



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC 12J)

EBC 2212: BUILDING TECHNOLOGY III & SERVICES

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Scientific 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 **TWO** printed pages

Question One

- a) With the aid of a sketch, explain the construction of a septic tank. **(10 marks)**
- b) Using a sketch, explain the construction of a soakaway. **(10 marks)**

Question Two

- a) With the aid of sketches, differentiate separate drainage system from combined drainage system. **(10 marks)**
- b) Define:
 - (i) Sewerage system
 - (ii) Drop manhole
 - (iii) Seeding
 - (iv) Free board
 - (v) Effluent **(10 marks)**

Question Three

- a) With the aid of a sketch, explain the construction of a reinforced concrete stair. **(10 marks)**
- b) With the aid of sketches, explain the construction using pile foundation. **(10 marks)**

Question Four

- a) With the aid of sketches, describe a cantilever foundation. **(10 marks)**
- b) Using suitable sketches describe underpinning. **(10 marks)**

Question Five

- a) Explain the **THREE** types of shoring as used in construction. **(10 marks)**
- b) Describe the following methods of testing underground drainage.
 - (i) Ball test
 - (ii) Mirror test
 - (iii) Smoke test **(10 marks)**