

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya.**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** [**info@must.ac.ke**](mailto:info@must.ac.ke)

**University Examinations 2015/2016**

THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH

**HPP 3306: ENVIRONMENTAL HEALTH GEOGRAPHIC INFORMATION SYSTEMS**

**DATE: AUGUST 2016 TIME: 2HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Define GIS and state its basic components. (3 Marks)
2. Briefly explain three examples of spatial relationships. (6 Marks)
3. Enumerate four advantages of GIS systems. (4 Marks)
4. What is a GPS? (2 Marks)
5. Describe the principles of GPS operation. (4 Marks)
6. Explain how the “human factor” enters into GIS development and implementation. (3 Marks)
7. Distinguish between GIS, CAD and AM/FM. (3 Marks)
8. Describe the differences between raster and vector based GIS. (4 Marks)
9. Define the term “Attributes” as is used in GIS. (1 Mark)

**QUESTION TWO (20 MARKS)**

1. Explain why you should never trust default setting in a GIS application. (5 Marks)
2. Describe four environmental issues that can be addressed using GIS. (4 Marks)
3. Discuss the applications of GIS in epidemiology. (11 Marks)

**QUESTION THREE (20 MARKS)**

1. Discuss the advantages and disadvantages of vector data. (12 Marks)
2. State the characteristics of a map and discuss importance of maps in GIS. (8 Marks)

**QUESTION FOUR (20 MARKS)**

Write an essay on Database Management Systems (DBMS). (20 Marks)