



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE
(PHYSICS)
1ST YEAR 2018/19
KISUMU CAMPUS

COURSE CODE: SPH 898

COURSE TITLE: RESEARCH METHODOLOGY

EXAM VENUE:

STREAM:

DATE:

EXAM SESSION:

TIME: 2:00 HRS

Instructions:

- 1. Answer question 1 (Compulsory) in Section A and ANY other 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

INSTRUCTIONS: Answer question ONE and any TWO questions.

QUESTION ONE (30 marks)

- 1.
- a) Explain the following concepts;
 - a. Research methodology
 - b. Hypothesis
 - c. Literature review
 - d. Research report
 - e. Research problem [10 marks]
 - b) Give any **THREE** scholarly sources of literature review. [3 marks]
 - c) It is not a good strategy to begin your research with a specific research idea. What is the best process to carry out research? [7 marks]
 - d) Briefly explain **FIVE** characteristics of scientific research. [10 marks]

QUESTION TWO (20 marks)

- 2.
- a) Differentiate between an empirical research and reductive research [2 marks]
 - b) Discuss the various expectations of a good literature review. [12 marks]
 - c) Explain the importance of a good research report. [6 marks]

QUESTION THREE (20 marks)

- 3.
- a) Briefly explain **FIVE** factors that should be taken into consideration by a researcher in selecting an appropriate method for data collection. [10 marks]
 - b)
 - i. Explain its importance of hypothesis [4 marks]
 - ii. Give the various types of hypothesis [6 marks]

QUESTION FOUR (20 marks)

- 4.
- a) Differentiate between a general source and scholarly source of literature [2 marks]
 - b) There is an increasing trend towards carbon emission and this has increased the risk associated with business decisions globally, making it more important to have a sound

information base. In view of the above statement, discuss the role of research in today's world. [8 marks]

c) Discuss the reasons why it is important to write a research proposal before engaging in any field research exercise. [10 marks]

QUESTION FIVE (20 marks)

5.

a) i. Explain the components of a research problem. [4 marks]

ii. What are the sources from which research problems are identified? [4 marks]

b) Discuss any **THREE** importance of literature review in a research proposal. [6 marks]

c) Write short notes on the bibliography [6 marks]