



**THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE**

**((A Constituent College of JKUAT)**

(A Centre of Excellence)

**Faculty of Engineering  
& Technology in Conjunction with  
Kenya Institute of Highways and  
Building & Technology (KIHBT)**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

**HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING**

EBE 3302: BUILDING ECONOMICS II

**END OF SEMESTER EXAMINATION**

**SERIES: AUGUST 2012**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*
- *The SMM of Building Works and Civil Engineering Works (2008 Edition)*

This paper consists of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

**SECTION A (COMPULSORY – 40 MARKS)**

**Question One (40 Marks)**

Take off all quantities for the basement work shown on drawing no BT/01/12F **(40 marks)**

**SECTION B (Attempt any TWO questions from this section)**

**Question Two (30 marks)**

Take off all quantities for the flush door, shown on drawing No. BT/02/12F and make adjustments for the door opening. **(30 marks)**

**Question Three (30 marks)**

Take off all quantities for the Louvre window shown on drawing No. BT/03/12F and make adjustments for the window opening. **(30 marks)**

**Question Four (30 marks)**

- a) Use data from question N01. of this paper to:
- i) Square
  - ii) Abstract
  - iii) Bill, all the substructure works **(20 marks)**
- b) Discuss the application of information technology (computers) in the measurement and costing field. **(10 marks)**

**Question Five (30 marks)**

- a) Build up a unit rate for manual excavation of foundation trenches in a relatively loose poor (coarse soil). **(6 marks)**
- b) Build up a unit rate for mechanical excavation of a basement in a relatively firm murram soil using a mechanical shovel. The shovel was purchased at kshs 12,500,000 (12.5 million shillings) and has a resale value of shs. 8,000,000 (8m) after 5 years use. **(18 marks)**
- c) State the various conditions for the determination of a contract. **(6 marks)**