

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: B.SC MLT
BRANCH: MLT

SEMESTER : IV
SESSION : SP/2025

SUBJECT: BMT403 HEMATOLOGY II

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Enlist methods of bone marrow collection. Write in short on types and functions of bone marrow.	[5] CO1	2
Q.1(b)	Discuss preparation, staining and examination of bone marrow smears. Mention cellular composition of bone marrow.	[5] CO1	2
Q.2(a)	Justify the statement binding of hemoglobin to oxygen is called cooperative binding. Write on composition and function of hemoglobin.	[5] CO2	3
Q.2(b)	Discuss synthesis of hemoglobin.	[5] CO2	2
Q.3(a)	Define hemoglobinopathies. Mention abnormalities of hemoglobin. Mention characteristic peaks of various forms of hemoglobin.	[5] CO3	1
Q.3(b)	Discuss thalassemia.	[5] CO3	2
Q.4(a)	Enlist various stains for cytochemical staining. Discuss methods of preparations of any two stains. Write a note on precautions in preparation of blood film.	[5] CO4	2
Q.4(b)	Discuss method of Prothrombin time (PT) determination.	[5] CO4	2
Q.5(a)	Enlist various clotting factors. Write about stages of blood coagulation.	[5] CO5	2
Q.5(b)	Write about pathways of coagulation process.	[5] CO5	2

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