MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

CITY CAMPUS

CIR 801: RESEARCH METHODS IN COMPUTING AND INFORMATICS

Date: 14th May 2018

Time 3.00 – 6.00pm

INSTRUCTIONS:

- Answer any THREE questions.

Q1. A master degree programme student in Information Technology was set to carry out research in an ITfield. He was asked by his department to come with an abstract in the area he intended to study. Assuming you were the student

    (a) Outline the MAIN components expected to be captured in the abstract.

        [5 marks]

    (b) Prepare an abstract of no more than 400 words on a topic of your choice within the field of IT for study.   [15 marks]

Q2. Note that research is a process through which researchers attempt to achieve systematically and with the support of data the answer to a question, the resolution of a problem, or a greater understanding of a phenomenon.

    (a) Briefly outline ANY FOUR of the eight distinct characteristics of a research process.   [8 marks]

    (b) With the aid of a well-labelled flow chart, illustrate a research process that consists of series of actions or steps necessary to effectively carry out research.

        [12 marks]

Q3. (a) Briefly explain what is meant by the following references to a good research

        (i) Good research is empirical   [2 marks]

        (ii) Good research is replicable   [2 marks]

    (b) Research Proposal is an important aspect of project writing. It is quite similar to an architectural plan, which gives an insight into what the building will look like on

completion. As a student determined to carry out research in some area in Information Technology, briefly

    (i)   Discuss the importance of coming up with a research proposal as a prerequisite to embarking on research.   [6 marks]

    (ii)   Outline the TEN components considered to be most critical to a good Research Proposal.   [10 marks]

Q4.   **(a)**   There are some personal and social considerations in the evaluation of research problem. Consequently, there is the need to ask some basic questions at the onset. According to Akinwumiju (2001) answers to such preliminary questions will act as guides during the actual execution of the study. Outline any

    (i)   THREE personal considerations.   [6 marks]

    (ii)   TWO social considerations.   [4 marks]

  (b)   As a postgraduate student out to carry out research briefly discuss the FIVE sources that according to Aina (2002) can help you identify a researchable topic

    [10 marks]

Q5.   **(a)**   At the end of any research undertaking, a researcher is expected to come up with a research report. As a current postgraduate student discuss the layout of such kind of a report and any other necessary considerations.   [14 marks]

  (b)   It is the view of most current researchers that the use of computing systems has made it much easier and more efficient to carry out research. What is your take on this view?   [6 marks]