

**UNIVERSITY OF SWAZILAND**

**DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND  
PLANNING**

**FINAL EXAMINATION, MAY 2017**

**MSc**

**TITLE OF PAPER : GEP RESEARCH TECHNIQUES**

**COURSE NUMBER : GEP 608/ERM625**

**TIME ALLOWED : THREE (3) HOURS**

**INSTRUCTIONS : ANSWER TWO (2) QUESTIONS ONLY**

**ILLUSTRATE YOUR ANSWERS WITH APPROPRIATE  
DIAGRAMS**

**MARK ALLOCATION: EACH QUESTION CARRIES FIFTY (50) MARKS**

**THIS PAPER IS NOT TO OPENED UNTIL PERMISSION HAS BEEN GRANTED  
BY THE INVIGILATOR**

**GEP 608/ERM 625: GEP RESEARCH TECHNIQUES - MAY, 2017**

**ANSWER ANY TWO (2) QUESTIONS**

**QUESTION 1**

Using examples and diagrams where appropriate, discuss the links between:

- a) Science, scientific knowledge, scientific research and scientific method. (14 marks)
  - b) Concepts, constructs and variables. (12 marks)
  - c) Theory, postulate, propositions and hypothesis. (12 marks)
  - d) Research, thesis, research question and hypothesis. (12 marks)
- (50 Marks)**

**QUESTION 2**

- a) Critically discuss the developments in social science research paradigms, indicating their strengths and weaknesses. (20 marks)
  - b) With the aid of examples explain what happens at the empirical and theoretical research planes. (10 marks)
  - c) With the help of examples and diagrams, explain how the following variables are interlinked:
    - i) Independent variables (5 marks)
    - ii) Dependent variables (5 marks)
    - iii) Moderating variables (5 marks)
    - iv) Mediating or control variables (5 marks)
- (50 Marks)**

**QUESTION 3**

- a) Draw a diagram which summarizes a functionalist research process. (5 marks)
  - b) Using an example explain how you would conduct the following phases of the research process:
    - i. Exploration (15 marks)
    - ii. Research design (15 marks)
    - iii. Research execution (15 marks)
- (50 Marks)**

**QUESTION 4**

- a) Using an example, explain how you will formulate and statistically test your research hypothesis. (10 marks)
  - b) Discuss the major ethical challenges that arise in scientific research. (10 marks)
  - c) Using examples, explain how researchers are expected to address the ethical issues discussed in (b) above. (10 marks)
  - d) Discuss the following key research design attributes:
    - i) Internal validity (5 marks)
    - ii) External validity (5 marks)
    - iii) Construct validity (5 marks)
    - iv) Statistical conclusion validity (5 marks)
- (50 Marks)**