



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

*Faculty of Engineering & Technology*

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

HIGHER DIPLOMA IN CONSTRUCTION

**EB 3134 : CONSTRUCTION TECHNOLOGY  
AND SERVICES III**

END OF COURSE EXAMINATIONS

APRIL/MAY 2010 SERIES

TIME: 2 HOURS

### **Instructions to Candidates**

You should have the following for this examination:

- Answer booklet
- Calculator
- Drawing instruments

This paper consists of **FIVE** Questions **ONE** in Section , **A** and **FOUR** in Section **B**.  
Answer any **THREE** Questions choosing **ONE** from Section **A (COMPULSORY)** and any **TWO** from Section **B**.

Questions in Section **B** carry **30 Marks** and Section **B** carry **20 Marks** each.

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

**SECTION A- Compulsory (30 Marks)**

**Question ONE**

- (a). Briefly describe the following classifications of paint:
- (i). Distempers
  - (ii). Emulsion paints
  - (iii). Enamel paints
  - (iv). Varnishes
- (6 Marks)**
- (b). Briefly describe the painting scheme to a plastered background. **(9 Marks)**
- (c). Using a sketch describe the construction details of a ledged, braced and battened door. **(10 Marks)**
- (d). Define the following terms used staircase design:
- (i). Stairwell
  - (ii). Nosing line
  - (iii). Flight
  - (iv). Stringer
  - (v). Newel
- (5 Marks)**

**SECTION B- Answer any TWO Questions (20 Marks)**

**Question TWO**

- (a). Describe the laying procedure of Granolithic floor finish to a concrete background. **(10 Marks)**
- (b). State the advantages of using granolithic as a floor finish. **(5 Marks)**
- (c). Briefly describe Mosaic finish to wall surfaces. **(5 Marks)**

**Question THREE**

- (a). Explain the factors governing the design and construction of stairs. **(5 Marks)**
- (b). Given the lift or total rise of staircase as 2400mm and the Total going as 2925mm. Using sketches Design a suitable staircase flight. **(10 Marks)**
- (c). Briefly describe the protection of a painted surface. **(5 Marks)**

#### **Question FOUR**

- (a). State **FIVE** functional design requirements of an external door. **(5 Marks)**
- (b). Briefly describe the operation of a folding door. **(6 Marks)**
- (c). Describe ways of preventing the following paint defects. **(10 Marks)**
- (i). Bleaching or moulding
  - (ii). Crazeing or cracking
  - (iii). Chalking
  - (iv). Bleeding
  - (v). Sulphurding

#### **Question FIVE**

- (a). With the aid of sketches illustrate **THREE** modes of opening in sliding windows. **(6 Marks)**
- (b). Briefly describe single glazing in sliding windows. **(8 Marks)**
- (c). State **FOUR** advantages of Sliding Windows compared to casement Windows. **(6 Marks)**