



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE)

EBC 2109: BUILDING TECHNOLOGY I

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: FEBRUARY 2015
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 of the **FIVE** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown

Use neat, large and well labeled diagrams where required

This paper consists of **THREE** printed pages

Question One

- a) Using sketches, detail provision of necessary planking and strutting to a loose soil **(8 marks)**
- b) State any EIGHT preliminary site works and detail vertical hoarding **(8 marks)**
- c) State the:

Question Two

- a) Differentiate between a door frame and door lining using sketches. **(6 marks)**
- b) Detail the following for a door:
 - (i) Section X – X
 - (ii) Section Y – Y **(6 marks)**
- c) Using sketches, detail:
 - (i) Parliament hinges
 - (ii) Butt hinges
 - (iii) Tee-hinges
 - (iv) Bawel Bolt **(8 marks)**

Question Three

- a) Describe briefly using sketches, the following door types:
 - (i) Semi solid cored flush door
 - (ii) Ledged braced and battered door
 - (iii) Panel door **(12 marks)**
- b) Outline the construction of the following types of walls:
 - (i) Ashlar walling
 - (ii) Solid black walling
 - (iii) Timber partition wall **(8 marks)**

Question Four

- a) Outline the following types of foundation using sketches to detail:
 - (i) Raft foundations
 - (ii) Stepped strip foundation
 - (iii) Pad foundation **(12 marks)**
- b) State the procedure of Excavations for a simple house **(3 marks)**
- c) Outline the requirements of setting out and detail a profile board **(5 marks)**

Question Five

- a) Describe the construction of a ground floor slab and detail using sketches **(10 marks)**

b) State the requirements of floors (3 marks)

c) Outline the use of the following in floor construction;

(i) Concrete slab

(ii) Anti termite treatment

(iii) Damp proofing membrane

(iv) Hardcore

(7 marks)