THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING
DIPLOMA IN ARCHITECTURE
DIPLOMA IN CIVIL ENGINEERING

EBC 2311: BUILDING TECHNOLOGY IV

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2012
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Scientific Calculator*

This paper consists of **FIVE** questions. Answer **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) With the aid of sketches, describe the following:

i) Diaphragm wall construction (Bentonite Method)
ii) Timbering to basement **(10 marks)**

b) With the aid of sketches, describe FREEZING dewatering technique. **(10 marks)**

Question Two (20 marks)

a) With the aid of sketches, explain the failures of retaining walls. **(8 marks)**

b) Sketch the following:

i) Cantilever retaining wall.
ii) Gravity wall
iii) Counter fort wall **(6 marks)**

c) State **THREE** disadvantages of internal tanking. **(6 marks)**

Question Three (20 marks)

a) With the aid of sketches, explain the following:

i) Single span lattice roof
ii) Multiple span north light roof **(10 marks)**

b) Explain the construction of the following:

i) Cantilever roof
ii) Monitor roof **(10 marks)**

Question Four (20 marks)

a) With the aid of sketches, describe the following:
i) Timber single leaf sliding door
ii) Operations of folding door **(10 marks)**

b) With the aid of sketch, describe the following:
i) Vertical sliding window
ii) Horizontal sliding window **(10 marks)**

Question Five (20 marks)

a) Outline the ventilation requirements for:

i) Domestic building
ii) Public building

iii) Industrial building **(10 marks)**

b) Explain the following air conditioning systems.

i) Central plant system
ii) Packaged system **(10 marks)**