



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF HUMANITIES AND SOCIAL SCIENCE

DEPARTMENT OF SOCIAL SCIENCES

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF EDUCATION (ARTS)

BACHELOR OF ARTS

AGE 402: SURVEYING

DATE: 8/12/2017

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Describe the following terms:
- i) Calibration (2 marks)
 - ii) Traverse (2 marks)
 - iii) Accuracy (2 marks)
 - iv) Precision (2 marks)
- b) Describe three major parts of a transit. (6 marks)
- c) Explain the common sources of error in surveying. (8 marks)
- d) Describe four types of measurements made in surveying. (8 marks)

QUESTION TWO (20 MARKS)

Explain the procedure of taking horizontal measurements across a depression and across a hill in chain surveying

QUESTION THREE (20 MARKS)

- a) Examine the reasons why vertical angles are required in survey. (6 marks)
- b) Critically assess the role of hydrographic surveys in Kenya. (14 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the basic operating principles of EDM class of surveying instructions. (10 marks)
- b) Using an illustration, describe how Abney level is used to measure height of objects in an accessible area. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Measurement of a road was recorded as 171.278 metres with a steel tape that was only 29.996 metres under standard atmospheric pressure and temperature.
 - i) What is the correction per tape length? (4 marks)
 - ii) Calculate the corrected distance. (4 marks)
- b) Define the term traversing and explain how it's done in surveying work. (12 marks)