



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC 11)

EBC 2302: BUILDING TECHNOLOGY IV & 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) State **FIVE** uses of basements. **(5 marks)**
- b) State **FIVE** roles of a building supervisor on a construction site. **(5 marks)**
- c) With the aid of sketches, explain the freezing dewatering method. **(10 marks)**

Question Two

- a) With the aid of sketches, describe the perimeter trench (dumping method) of basement excavation. **(10 marks)**
- b) Outline different uses of retaining walls. **(5 marks)**
- c) Sketch the following retaining wall failures:
 - (i) Settlement
 - (ii) Over stressed
 - (iii) Sliding **(5 marks)**

Question Three

- a) With the aid of sketches, describe the following types of retaining walls:
 - (i) Counter fort
 - (ii) Cantilever **(10 marks)**
- b) With the aid of sketches, describe the following:
 - (i) Internal tanking
 - (ii) External tanking **(10 marks)**

Question Four

- a) With the aid of sketches, describe the following:
 - (i) Single span lattice roof
 - (ii) Multiple span North light roof **(10 marks)**
- b) Outline the ventilation requirement for:
 - (i) Domestic building
 - (ii) Public building
 - (iii) Industrial building **(10 marks)**

Question Five

- a) Describe the following:
 - (i) Monitor roof
 - (ii) Double leaf sliding door
 - (iii) Lattice truss **(10 marks)**
- b) Describe the following air conditioning systems:
 - (i) Central plant system

(ii) Package system

(10 marks)