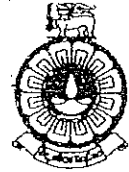


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THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF MEDICAL LABORATORY SCIENCES  
ACADEMIC YEAR 2019/2020– SEMSETER 1

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS  
MLU3146 RESEARCH METHODOLOGY- LEVEL 5  
FINAL EXAMINATION

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DATE: 07. 09. 2020

TIME: 1.30 PM –3.30 PM

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**Part B – Matching Questions – (10 Marks)**

Match each word or phrase given in the left column with one of the most suitable descriptions given in the right column. Indicate the letter corresponding to your response in the given space. (Within brackets)

Left Column		Right Column
1.	Looks at a situation which is current or about to occur (.....)	A. Cross-sectional designs
2.	A problem solving approach (.....)	B. Virginia Henderson
3.	The first nurse researcher (.....)	C. Interrogative
4.	States relationship between the variables (.....)	D. Primary source
5.	Any information they give to the researcher will not be used against them. (.....)	E. Prospective studies
6.	Purpose of the research is written as a question (.....)	F. Non-probability sampling
7.	The description of an investigation written by the person who conducted it (.....)	G. Questionnaire
8.	Examine groups of subjects at the same time in various stages of development (.....)	H. Trial & error
9.	Subjects are chosen by non-random methods (.....)	I. Florence Nightingale
10.	Self-report method of data collection (.....)	J. Hypothesis
		K. Freedom from exploitation
		L. Accessible population

**Part C - Four (04) Short Answer Questions. Answer all. (60 Marks)****Question 01**

1.1 What are the **TWO (02)** main types of research? (03 Marks)

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

1.2 State **THREE (03)** designs of qualitative research. (03 Marks)

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

1.3 What information should you include in the informed consent? (05 Marks)

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

1.4 What are the **THREE (03)** types of validity in research? (03 Marks)

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

1.5 Identify **FOUR (04)** most common threats to external validity? (04Marks)

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

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1.6 Identify **TWO** (02) ways of assessing reliability (02 Marks)

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

(Total Marks = 20)

**Question 02**

Read the following abstract carefully and answer the questions given below (2.1- 2.3 and 2.5-2.6).

**Abstract**

Lower-extremity wounds are a major complication of diabetes. Hemoglobin A1c (HbA1c) reflects glycemia over 2–3 months and is the standard measure used to monitor glycemia in diabetic patients, but results from studies have not shown a consistent association of HbA1c with wound healing. We hypothesized that elevated HbA1c would be most associated with poor wound healing. To test this hypothesis we conducted a retrospective cohort study of 183 diabetic individuals treated at the Johns Hopkins Wound Center. Our primary outcome was wound-area healing rate ( $\text{cm}^2/\text{day}$ ). Calibrated tracings of digital images were used to measure wound area. We estimated coefficients for healing rate using a multiple linear regression model controlling for clustering of wounds within individuals and other common clinic variables. The study population was 45% female and 41% black with mean age of 61 years. Mean HbA1c was 8.0% and there were 2.3 wounds per individual (310 wounds total). Of all measures assessed, only HbA1c was significantly associated with wound-area healing rate. Specifically, for each 1.0% point increase in HbA1c, the daily wound-area healing rate decreased by  $0.028 \text{ cm}^2/\text{day}$  (95% CI: 0.003, 0.0054,  $p=0.027$ ). Our results suggest that glycemia, as assessed by HbA1c, may be an important biomarker in predicting wound healing rate in diabetic patients.

2.1 Identify the research approach and design of this study? (03 Marks)

Approach - ..... Design - .....

2.2 Identify the hypothesis of the study. (02 Marks)

.....  
.....

2.3 What are the independent and dependent variables you have identified from the hypothesis mentioned in 2.2? (04 Marks)

Independent variable - .....

Dependent variable - .....

2.4 Except the variables you have mentioned in 2.3 identify **THREE (03)** other variables from the above abstract (03 Marks)

i. ....

ii. ....

iii. ....

2.5 What are the **FOUR (04)** levels of measurements which are important in determining appropriate statistical tests in data analysis? (04 Marks)

i. ....

ii. ....

iii. ....

iv. ....

2.6 Identify **TWO (02)** levels of measurements from the above abstract with examples for each. (04 Marks)

Measurement	Example

(Total Marks=20)



