



Family Name					
Given Name/s					
Student Number					
Teaching Period	Semester 2, 2017				

SBI284 – Histology and Histochemistry	DURATION	
	Reading Time:	10 minutes
	Writing Time:	120 minutes
INSTRUCTIONS TO CANDIDATES		
<p>The examination has A, B and C sections Section A: Suggested Time: 30 minutes Answer ALL 20 questions on the answer booklet provided. Marks:20</p> <p>Section B: Suggested Time: 30 minutes Answer ALL 6 questions in the booklets provided. Marks: 30 Note that questions ARE of equal value.</p> <p>Section C: Suggested Time: 60 minutes Answer ALL 5 questions in the booklet provided. Marks: 60 Note that questions ARE of equal value.</p> <p>Section A must be answered on the Multiple Choice Answer booklet. Please ensure that your name and student number are clearly indicated on your Answer Sheet and at the top of this examination paper.</p> <p>Section B & C must be answered in separate booklets. Read ALL questions carefully.</p>		
EXAM CONDITIONS		
<p><u>You may begin writing from the commencement of the examination session.</u> The reading time indicated above is provided as a guide only.</p>		
This is a CLOSED BOOK examination		
No calculators are permitted		
No handwritten notes are permitted		
No dictionaries are permitted		
ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED	
No additional printed material is permitted	1 x 16 Page Book 1 x 4-Multiple Choice Answer Sheet 1 x Scrap Paper	

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DOUBLE-SIDED.**

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Section A

Multiple Choice Questions

Total No of Marks for this section: 20

This section should be answered on the Answer Sheet provided. Please ensure that your name and student number have been written on the Answer sheet and place in the completed answer Booklet.

Note that **ALL** questions in this section are of equal value as indicated.

Suggested Time allocation for Section A: 30 mins

END OF SECTION A

Section B

Short Answer Questions

Total No of Marks for this section: 30

Answer ALL questions in this section should be answered in the Answer Booklet provided.

Marks for each question are indicated.

Suggested Time allocation for Section B: 30 mins

Question 1

Explain what immunohistochemistry involves and variations of the technique.

(Marks: 5)

Question 2

Explain the role of embedding and infiltration and describe **TWO** different materials that can be used listing the advantages and disadvantages of each.

(Marks: 5)

Question 3

Describe the mechanisms by which fixatives work giving relevant examples.

(Marks: 5)

Question 4

Explain the basis of the lysochrome staining technique

(Marks: 5)

Question 5

Explain what is meant by “taking to water” in tissue processing and how this is achieved.

(Marks: 5)

Question 6

Define what a mordant is and explain the role of mordants in staining.

(Marks: 5)

END OF SECTION B

Section C

Short Essay Questions

Total No of Marks for this section: 60

Answer ALL questions in this section should be answered in the Answer Booklet provided.

Marks for each question are indicated.

Suggested Time allocation for Section B: 60 mins

Question 1

You have received a piece of bone from a biopsy in formalin. Describe how you would process the specimen prior to the staining stage

(Marks: 10)

Question 2

Describe the various types of connective tissue (your description must mention the predominant cell types, fibers and relative amount of extracellular matrix)

You may include diagrams to illustrate your answer.

(Marks: 10)

Question 3

Describe in detail the three types of muscle tissue and how you would distinguish them on light microscopy.

You may include diagrams to illustrate your answer.

(Marks: 10)

Question 4

Describe the four distinct layers of the gastrointestinal tract relating the structure of each layer to its function.

You may include diagrams to illustrate your answer.

(Marks: 10)

Question 5

Describe the changes in histological organization that occur along the respiratory tract from the trachea to the alveoli.

You may include diagrams to illustrate your answer.

(Marks: 10)

Question 6

Describe the structure and functions of the epithelium that lines the bladder.

(Marks: 10)

END OF EXAM