

**THE OPEN UNIVERSITY OF SRI LANKA**  
**FACULTY OF HEALTH SCIENCES**  
**DEPARTMENT OF MEDICAL LABORATORY SCIENCES**  
**ACADEMIC YEAR 2023/2024 – SEMESTER I**

**BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS**  
**MDU4406 – HISTOPATHOLOGY**  
**FINAL EXAMINATION**

**DURATION: 03 HOURS**

---

DATE: 2<sup>nd</sup> APRIL 2024

TIME: 09.30 AM – 12.30 PM

---

**INDEX NO: .....**



**Part B: Structured Essay Questions (40 marks)**

Q1.

1.1

a) State the principle applied in immunohistochemistry (IHC). (02 Marks)

.....

.....

.....

.....

.....

b) List three (03) main types of controls used in IHC. (01 Mark)

- i. ....
- ii. ....
- iii. ....

1.2 Give two (02) antigen retrieval methods with one example for each. (04 Marks)

Antigen retrieval method	Example

1.3 Draw a labeled diagram of polymer chains to illustrate the principle of two step indirect immunohistochemistry technique (EnVision technique). (03 Marks)

**(Total 10 Marks)**

Q2.

2.1 State three (03) main parts of the microtome used in the histopathology laboratory.

(03 Marks)

- i. ....
- ii. ....
- iii. ....

2.2 State one (01) cause and one (01) corrective measure of the following errors in microtomy.

(04 Marks)

Error	Cause	Corrective measure
Ribbon of consecutive sections are curved		
Thick and thin sections		

2.3 How would you orient the following histology samples in a mould during tissue embedding?

(03 Marks)

Tissue	Orientation
Nails	
Placing multiple tissue pieces in one mold	

(Total 10 Marks)

Q3. Specimen of the lung has been sent to the histopathology laboratory in 10% neutral buffered formalin.

3.1 State a precautionary action that would facilitate quick fixation of lung tissue. (02 Marks)

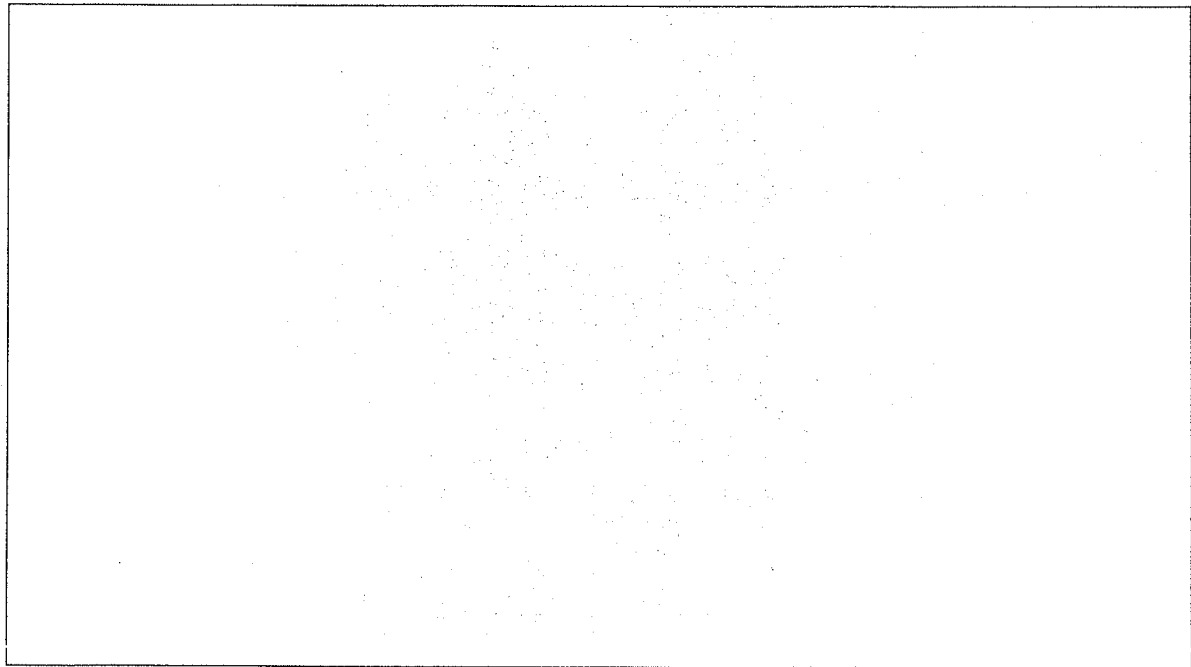
.....  
.....  
.....

3.2 Give three (03) disadvantages of using formalin as a fixative. (03 Marks)

- i. ....
- ii. ....
- iii. ....

3.3

a) Draw a labeled diagram of a cross-section of a hepatic lobule. (02 Marks)



b) State the function of each of the components in the portal triad. (03 Marks)

- i. ....
- ii. ....
- iii. ....

**(Total 10 Marks)**

Q4.

4.1 What are the three (03) main categories of hazards that may be encountered in the histopathology laboratory? (03 Marks)

- i. ....
- ii. ....
- iii. ....

4.2 Give two (02) examples for each of the following commonly used chemical hazards found in the histopathology laboratory. (02 Marks)

Chemical hazard	Example
Flammable	
Toxins	

4.3

a) State three (03) points to be considered, when selecting a container for fixing histology samples. (03 Marks)

- i. ....
- ii. ....
- iii. ....

b) Give one (01) precaution to minimize possible errors in fixation mentioned below. (02 Marks)

Error	Preventive measure
Formalin pigments	
Under fixation of large specimen	

(Total 10 Marks)

**Part C: Essay Questions (30 Marks)**

**Q1.** Briefly explain the different external quality assessment methods conducted to evaluate the quality of the histopathology laboratory. **(15 Marks)**

**Q2.** Describe five (05) factors that affect the rate of decalcification. **(15 Marks)**

\*\*\*\*\*

**Copy rights reserved**

