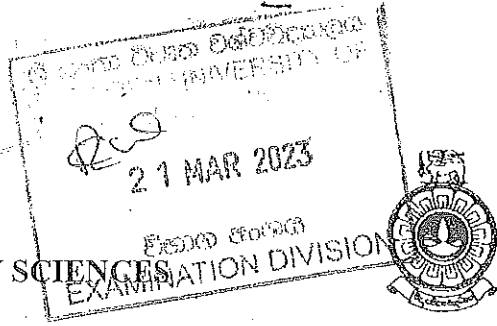


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THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES
ACADEMIC YEAR 2022/2023 – SEMESTER I

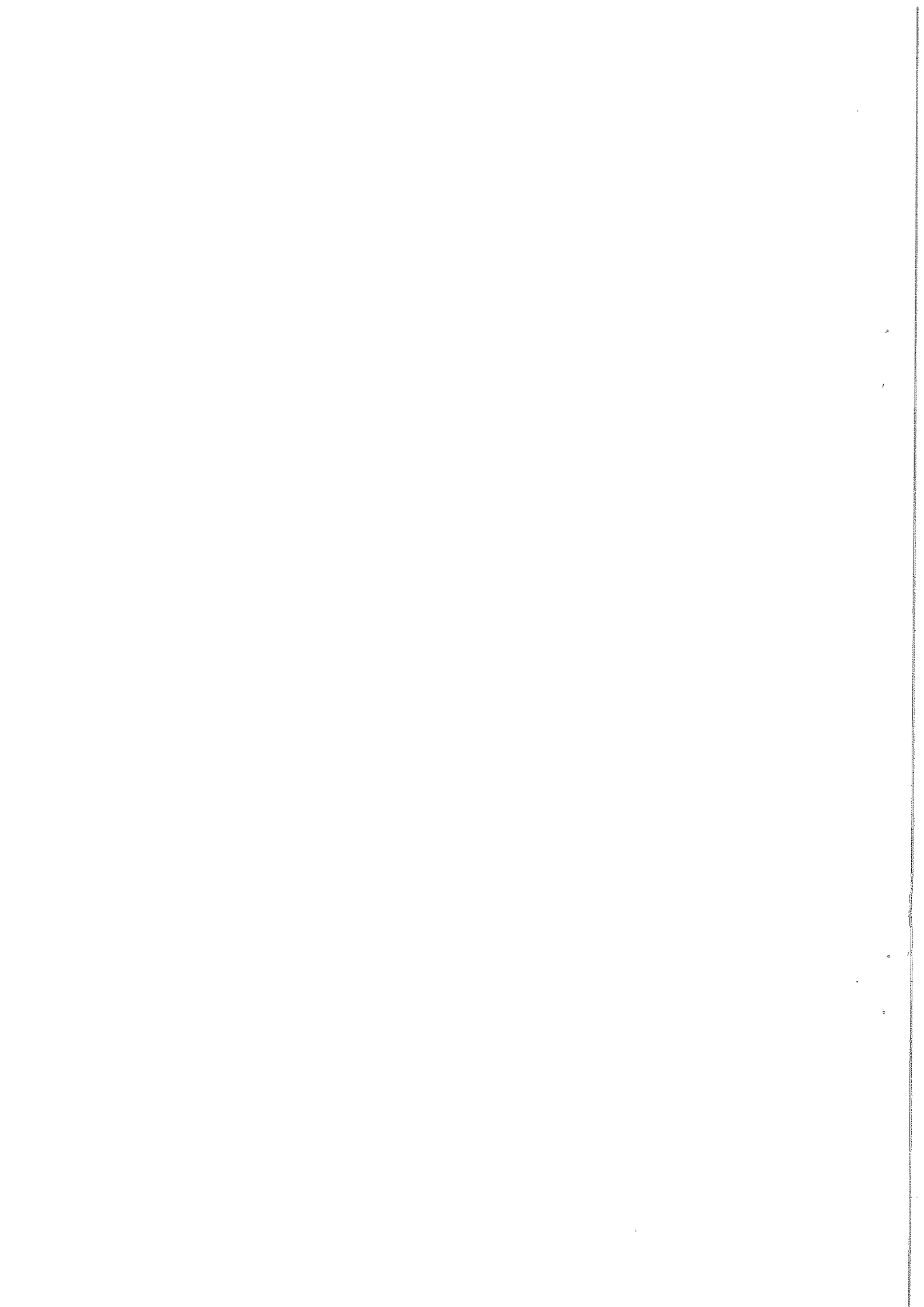


BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU5308 – RESEARCH METHODOLOGY – LEVEL 5
FINAL EXAMINATION

DURATION: 03 HOURS

DATE: 21st MARCH 2023

TIME: 01.30PM – 04.30PM



PART B – Structured Essay Questions (40 Marks)

1.1 Define the term hypothesis. (02 marks)

.....
.....

1.2 List three (03) components of a hypothesis. (03 marks)

- i.
- ii.
- iii.

1.3 “*Students who attend classes have higher grades than students who skip classes*”
Evaluate the given hypothesis. (05 marks)

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(Total: 10 Marks)

2. The following title was selected as a final year student research project.

A retrospective study on the incidence of dengue serotypes and its association with biochemical and heamatological laboratory parameters among dengue patients in Galle district.

2.1 Write down the general objective of the above research. (02 marks)

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2.2 Write down the specific objectives of this study. (03 marks)

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2.3 Evaluate the soundness of the research title. (05 marks)

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(Total: 10 Marks)

3.

3.1. List two (02) ways of writing a problem statement. (02 marks)

- i.
- ii.

3.2. Write down problem statements for the following research as per the above-mentioned methods.

Determination of association between body hydration status and acute kidney injury.

(04 marks)

- i.
.....

ii.
.....

3.3. List five (05) steps in writing a research problem. (04 marks)

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

(Total: 10 Marks)

4.

4.1. Describe the following terms by giving an example.

a. Conceptual definition of a variable (02 marks)

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b. Operational definition of a variable (02 marks)

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4.2. Cluster sampling could associate with decrease in precision and an increase in sampling error. Explain why? (02 marks)

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- 4.3. Illustrate the difference between cluster sampling and stratified random sampling using a figure. (04 marks)

(Total: 10 Marks)

PART C – Essay Questions (30 marks)

1. Write down a research problem related to pre-analytical phase of a medical laboratory and explain the methodology of your research indicating research approach, research design, research setting, population and sample, data collection method, data analysis method. (15 marks)
2. Describe the sources of measurement errors in research process giving examples. (15 marks)