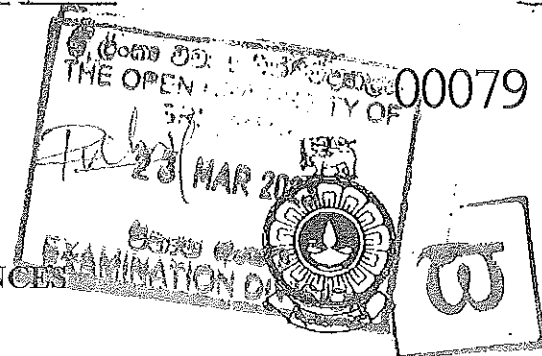


THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES



ACADEMIC YEAR 2022/2023 – SEMESTER I
BACHELOR OF MEDICAL LABORATORY SCIENCES (BMLS) HONOURS
MDU6503 – CLINICAL BIOCHEMISTRY III – LEVEL 6
FINAL EXAMINATION DURATION: THREE (03) HOURS

DATE: 23RD MARCH 2023

TIME: 09.30AM – 12.30 PM

INDEX NO:

PART B – Structured Essay Questions (40 marks)

1. Based on the structure and biological function, ovarian hormones are divided into three major groups.

1.1. Name the three (03) major groups of ovarian hormones. (2.5 marks)

I.

II.

III.

1.2. List the hormones connected to the hypothalamus-pituitary-ovarian axis.

(2.5 marks)

Organ	Hormone
Hypothalamus	A.
Pituitary	B.
	C.
Ovary	D.
	E.

1.3. Briefly describe the regulation of the secretion of female reproductive hormones.

(05 marks)

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INDEX NO:

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(Total: 10 Marks)

2. Vitamins act as components of coenzymes, antioxidants, hormones that affect gene expression and components of cell membrane.

2.1. Briefly explain the following two (02) terms. (02 Marks)

A. Vitamer

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.....

B. Pro-vitamin

.....

.....

2.2. Provide one (01) example of vitamin for each of the following functions. (03 Marks)

Function	Example
Coenzyme	
Antioxidant	
Hormone like steroid	

2.3. Briefly explain the metabolism of vitamin K. (05 marks)

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[illegible]

(Total: 10 Marks)

3. Minerals are inorganic elements which play a variety of important roles in the human body.

3.1.

3.1.1. Give two (02) examples of principal elements found in the human body. (01 Mark)

I.

II.

3.1.2. Give two (02) examples of micronutrient elements found in the human body.

(01 Mark)

I.

II

3.2. Write one (01) function of each of the following minerals. (03 Marks)

Mineral	Function
Silicon	
Chromium	
Iodine	

INDEX NO:

- 3.3. Describe the biochemical and physiological functions of calcium in the human body. (05 marks)

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(Total: 10 Marks)

4. Contemporary clinical medicine relies on clinical biochemistry and histopathology in testing and scanning for the diagnosis of cancer.

- 4.1. Briefly explain what a tumor marker is. (03 Marks)

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- 4.2. List two (02) desirable characteristics of a good tumor marker. (02 Marks)

I.

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II.

.....

.....

4.3. Briefly explain the application of tumor markers.

(05 Marks)

[illegible]

(Total: 10 Marks)

INDEX NO:

PART C – Essay Questions (30 Marks)

1. Write an essay on “Biochemical tests for the detection of maternal and fetal disorders”
(15 marks)
2. Write an essay on “pharmacokinetics”.
(15 Marks)

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