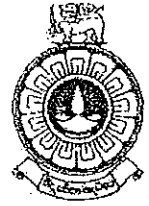


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THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MLS
ACADEMIC YEAR 2018/2019 – SEMESTER I

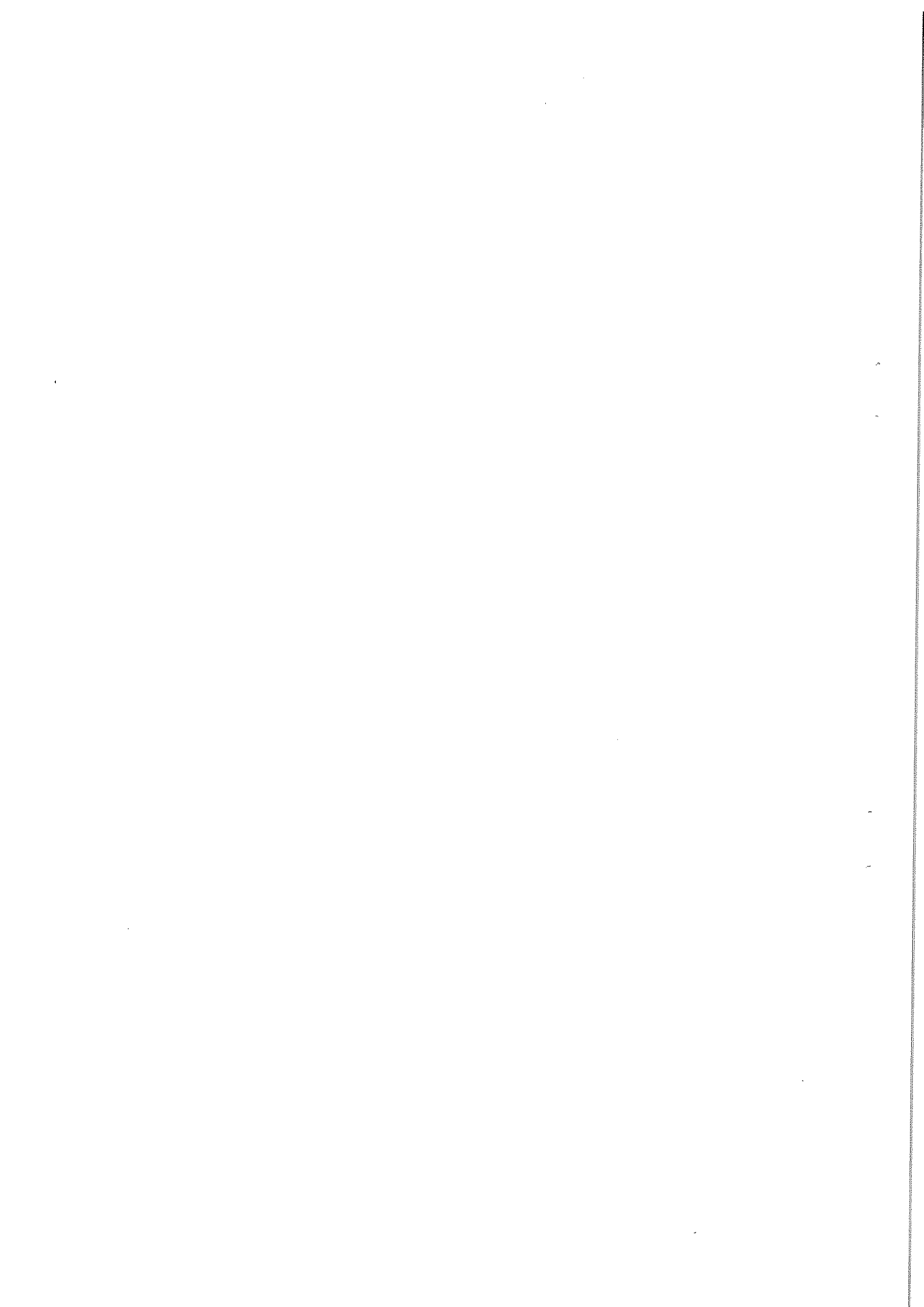


BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU4406 – HISTOPATHOLOGY – LEVEL 4
FINAL EXAMINATION

DURATION:03 HOURS

DATE:07.03.2019

TIME: 9.30AM –12.30PM



Part B: Structured Essay Questions (40 marks)

Q1

1.1 Give an example of a tissue block, which can be used as a control for the following special stains and immunohistochemical tests. For each stain, state the structure that would show positive staining in your control slide and the colour that these structures would stain. (The first answer has been provided as an example). (10 marks)

	Special stain	Control	Positive structures	Colour
	Masson Fontana	skin tissue	melanocytes in epidermis	black
1)	Alcian Blue			
2)	Iron			
3)	Elastin Van - Gieson			
4)	Wade Fite			
5)	CD20 immunostain			

Total-10 Marks

Q2

- 2.1 List a common technical problem encountered in each of the following situations. What steps you would take to improve the quality of the slides prepared from these specimens? (5 marks)

	Specimen	Technical problem	Remedial measure/s
i.	Fatty specimen		
ii.	Blood stained specimen		
iii.	Large tumour from liver		
iv.	Ossified tumour		
v.	Endoscopic biopsy from stomach		

2.2 List one cause for each of the following technical errors encountered in histology slides (5 marks)

- 1. Shatters
- 2. Scores.....
- 3. Holes.....
- 4. Uneven staining.....
- 5. Air bubbles.....

Total- 10 Marks

Q3: You work in a laboratory with facilities for immunohistochemistry and receive a paraffin block with a request for estrogen receptors (ER), progesterone receptors (PR) and human epidermal growth factor receptor 2 (HER 2) to be performed on the tumour.

3.1 What is the most likely tumour? (1 mark)

3.2 Outline in sequence the steps that you would take in performing immunohistochemical staining on the tumour block. (6 marks)

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3.3 The test for ER is completely negative. The pathologist tells you that based on the histological features she expects the tumour to be positive for ER. List two causes of false negative immunohistochemical staining (2 marks)

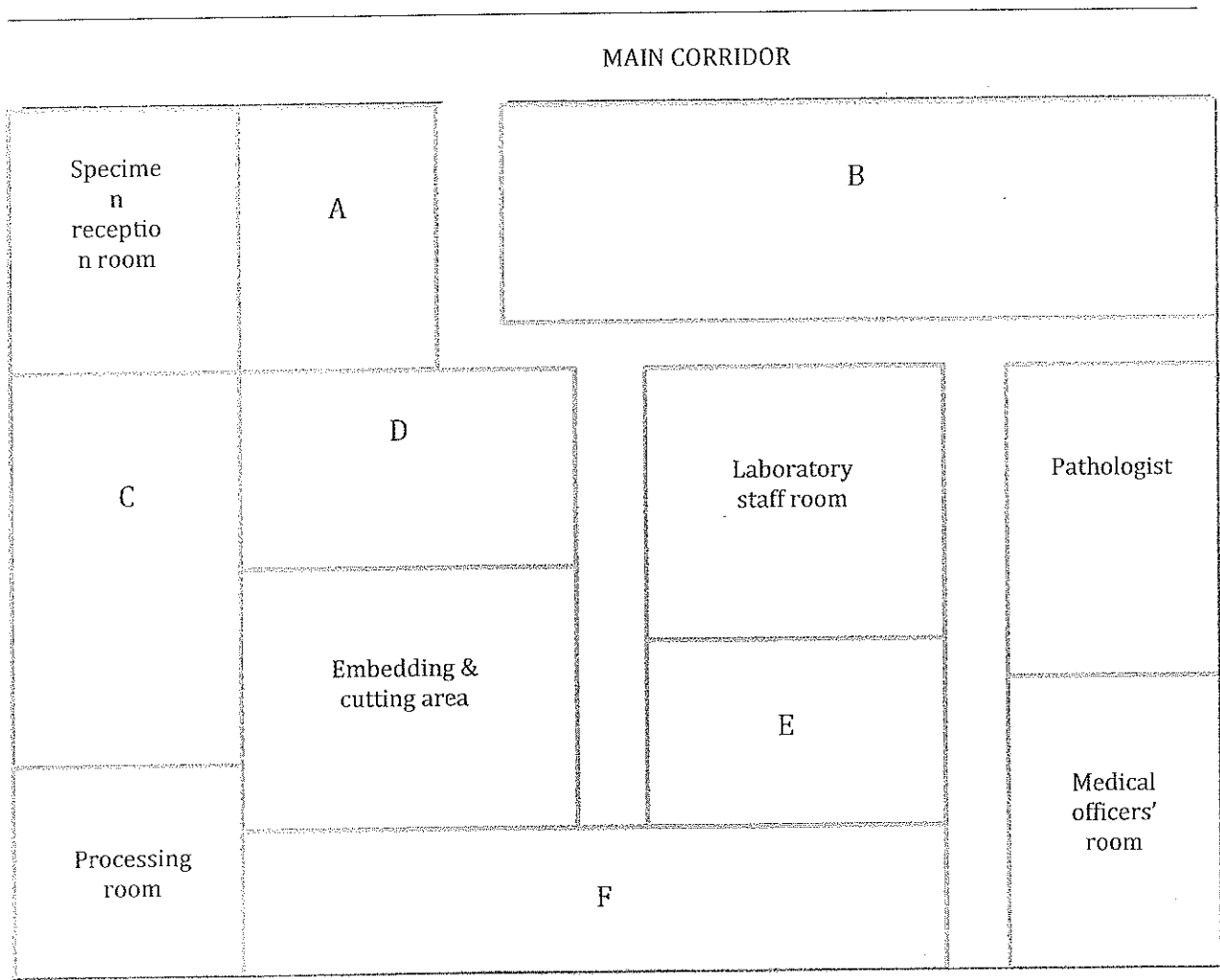
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3.4 State one routine step that you would take during immunohistochemical staining to detect false negatives. (1 mark)

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Total- 10 Marks

Q4: Given below is a floor plan of a basic histopathology laboratory.



4.1 According to the above floor plan, what are the best rooms to be dedicated for the following functions? (Select from A – F) (5 marks)

- 4.1.1 Frozen sectioning:
- 4.1.2 Grossing area:
- 4.1.3 Histochemical staining (for H&E and special stains) :
.....
- 4.1.4 Immunohistochemical staining:
- 4.1.5 Report issuing:

4.2. During an inspection visit, it was noted that the laboratory staff used a table in one corner of the main work-space to keep their belongings and to eat. They use the sinks in the same room for general washing as well.

4.2.1. Give three reasons why this practice needs to be changed (3 marks)

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4.2.2. Briefly explain two steps you could take to correct the problems noted in the answer to 4.2.1 (2 marks)

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Total- 10 Marks

Part C: Essay Questions.(30 marks)

1. You are appointed as the technician in charge of the specimen cut up room. Describe the standard operation procedures (SOPs) that should be followed in the specimen cut up room, emphasizing their importance in providing a quality histopathology diagnostic service. Provide examples of issues that can occur due to improper practises and how these can be rectified. (15 marks)
2. Describe the steps involved from the point a specimen is trimmed /cut-up, to the point the slides are prepared for histological evaluation. (15 marks)

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BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU4406 HISTOPATHOLOGY- LEVEL4
FINAL EXAMINATION (2018/2019)

ANSWER SHEET FOR PART A

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|-----|---|---|---|---|---|-----|---|---|---|---|---|-----|---|---|---|---|---|
| 1. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d | 11. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d | 21. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d |
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| 10. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d | 20. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d | 30. | <table border="1"><tr><td>a</td><td>b</td><td>c</td><td>d</td></tr></table> | a | b | c | d |
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