DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
University Examinations 2014/2015

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF **BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE**

HRD 2114: RESEARCH METHODOLOGY

DATE: 2ND FEBRUARY 2015   **TIME: 8.30AM-10.30 AM**

INSTRUCTIONS:
1. Answer **QUESTION ONE** and any other **TWO QUESTIONS**.
2. Show clearly your work and the number of questions attempted.

QUESTION ONE (30MARKS) (COMPULSORY)

a) Define 'Research'. What are the three criteria that a process needs to adhere to, to qualify to be called a research?   **[3 Marks]**
b) State and explain four characteristics of research.   **[4 Marks]**
c) Distinguish between research method and research methodology.   **[2 Marks]**
d) Give three reasons why is it important to spend time formulating and clarifying your research problem?   **[3 Marks]**
e) List and explain four challenges a researcher is likely to encounter in carrying out of a literature review.   **[4 Marks]**
f) What is a sample? State three decisions one need to consider when designing a sample.   **[4 Marks]**
g) As a researcher, explain the factors you would consider during the data collection process to ensure the success of the process.   **[3 Marks]**
h) You are having considerable problems with finding relevant material for your research when searching databases. What are the possible reasons why this is so?
                                                                            [2 Marks]
i) State three examples of different situations where you might use secondary data as part of your research.   **[3 Marks]**
j) Differentiate between the following measurement scales, Nominal scale and ordinal scale.   **[2 Marks]**

QUESTION TWO (20 MARKS)

a) A differentiate between null hypothesis and alternative hypothesis citing relevant examples. **[5 Marks]**

b) Conceptual frame work increasingly strengthens and keeps the researcher on track. Explain the usefulness of the conceptual frame work in a research study.

[5 Marks]

c) State and explain briefly the guidelines that a researcher need to follow to ensure validity of instruments/tools he intends to construct.

[10 Marks]

QUESTION THREE (20 MARKS)

a) Assume you wish to analyze the car traffic that passes the Dedan Kimathi University gate. You are interested in determining how many vehicles pass by the gate and you would like to classify them on various relevant dimensions.

   i) What other information might you find useful to observe?

   ii) How would you decide what information to collect?

   iii) Devise the operational definition you would need.

   iv) How would you sample the vehicle traffic? **[12 Marks]**

b) Distinguish between probability and non- probability sampling **[4 Marks]**

c) What are some of the considerations in the preparation of a research design?

[4 Marks]

QUESTION FOUR (20 MARKS)

a) Briefly describe the different steps involved in a research process. **[10 Marks]**

b) State five instances that may compromises research ethics in a research process.

[5 Marks]

c) List and explain the qualities of a good research proposal. **[5 Marks]**

QUESTION FIVE (20 MARKS)

A software company which develops customized software solutions for its clients worldwide is facing internal problems with its employees. The company's employee productivity which had reached record levels is now decreasing. The firm also observed that the attrition rates which were very low previously are now beginning to increase as the market is gaining momentum. The management of the company has decided to carry out a study to seek reasons for its employee behavior.

(i) Explain the type of research design that is suitable for the above study   **[7 Marks]**

(ii) Explain the possible dependent and independent variables of the study   **[6 Marks]**

(iii) Formulate three possible specific objectives of the study   **[3 Marks]**

(iv) Explain how you can construct the sample size   [**4 Marks**]