

**FACULTY OF HEALTH SCIENCES
DEGREE IN ENVIRONMENTAL HEALTH SCIENCES
(FINAL EXAMINATION –DECEMBER 2014)**

TITLE OF PAPER : RESEARCH METHODS
COURSE CODE : EHS 308
TIME : 2 HOURS
TOTAL MARKS : 100

INSTRUCTIONS:

1. ANSWER ANY OTHER FOUR QUESTIONS
2. EACH QUESTIONS WORTH 25 MARKS
3. FORMULAE AND OTHER DATA IS PROVIDED
4. BEGIN THE ANSWER TO EACH QUESTION IN A SEPARATE SHEET OF PAPER.

DO NO OPEN THIS EXAMINATION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

QUESTION 1

- a. Write short notes on the following:
 - i. Placebo effect. [5]
 - ii. Confounding variables. [5]
- b. Briefly discuss the type of information obtained using the following research designs:
 - i. Cross sectional study. [5]
 - ii. Longitudinal study. [5]
 - iii. Descriptive study. [5]

[25]

QUESTION 2

- a. Discuss the main issues which should receive attention during formulation of the research problem. [10]
- b. Name the scales of measurement and describe their properties. [15]

[25]

QUESTION 3

- a. Distinguish between
 - i. Convenience and purposive sampling. [4]
 - ii. Systematic and stratified sampling. [6]
 - iii. Discrete and continuous variables. [4]
 - iv. Reliability and validity. [6]
- b. Briefly explain the purpose of a 'control' in experimental research. [5]

[25]

QUESTION 4

- a. Use the following headings to discuss how continuous variables can be related. Use diagrams to illustrate where possible.
 - i. Scatter plot. [10]
 - ii. Correlation and correlation coefficient. [10]
 - iii. Regression analysis. [5]

[25]

QUESTION 5

Discuss the ethical standards required for treatment of human participants in research under the following headings:

- i. Avoiding harm. [5]
- ii. Privacy and confidentiality. [5]
- iii. Justice. [5]
- iv. Informed consent. [10]

[25]

END OF EXAMINATION