



# MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE  
IN POPULATION HEALTH

PPH 300: RESEARCH METHODS

DATE: 5/12/2017

TIME: 8.30-10.30 AM

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## INSTRUCTIONS

- The paper consists of **two** sections
- Section **A** is **compulsory**
- Answer **any two** questions in section **B**

## SECTION A (30 MARKS) (COMPULSORY)

### QUESTION ONE (30 MARKS)

- Explain the benefits of research in modern society. (3 marks)
- Using appropriate examples, differentiate between a null hypothesis and an alternative hypothesis. (3 marks)
- Explain the role of a conceptual framework in a research proposal. (3 marks)
- Highlight four reasons why a researcher would need to conduct literature review. (4 marks)
- Explain three key components of a research problem. (3 marks)
- State any two sources where you could get “cases” to include in a case-control study. (2 marks)
- Research can be broadly categorized into two. Explain. (4 marks)

- h) Explain three ethical issues a researcher would encounter during data collection (3 marks)
- i) Distinguish between a dependent variable and an independent variable. (2 marks)
- j) Explain three non probability sampling methods used in research. (3 marks)

## **SECTION B**

### **QUESTION TWO (20 MARKS)**

- a) A student at Machakos University has found out that only 35% of women of reproductive age in Machakos County use skilled birth attendants during delivery. This is even lower than the national average which stands at 60%. For this problem, formulate
  - i. An appropriate title for the research proposal (1 mark)
  - ii. A broad objective (1 mark)
  - iii. Two specific objectives (1 mark)
  - iv. A statement of the problem (4 marks)
  - v. A justification (2 marks)
- b) Explain why you would choose a cohort study design for your research. (10 marks)

### **QUESTION THREE (20 MARKS)**

- a) By giving relevant examples, discuss the major challenges faced by researchers in Kenya. (10 marks)
- b) Explain five reasons why it is important to write a research proposal. (10 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Communicating scientific information is very important in research. Explain ways this can be achieved. (10 marks)
- b) Describe the components of an informed consent and explain their importance.(10 marks)

### **QUESTION FIVE (20 MARKS)**

- a) As a researcher, you are conducting research in Machakos Level 5 hospital to investigate factors causing an increase in teenage pregnancies. You have identified a sample frame of 100 teenagers. Explain how you would draw a sample of twenty (20) teenagers using systematic sampling method. (10 marks)
- b) Describe the factors that you will consider before choosing a study design for your research. (10 marks)