



THE TECHNICAL UNIVERSITY OF MOMBASA

# Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

**DIPLOMA IN ARCHITECTURE (DA 12J)**

**DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC 12J)**

EBC 2105: BUILDING TECHNOLOGY I

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SERIES: FEBRUARY 2013**

**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 any **THREE** questions  
Maximum marks for each part of a question are as shown  
This paper consists of **TWO** printed pages

**Question One**

- a) Outline the roles of the following in the building team.
- (i) Architect
  - (ii) Structural engineer
  - (iii) Quantity surveyor
  - (iv) Clerk of work
- (10 marks)**
- b) Sketch and label the following types of foundations:
- (i) Wide strip
  - (ii) Raft
  - (iii) Pad
- (10 marks)**

**Question Two**

- a) Explain the importance of soil investigation on site. **(10 marks)**
- b) Sketch the following types of walls:
- (i) Cavity wall
  - (ii) Random rubble
  - (iii) Flint
  - (iv) Monolithic
- (10 marks)**

**Question Three**

- a) Sketch and label the parts of a timber stair. **(5 marks)**
- b) Sketch the following:
- (i) Straight flight
  - (ii) Launching
  - (iii) Winder
  - (iv) Dog leg stair
  - (v) Staircase
- (10 marks)**
- c) Outline the roles of a supervisor of construction works on site. **(5 marks)**

**Question Four**

- a) Sketch and label the following types of doors:
- (i) Panel
  - (ii) Ledged, battened and braced
- (10 marks)**
- b) With the aid of sketches, differentiate; Dependent Scaffolding from Independent Scaffolding. **(10 marks)**

**Question Five**

- a) With the aid of a sketch, describe the construction of solid ground floor. **(10 marks)**

b) Sketch and label the indirect domestic cold water system.

**(10 marks)**