



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

DCC 09A, DBC 09A, CA 09

SEMESTER I EXAMINATIONS

APRIL/MAY 2010 SERIES

BUILDING TECHNOLOGY I

TIME: 3 HOURS

Instructions to Candidates

You should have the following for this examination:

- Answer booklet
- Pocket Calculator

This paper consists of **FIVE** Questions.

Question **ONE** is **COMPULSORY**.

Answer any other **TWO** Questions.

The maximum marks to each part of a question are all shown.

Question ONE (Compulsory)

- (a). Differentiate between the pre-historic and traditional stages of the evolution of the built environment. **(4 Marks)**
- (b). Using a flow diagram, show the personnel involved in the building industry. **(5 Marks)**
- (c). Differentiate between manual land leveling and mechanical land leveling. **(4 Marks)**
- (d). Give the importance of the following:
- (i). Building line
 - (ii). Site level
- (4 Marks)**
- (e). List down any **THREE** setting out methods. **(3 Marks)**

Question TWO

- (a). Differentiate between live loads and dead loads. **(4 Marks)**
- (b). Define the following terms:
- (i). Backfilling
 - (ii). Made ground
 - (iii). Settlement
- (4 Marks)**
- (c). Using well labeled diagrams, differentiate between bored piles and driven piles. **(6 Marks)**
- (d). Calculate the size of the foundation given the following information:
- Bearing capacity of ground is 72KN/m^2 .
Wall thickness is 215mm
Total load on foundation is 25KN **(4 Marks)**

Question THREE

- (a). List down **FIVE** functions of a floor screed. **(5 Marks)**
- (b). Differentiate between:
- (i) PVC tiles and ceramic tiles. **(4 Marks)**
 - (ii) D.p.c and d.p.m **(3 Marks)**

- (iii) Pre-cast concrete and cast in-situ concrete. **(4 Marks)**
- (iv) Granolithic floor finish and terrazzo floor finish. **(4 Marks)**

Question FOUR

- (a). Briefly explain any **FIVE** functions of walls. **(10 Marks)**
- (b). Define the following terms:
 - (i). Partition walls
 - (ii). Separation walls
 - (iii). Cross wall
 - (iv). Boundary wall
 - (v). Load bearing wall **(10 marks)**

Question FIVE

- (a). Explain the difference between a rough arch and a gauged arch. **(6 Marks)**
- (b). Use drawings to illustrate the following pointing joints.
 - (i). Flush flat joint
 - (ii). Recessed semicircular joint
 - (iii). Recessed weathered joint
 - (iv). Recessed square joint
 - (v). Bastard joint **(10 marks)**
- (c). List down **FOUR** functions of wall finishes. **(4 Marks)**