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THE OPEN UNIVERSITY OF
SRI LANKA
15 MAY 2025
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EXAMINATION DIVISION

00030



THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES

ACADEMIC YEAR 2024/2025 – SEMESTER I

BACHELOR OF MEDICAL LABORATORY SCIENCES (BMLS) HONOURS

MDU4209 – GENERAL PATHOLOGY

FINAL EXAMINATION

DURATION: 02 HOURS

DATE: 15TH MAY 2025

TIME: 1.30 PM – 3.30 PM

Part B: Structured Essay Questions (60 marks)

Q1. Numerous molecular mechanisms mediate cellular adaptations.

1.1. Define the following terms of cellular adaptation giving one (01) example for each.

(6 marks)

a. Physiological hypertrophy

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b. Pathological hyperplasia

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1.2 State the metaplastic changes that occur in the following organs due to chronic irritation.

(4 marks)

a. Respiratory Tract

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b. Bladder

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1.3 List four (04) causes of cellular atrophy.

(2 marks)

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

1.4 Briefly explain four (04) essential cellular changes for malignant transformation. (8 marks)

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Q2. Malignant diseases are a leading cause of death worldwide.

2.1. State the differences of benign and malignant tumors under the following criteria.

(5 marks)

Criteria	Benign tumours	Malignant tumours
i. Differentiation		
ii. Invasiveness		
iii. Metastasis		
iv. Cell orientation		
v. Growth rate		

2.2. State the nomenclature for benign and malignant tumors of the following tissues. (2 marks)

Tissue of origin	Benign	Malignant
Liver cells		
Striated muscle		

2.3. Briefly explain the three (03) ways of tumor/ cancer metastasis.

(9 marks)

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2.4. List two (02) criteria encountered in tumor grading (2 marks)

- i.
- ii.

2.5. State the two (02) tumor staging systems currently in use. (2 marks)

- i.
- ii.

(Total 20 marks)

Q3. Both genetic and environmental causes play an important role in transforming a normal cell into a neoplastic cell.

3.1 Briefly explain the role of proto-oncogenes in normal cellular function. (5 marks)

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3.2 List five (05) classes of oncogenes. (5 marks)

- i.
- ii.
- iii.
- iv.
- v.

3.3 State the sequence of events in cancer invasion. (4 marks)

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

3.4 Briefly explain the role of ultraviolet (UV) radiation in carcinogenesis. (6 marks)

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(Total 20 marks)

Part C: Essay Question. (20 marks)

Answer the question in the booklet provided.

Q1. Write short notes on,

- i. Metastatic calcification. (10 marks)
- ii. Classification of infarcts. (10 marks)

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