



The Open University of Sri Lanka
Bachelor of Medical Laboratory Sciences
Academic Year 2015/16 – Semester 2
MLU1141- Health Statistics
Continuous Assessment Test I

Date	: 23. 03. 2016	Time	:	10.00am – 11.00am
Registration Number	:	Duration	:	1 hour

There are **two (02)** questions. Answer **all** questions. Each question is allocated fifty marks.

- 1) State whether each of the following statements is true or false. In each case, give reasons for your answer.
 1. In random sampling, the probability of selecting an item from the population is unknown.
 2. In random sampling, each item in the population has the same probability to be included into the sample.
 3. Response bias cannot be possible in estimates obtained from a random sample.
 4. Non-sampling error can always be reduced by increasing the sample size.
 5. Non-sampling error cannot occur in random samples.

- 2) In a study to understand the effectiveness of a drug as a pain relief, a researcher recorded the **time taken (minutes) for pain relief**, after taking the drug. Since the effect of the drug may vary depending on the gender and the age, he further recorded the **gender** of each person and the **age to the nearest year**. The persons for this study were selected from among the persons attended to a clinic for treatment. The researcher had recorded data on 820 females and 530 males and included all the persons attended the clinic on the four days he had allocated for data collection.
 - i) Clearly describe the population.
 - ii) State whether the population is finite or infinite. Give reasons for your answer.
 - iii) State whether the study is an observational study or an experimental study. Give reasons for your answer.
 - iv) A student claimed that since the researcher had collected data on all the persons who had attended the clinic on the days of data collection, he had done a census. Do you agree with this statement or not? Give reasons for your answer.

- v) Classify each of the three variables in this study as qualitative or quantitative.
- vi) Classify the data collected on each of the three variables as nominal, ordinal, interval or ratio.
- vii) In relation to this study, explain the following terms:
 - a. Interaction
 - b. Random variation

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