



TECHNICAL UNIVERSITY OF MOMBASA
**Faculty of Engineering &
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN CIVIL ENGINEERING (DCE 13M)

EBC 2308: MEASUREMENTS OF CIVIL ENGINEERING WORKS

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

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 **TWO** printed pages

Question One

Take off all quantities for the retaining wall shown in drawing No. 01 (Use C.E.S. mm) **(30 marks)**

Question Two

Take off all quantities for the deep manhole shown in drawing No. 02 (Use C.E.S.mm) **(20 marks)**

Question Three

Take off all quantities for the pump chamber shown in drawing No. 03 (Use C.E.S.mm) **(20 marks)**

Question Four

- a) Outline the following contract documents:
- (i) Form of agreement
 - (ii) Specifications
 - (iii) Form of Tender
 - (iv) General conditions of contract. **(10 marks)**
- b) (i) Describe the term variations
(ii) Outline THREE methods of valuing variations **(10 marks)**

Question Five

- a) Describe the following terms used in Civil Engineering works: **(10 marks)**
- (i) Provisional sums
 - (ii) Prime cost sums
 - (iii) Nominated subcontracts
 - (iv) Retention sum
- b) Outline the following types of contracts:
- (i) Cost plus percentage contracts
 - (ii) Cost plus fluctuating fee contracts
 - (iii) All in contracts
 - (iv) Schedule contracts. **(10 marks)**