1411E1190

Candidate's Seat No : _____

M.Sc. Sem.-3 Examination

502

M. L. T.

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

Q1A	Give a detailed account of fixation in tissue processing. Discuss various types of fixatives and their roles in preserving tissue morphology.	7 Marks
Q1B	Outline the complete steps involved in tissue processing in histopathology and explain the purpose of each step.	7 Marks
	OR	
Q1A	Explain the function of dehydrating agents in tissue processing and compare the properties and uses of different dehydrating media.	7 Marks
Q1B	Describe the embedding procedure used in tissue processing. Discuss the essential factors that must be considered to achieve optimal embedding results.	7 Marks
Q2A	Write a comprehensive note on special staining techniques used in histopathology and their diagnostic value.	7 Marks
Q2B	Explain the importance and diagnostic applications of special stains such as PAS, Masson's Trichrome, and Gomori's Methenamine Silver (GMS).	7 Marks
	OR	
Q2A	Write an explanatory note on the principle, procedure, and diagnostic applications of Immunohistochemistry (IHC).	7 Marks
Q2B	Describe in detail the principle, procedure, and interpretation of Haematoxylin and Eosin (H&E) staining.	7 Marks
Q3A	Describe various cytological and tissue-level changes that indicate disease. Explain how variations in cell morphology, arrangement, and growth pattern aid in diagnosis.	7 Marks
Q3B	Explain how histopathological slide interpretation is carried out. What key cellular components and tissue features are examined to differentiate normal from abnormal histology?	7 Marks
	OR	
Q3A	Discuss the major histological differences between normal and diseased tissues. Provide examples of cellular and structural alterations associated with pathological conditions.	7 Marks
Q3B	Differentiate between benign and malignant neoplasms based on histopathological characteristics. Describe the cellular features used to identify malignancy.	7 Marks
Q4A	Describe the importance of clinico-pathological correlation in understanding disease evolution from early to advanced stages.	7 Marks
Q4B	Explain the process of clinico-pathological correlation. How do	7 Marks

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	histopathological findings complement clinical data to establish an accurate diagnosis?	
	OR	
Q4A	Discuss the contribution of histopathology in planning cancer treatment. How do tumor grade, stage, and microscopic features influence therapeutic choices?	7 Marks
Q4B	Discuss the significance of effective collaboration between clinicians and pathologists. Explain how accurate and prompt reporting of histopathological results impacts patient management.	7 Marks
Q5	**Answer the following questions (Any Seven)**	**14 Marks**
I	How does the thickness of a section influence the quality of microscopic examination?	2 Marks
II	List any two types of microtomes used in histopathology.	2 Marks
III	Mention two commonly used cleaning agents in tissue processing.	2 Marks
IV	Expand the abbreviation "PAS" stain.	2 Marks
V	Haematoxylin is extracted from which natural source?	2 Marks
VI	Name one special stain routinely used for kidney biopsy specimens.	2 Marks
VII	Define "staging" in relation to tumor assessment.	2 Marks
VII	What is the key distinction between normal and abnormal tissue histology?	2 Marks
IX	Which cellular feature is most characteristic of malignant transformation?	2 Marks
X	What is the role of clinico-pathological correlation in diagnosing diseases?	2 Marks
XI	Why is timely reporting of histopathological results important for patient care?	2 Marks
XII	Why is it important to correlate clinical information with histopathological observations?	2 Marks

BEST OF LUCK