



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations 2015/2016

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

SECOND SEMESTER EXAMINATION FOR DIPLOMA IN BUILDING

CONSTRUCTION TECHNOLOGY AND DIPLOMA IN CIVIL ENGINEERING

BCECD 115: SURVEYING I

Date: 20/4/2016

Time: 8:30 – 10:30 AM

INSTRUCTIONS

This paper consists of FIVE questions

Answer question one and other two questions in this paper

QUESTION ONE

- a) Define the term surveying (2 marks)
- b) State four purposes of surveying (8 marks)
- c) Outline two branches of surveying (4 marks)
- d) Explain the three main types of obstacles in chain surveying (6 marks)
- e) Define the term LEVELLING (2 marks)
- f) State four types of levels (8 marks)

QUESTION TWO

- a) Name five types of surveyors outlining their duties (10 marks)
- b) Show a method of measuring a line over a small hill (10 marks)

QUESTION THREE

- a) Briefly explain a procedure of measuring a line across a tall building without setting out right angles (10 marks)
- b) Make a neat diagrammatic sketch to show the basic optical principle of a telescope (10 marks)

QUESTION FOUR

Briefly explain the following terms as applied in leveling

- a) Level line
- b) Reference plane
- c) Reduced level
- d) Benchmark
- e) Temporary benchmark
- f) Line of collimation
- g) Spot height
- h) Back sight
- i) Fore sight
- j) Intermediate sight

QUESTION FIVE

- a) State five types of errors which may be encountered in ordinary leveling (10 marks)
- b) Briefly outline a suitable method of measuring a line across a wide river without setting out right angles (10 marks)