



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

((A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING

EBC 3218: MEASUREMENT OF BUILDING WORKS I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Pocket Calculator*

This paper consists of **FIVE** questions.

Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

Question One (20 marks)

- a) Outline the duties of the following personnel in a project.
 - i) Quantity Surveyor
 - ii) Architect

(10 marks)
- b) Describe the operations carried out on a dimension paper **(6 marks)**
- c) Describe the term 'billing direct' **(4 marks)**

Question Two (20 marks)

- a) Outline the process of bill preparation. **(10 marks)**
- b) Describe the following contract documents.
 - i) Contract drawings
 - ii) Bill of quantities
 - iii) Specification
 - iv) Form of tender
 - v) Article of agreement

(10 marks)

Question Three (20 marks)

- a) Briefly describe the following tendering methods giving on merit and one demerit of each method. **(16 marks)**
- b) Determine the girth of the foundation wall shown in figure 1. Thickness of wall is 200mm. **(4 marks)**

Figure 1

Question Four (20 marks)

- a) Explain the following terms:
- i) Prime cost sums
 - ii) Provisional sum
 - iii) Contingency sum
- (9 marks)**
- b) Briefly describe the following types of contracts:
- i) Cost plus fixed fee contracts
 - ii) Cost plus percentage fee contracts
 - iii) Lump sum contracts.
- (9 marks)**
- c) Describe the term “extra over item”
- (2 marks)**

Question Five (20 marks)

- a) Explain the following payment certificates:
- i) Interim certificates.
 - ii) Penultimate certificate
 - iii) Final certificate
- (9 marks)**
- b) Explain the following terms:
- i) Variation
 - ii) Valuation of variations
- (6 marks)**
- c) State the columns in a ruling of a bill of quantities
- (5 marks)**