

**PRACTICE SET**  
**End Semester Examination, May 2026**

**Program: BMLT**

**Semester: II**

**Subject: Histology**

**Subject Code: 42ABMT012**

**Course Outcome:**

On the completion of the Course, the students will be able to:

<b>Course Outcomes</b>	<b>Description</b>
CO1	Understand the significance of various steps to prepare the specimen for histological examination.
CO2	Understand to carry out the fixation process and the mechanism involved.
CO3	Get knowledge of importance of mounting and various types of mountant used.
CO4	Knowledge about various stains used for preparation of specimen shall be attained.
CO5	Acquainted with anatomy of various organs and be capable to distinguish the presence/absence of pathological conditions

- 1. Section A : 10 Marks Question covering All units (Total No. of questions 30)**
- 2. Section B : 20 Marks Question covering All units (Total No. of questions 10)**

**UNIT I**

**Section A (10 marks)**

1. Define histology and explain its significance in medical science. [CO1, Remember, LOT]
2. Define histology and explain its significance in medical science. [CO1, Remember, LOT]
3. Describe the basic principles and steps involved in microtechniques used in histology. [CO1, Understand, LOT]
4. Explain the importance of histological examination in diagnosis of diseases. [CO1, Understand, LOT]
5. Differentiate between various microtechniques and justify their applications in specific conditions. [CO1, Analyze, HOT]

6. Explain the role of histology in identifying normal and abnormal tissue structures. [**CO1, Understand, LOT**]

#### **Section B (20 marks)**

7. Design a complete histological workflow starting from specimen collection to final diagnosis. [**CO1, Create, HOT**]
8. Justify the importance of histology in distinguishing between normal and pathological tissues with examples. [**CO1, Evaluate, HOT**]

### **UNIT II**

#### **Section A (10 marks)**

9. Define fixation and explain its purpose in histological studies. [**CO2, Remember, LOT**]
10. Describe the different methods of fixation: physical and chemical methods. [**CO2, Understand, LOT**]
11. Analyze the advantages and disadvantages of physical and chemical fixation methods. [**CO2, Analyze, HOT**]
12. Classify different types of fixatives with suitable examples. [**CO2, Remember, LOT**]
13. Design an appropriate fixation protocol for a delicate tissue sample and justify your choices. [**CO2, Create, HOT**]
14. Evaluate the importance of fixation in preserving tissue morphology and preventing degradation. [**CO2, Evaluate, HOT**]

#### **Section B (20 marks)**

15. Critically analyze the role of fixation in histology and its impact on staining and microscopic interpretation. [**CO2, Analyze, HOT**]
16. Evaluate various chemical fixatives and their mechanisms of action in tissue preservation. [**CO2, Evaluate, HOT**]

### **UNIT III**

#### **Section A (10 marks)**

17. Define mounting and explain its importance in histological preparation. [**CO3, Remember, LOT**]
18. Analyze the importance of mounting media in maintaining tissue integrity and clarity. [**CO3, Analyze, HOT**]
19. Describe the mounting process and steps involved in preparing slides. [**CO3, Understand, LOT**]
20. Compare various mounting media and justify their use in different staining procedures. [**CO3, Analyze, HOT**]
21. Discuss the treatments required before staining in tissue preparation. [**CO3, Understand, LOT**]
22. Design a step-by-step protocol for mounting histological sections for long-term preservation. [**CO3, Create, HOT**]

**Section B (20 marks)**

23. Design a complete workflow for mounting and preserving histological specimens. [CO3, Create, HOT]
24. Evaluate different mounting media and their impact on microscopic observation. [CO3, Evaluate, HOT]

**UNIT IV**

**Section A (10 marks)**

25. Define dyes and stains and explain their role in histology. [CO4, Remember, LOT]
26. Analyze the mechanism of staining and its role in differentiating cellular components. [CO4, Analyze, HOT]
27. Classify dyes based on their properties and explain with examples. [CO4, Understand, LOT]
28. Design an appropriate staining protocol for identifying nucleic acids and proteins. [CO4, Create, HOT]
29. Explain metachromasia and metachromatic dyes with suitable examples. [CO4, Remember, LOT]
30. Evaluate the importance of special stains in diagnosing pathological conditions. [CO4, Evaluate, HOT]

**Section B (20 marks)**

31. Design a comprehensive staining procedure for identifying multiple cellular structures. [CO4, Create, HOT]
32. Justify the importance of staining in identifying minerals and pigments in tissues. [CO4, Evaluate, HOT]

**UNIT V**

**Section A (10 marks)**

33. Explain the histology of the digestive system with suitable diagrams. [CO5, Understand, LOT]
34. Analyze the relationship between structure and function in different organ systems. [CO5, Analyze, HOT]
35. Evaluate histological differences between normal and diseased tissues in any system. [CO5, Evaluate, HOT]
36. Compare histological features of two organ systems and justify their functional differences. [CO5, Analyze, HOT]
37. Discuss the structure of the respiratory system at the tissue level. [CO5, Understand, LOT]
38. Explain the histological features of the urinary system. [CO5, Apply, LOT]

**Section B (20 marks)**

39. Evaluate the role of histology in diagnosing diseases of different organ systems. [CO5, Evaluate, HOT]
40. Design a detailed comparative analysis of histological structures in different systems. [CO5, Create, HOT]

**Summary Sheet**

**CO Wise**

<b>CO</b>	<b>Q. No</b>	<b>Marks</b>
CO1	1,2,3,4,5,6,7,8	100
CO2	9,10,11,12,13,14,15,16	100
CO3	17,18,19,20,21,22,23,24	100
CO4	25,26,27,28,29,30,31,32	100
CO5	33,34,35,36,37,38,39,40	100
<b>Total</b>		<b>500</b>

**Unit Wise**

<b>Unit</b>	<b>Q. No</b>	<b>Marks</b>
Unit 1	1,2,3,4,5,6,7,8	100
Unit 2	9,10,11,12,13,14,15,16	100
Unit 3	17,18,19,20,21,22,23,24	100
Unit 4	25,26,27,28,29,30,31,32	100
Unit 5	33,34,35,36,37,38,39,40	100
<b>Total</b>		<b>500</b>

### Blooms Taxonomy Level (BTL) Wise

<b>BTL</b>	<b>Q. No</b>	<b>Marks</b>
LOT	1, 2, 3, 4, 6, 9, 10,12, 17, 19, 21, 25, 27, 29, 33, 37, 38	170
HOT	5,7,8,11,13,14,15,16,18,20,22,23,24,26,28,30,31,32,34,35,36,39,40	330
<b>Total</b>		<b>500</b>

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**Disclaimer:** -This is a Practice set. The Question in End term examination will differ from the Practice set. This Practice set is meant for practice only.