



**THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE**

***Faculty of Engineering & Technology***

**DEPARTMENT OF CIVIL AND BUILDING ENGINEERING**

**CERTIFICATE IN CONSTRUCTION TECHNICIAN II (09A)**

**EB 1108 CONSTRUCTION TECHNOLOGY**

**END OF SEMESTER II EXAMINATIONS**

**APRIL/MAY 2010 SERIES**

**TIME: 2 HOURS**

**Instructions to Candidates**

You should have the following for this examinations:

- Answer booklet
- Pocket calculator

This paper consists of **FIVE** Questions in **TWO** Sections 'A' and 'B'.  
Answer Question **ONE** in Section **A** and choose **TWO** Questions from Section **B**.

Maximum marks for each part of a question is as shown.

## SECTION A

### Question ONE

- (a). Define the following stairs terminologies:
- (i). Hand-rail and balusters
  - (ii). Head-room
  - (iii). Flight
  - (iv). Staircase
  - (v). Steps
- (10 Marks)**
- (b). Sketch the following door furniture:
- (i). Ring butt hinge
  - (ii). Strap hinge
  - (iii). Night batch
  - (iv). Broad butt
- (10 Marks)**
- (c). With the aid of a sketch describe a single stack. **(10 Marks)**

## SECTION B

### Question TWO

- (a). State **FIVE** functions requirements of a roof. **(5 Marks)**
- (b). State **SIX** factors determining roof structure. **(6 Marks)**
- (c). Using sketches, describe the following:-
- Couple roof
  - Closed couple
  - Collar roof
- (9 Marks)**

### Question THREE

- (a). With the aid of a well labeled sketch. Show the following tiled roof detail:
- (i). At the ridge
  - (ii). At the valley
- (10 Marks)**
- (b). With the aid of sketches, describe the following types of stairs:

- (i). Half turn
- (ii). Open well

**(10 Marks)**

**Question FOUR**

(a). Briefly explain the design requirement of windows. **(5 Marks)**

(b). With the aid of sketches, show **FOUR** ways of opening windows. **(10 Marks)**

(c). State **FIVE** disadvantages of louvred windows. **(5 Marks)**

**Question FIVE**

(a). State the precaution is using scaffolding. **(5 Marks)**

(b). With the aid of a sketch, describe dependent scaffold. **(10 Marks)**

(c). Sketch the following scaffold detail.

- (i). Standard and toe-board joint
- (ii). Reveal pin

**(5 Marks)**