FIRST YEAR EXAMINATIONS FOR THE AWARD OF BACHELOR OF SCIENCE IN MATHEMATICS.

MATH 390: RESEARCH METHODOLOGY   TIME: 2 HOURS

INSTRUCTIONS

Answer question one and any other two questions

Adhere to the instructions on the answer booklet.

QUESTION ONE Compulsory.

a.   Explain the difference between primary data and Secondary data   2mks

b.   State at least three assumptions of Sampling   3mks.

c.   List at least four Forms of Hypothesis   4mks

d.   State the main parts of an abstract in a report   6mks

e.   State and briefly explain at least five tools of data collection   5mks

f.   Highlight five Types of Research On the basis of method of research   5mks

g.   Highlight at least six Basic rules in the APA referencing style.   5mks.

QUESTION TWO

a.   Highlight and briefly explain 10 sources of applied   mathematics research problem   10mks

b.   Highlight the General format of research report: 6mks

c.   Explain the difference between a bibliography and a reference and state at least four referencing styles   5mks

QUESTION THREE

a.   Highlight the general steps in Experimental Research Methods   10mks

b.   State and explain at least five Purposes of a Research Design   10mks

QUESTION FOUR

a. Briefly explain the following terms   4mks
     i.   Exploratory or formative research studies.

     ii.   Descriptive research studies

     iii.   Diagnostic research studies

     iv.   Hypothesis-testing research studies).

b. Highlight the criteria to be satisfied by a scientific research   7mks

c. State at least four questions to be answered in the Evaluation of a research Problem   4mks

d. Highlight the main characteristics of a good objective   5mks

QUESTION FIVE

a. Explain the steps in Identification of a Research Problem: 6mks

b. Explain five Characteristics of Good Research Design: 10mks

c. List at least five types of variables in research   5mks