MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN GEOSPATIAL INFORMATION SCIENCE WITH INFORMATION TECHNOLOGY

(CITY CAMPUS - DAY)

PGS 121: INTRODUCTION TO SURVEYING

Date: 14th July, 2014 Time: 9.00 - 11.00 a.m.

INSTRUCTIONS:

- **Answer Question ONE (COMPULSORY) and any other TWO questions.**

PGS 121: INTRODUCTION TO SURVEYING

Answer question ONE and any other TWO

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

1. a) Discuss the relevance of surveying **5marks**

   b) Explain any three rules which apply to field notes **6marks**

   c) Describe the process of chaining across an obstacle **6 marks**

   d) Explain the types of errors in any surveying exercise **6 marks**

   e) Calculate the distance of a road on the ground if the road is 10cm on a survey plan constructed at the scale of 1: 2000 **3marks**

2. The following readings were taken during a leveling exercise: 2.530, 1.347, 2.920, 1.270, 1.421, 2.676, 1.421, 2.281, 2.513, 1.559, 0.291, and 1.241. The level shifted after the fourth (4), eighth (8) and tenth 10^{th} readings. The first reading was taken on a benchmark(BM) 48.285m

   Rule out a level book page and carry out the necessary checks **20 marks**

3. Describe four primary functions of a GPS **5 marks**

   Explain the segments of operation in GPS **9 marks**

   Describe three types of error in GPS **6 marks**

4. Examine the role of surveying in sustainable land use planning **20 marks**

5. Explain the advantages and disadvantages of using GPS and plane table survey **20 marks**

6. Explain precision and accuracy **6 marks**

   Describe a position fix and a way point in GPS **14 marks**