the basic principles of blood transfusion. Discuss the indications, procedures, and precautions involved.	7 Marks
	OR	
Q4A	Discuss donor eligibility criteria and explain the process of blood collection, processing, and storage in a blood bank.	7 Marks
Q4B	Describe the steps involved in cross-matching and compatibility testing. Why is it crucial in blood transfusion?	7 Marks
Q5	**Answer the following questions (Any Seven)**	**14 Marks**
I	Define thrombocytopenia.	2 Marks
II	Name two disorder of hemostasis.	2 Marks
III	Which coagulation factor is deficient in Haemophilia A?	2 Marks
IV	Write about the different derivatives of hemoglobin.	2 Marks
V	Enlist the indications of flowcytometry in Hematology.	2 Marks
VI	What is HbH disease?	2 Marks
VII	Write down the types of ALL and their respective diagnostic markers.	2 Marks
VIII	What is Aplastic Anemia?	2 Marks
IX	Write down the classification of leukemia.	2 Marks
X	Name minor blood group system other than ABO and Rh?	2 Marks
XI	What does cross-matching detect?	2 Marks
XII	Define Rh incompatibility in one sentence.	2 Marks