



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF ARTS IN DISASTER
MANAGEMENT WITH INFORMATION TECHNOLOGY
(CITY CAMPUS – DAY)**

PDM 122: INTRODUCTION TO FLOOD MODELLING

Date: 21st July, 2014

Time: 2.00 – 4.00 p.m.

INSTRUCTIONS:

- **Answer Question ONE and any other TWO questions.**



PDM 122: INTRODUCTION TO FLOOD MODELLING

Answer question ONE and any other TWO

Sketch maps and diagrams should be used wherever they serve the purpose

1. a) Describe any four model parameters used in modeling flood **10 marks**
b) Explain the challenges of combining data in GIS for modeling **10 marks**
c) Discuss the indicators for flood risk in urban areas **10 marks**
2. a) Explain the types of flooding **10 marks**
c) Discuss the challenges caused by climate change in flood modeling **10 marks**
3. a) Explain the river profile **10 marks**
b) Discuss the factors contributing to urban flooding **10 marks**
4. a) Evaluate the application of modeling in mitigating floods **10 marks**
c) Explain the challenges in using flood models in developing countries **10 marks**
5. Analyze the challenges in data availability for modeling **20 marks**
6. a) Giving examples explain the following terms
b) Flood risk **5 marks**
c) Flood vulnerability **5 marks**
d) Flood hazard **5 marks**
e) Flood mitigation **5 marks**