



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2015/2016

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE
OF BACHELOR OF ARTS IN DISASTER MANAGEMENT WITH
INFORMATION TECHNOLOGY**

CITY CAMPUS - REGULAR

**PDM 213: INTRODUCTION TO GEOGRAPHIC INFORMATION
SYSTEM IN DISASTER MANAGEMENT**

Date: 4th December, 2015

Time: 9.00 - 11.00 am

INSTRUCTIONS:

- Answer THREE questions. Question ONE is compulsory.



PDM 213: INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEM IN DISASTER MANAGEMENT

Answer **three** questions. Question **ONE** is Compulsory

Maps and should be used whenever appropriate

1. a) Explain a geographic object and a geographic field 4 marks
b) Describe the elements you use in creating a coordinate system 8 marks
c) Discuss the qualities of good spatial data base 8 marks
d) Discuss vector overlay functions 10 marks
2. A disaster manager created a map showing the trend of malaria in Kisumu in the last five years and projected to the future five years. Use this information to answer the following questions
a) Explain three data sources he used to create the map 3 marks
b) Discuss the representations he used in showing the features in raster 9 marks
c) Describe the visual variables used in representing different malaria incident locations 8 marks
3. Discuss five challenges in using GIS in analyzing trends in biological hazards 20 marks
4. Explain the factors that influence visualization of trends in hazard mapping 20 marks
5. Construct a relational database showing 3 relations for monitoring flood hazards 20 marks
6. Explain the functions of a spatial database management system 20 marks