



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURE, ENVIROMENT AND HEALTH SCIENCES

DEPARTMENT OF HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH 300: RESEARCH AND RESEARCH METHODS

DATE: 23/8/2022

TIME: 2.00-4.0 PM

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## INSTRUCTIONS:

This paper consists of two sections A and B

### SECTION A

#### Specific Instructions

- This section has one question
- This question is **COMPULSORY**
- The question is 30 Marks

#### QUESTION ONE (30 MARKS)

- a) Research is a systematic inquiry to discover new knowledge
- Outline the importance of new knowledge in public health (3 marks)
  - Highlight sources of the new knowledge (2 marks)
- b) Using examples distinguish between
- Independent and Dependent variable (2 marks)
  - Qualitative and Quantitative research design (2 marks)
- c) Provide the correct APA Reference list for the following; (2 marks)
- A developmental-contextual model of couples coping with chronic illness across the adult lifespan. Berg Charles. Allen kings and Upchurch Richer, 2007 Psychological Bulletin. 133(6), 920-954.
  - Indian Journal of Psychiatry Chadda Rita Kelly 2014 Caring for the family caregivers of persons with mental illness, 56(3), 221-227.

- d) Use the following research title to answer the questions below; “Influence of education level on use of contraceptives among women of reproductive age (15-45 years) attending Mwala level 4 Hospital, Machakos County”
- i. Define the target population's exclusion criteria (3 marks)
  - ii. Argue why purposive sampling is preferable to other sampling methods (1 mark)
  - iii. Formulate three (3) objectives for the above study (3 marks)
  - iv. Choose three (3) topics for the literature review (3 marks)
  - v. State the purpose of the above study (1 mark)
  - vi. Formulate a null hypothesis for the above study (1 mark)
- e) Outline two (2) characteristics of any research that ensure minimum biases and errors (2 marks)
- f) Explain the statistical tests applicable for the following studies (2 marks)
- i. Assume you want to determine whether students who have used the library services have higher average grades in their class.
  - ii. Suppose you want to know how Machakos university employees compare to Kenyatta university employees in terms of monthly salary.
  - iii. Assume you want to determine whether a student's total grade differs when they are in their first, second, or third year.
  - iv. You want to predict if university students will return for their second year based on their first year's class attendance.
- g) The following is part of research results;  
Individuals or oneself (55%) made the decision to take contraception, while the couple (34%) made the decision together. Only 5% were advised by their husbands, while 3%, 2%, and 1% received advice from their mothers, neighbors, and church members, respectively.  
Use a bar graph to present the above data (3 marks)

## **SECTION B:**

### **Specific Instructions**

- **This section has four (4) question**
- **Answer any two (2) questions**

**Each question is 20 Marks**

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

You have been granted funding to conduct research on the factors that influence the occurrence of diarrhea in children under the age of five in informal urban settlements.: A case study of Korogocho, in Nairobi County, Kenya

- Describe the fundamental contents of a consent form for the study mentioned above. (10 marks)
- Provide details on the logistics of the study's pre- and post-field activities. (10 marks)

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

- Discuss challenges faced by researchers in the field of health sciences (10 marks)
- Describe methods for determining if a research instrument generates consistent results even after repeated trials. (10 marks)

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

- Discuss the merits of using an observation checklist for collecting data on COVID-19 containment measures. (10 marks)
- “Many research institutions are hesitant about the value of research and consider it as a worthless activity on which no funds should be spent.”. Critique this statement. (10 marks)

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

- Discuss the purposes of the “results” and “discussion” sections of a research report (10 marks)
- A public relations firm will be established to promote vasectomy across the country. Explore a number of non-experimental research designs that would be appropriate for the

project.  
(10 marks)