

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



ACADEMIC YEAR 2020/2021 – SEMESTER II
BACHELOR OF MEDICAL LABORATORY SCIENCES (BMLS) HONOURS
MDU4303 – CLINICAL BIOCHEMISTRY II – LEVEL 4
FINAL EXAMINATION

DURATION: 03 HOURS

DATE: 06TH OCTOBER 2022

TIME: 09.30 AM – 12.30 PM

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8

9

2

1. Serum/ plasma proteins are mainly synthesized by the liver. Plasma contains at least 125 individual proteins.

- I.

II.

III.

- I.

II.

III.

IV.

- 1.3. Briefly describe the application of immunochemical methods in assessment of serum protein levels. (05 marks)

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Number of children in the household (X)	Number of children in the household who are under 18 years of age (Y)
0	10
1	10
2	10
3	10
4	10
5	10
6	10
7	10
8	10
9	10
10	10

The graph shows a perfect positive linear relationship between the total number of children in the household and the number of children under 18. The x-axis is labeled 'Number of children in the household' and ranges from 0 to 10. The y-axis is labeled 'Number of children in the household who are under 18 years of age' and also ranges from 0 to 10. A solid line starts at the origin (0,0) and extends to the point (10,10), with data points plotted at every integer interval along the line.

[illegible]

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Figure 1. The effect of the initial concentration of the monomer on the polymerization of α -methylstyrene initiated by SnCl_4 in CH_2Cl_2 at -78°C for 24 h. The concentration of the initiator was $1.0 \times 10^{-2} \text{ mol/L}$. The concentration of the monomer was (a) 0.1 mol/L , (b) 0.2 mol/L , (c) 0.3 mol/L , (d) 0.4 mol/L , (e) 0.5 mol/L , (f) 0.6 mol/L , (g) 0.7 mol/L , (h) 0.8 mol/L , (i) 0.9 mol/L , and (j) 1.0 mol/L .

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(Total: 10 Marks)

(Total: 10 Marks)

INDEX NO:

3. A series of tests can be performed on a stool (or fecal) sample to help diagnosis of certain conditions affecting the digestive tract.

3.1. List five (05) constituents of normal feces. (2.5 marks)

I.

II.

III.

IV.

V.

3.2. List five (05) parameters assessed in the chemical analysis of stool samples. (2.5 marks)

I.

II.

III.

IV.

V.

3.3. Briefly describe the term "osmotic diarrhea". (05 marks)

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(Total: 10 Marks)

4. Hormonal, psychosocial and immunological factors may affect the fertility of females.

4.1. List two (02) examples for each of the following mentioned conditions (02 marks)

4.1.1. Disorders of hormonal metabolism

I.

II.

4.1.2. Uterine factors

I.

II.

4.2. List three (03) techniques can be used to detect ovulation. (03 marks)

I.

II.

III.

4.3. Write a short description on one method that you mentioned in 4.2. (05 marks)

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(Total: 10 Marks)

INDEX NO:

PART C – Essay Question (30 Marks)

1. Write an essay on “specimen collection and handling of cerebrospinal fluid”. Do not include steps of specimen collection in your answer. (15 marks)

2. Write an essay on “structure of normal spermatozoa” with the aid of an illustration. (15 marks)

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