TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING &TECHNOLOGY

BUILDING AND CIVIL ENGINEERING DEPARTMENT

END OF SEMESTER EXAMINATION

DIPLOMA BUILDING AND CIVIL ENGINEERING

EBC 2210: BUILDING TECHNOLOGY III

MAY 2016 SERIES

This paper consist of FIVE questions answer only THREE questions;

Q1 (a) Define the following terms;

(i) temporally works
(ii) shoring (4marks)

(b) State situations where shoring can be done (5marks)

(c) Draw a sketch of a dead shoring. (11marks)

Q2 (a) Explain and sketch three types of dewatering (12mrks)

(b) Explain THREE causes of uneven loading on soils (3marks)

(c) With the aid of a diagram, explain the underpinning schedule (5marks)

Q3 (a) Define the following terms in drainage;

(i) separate system
(ii) combined system
(iii) partially separate system
(iv) drainage
(v) underpinning (10mrks)

(b) The total surface area of a foot path and roadways of a building development scheme is found to be 4000m cubed.

Calculate the diameter of the main surface water drain using the following data;

- Rainfall intensity-----50mm/hr
- impermeable factor of surface---0.9
- Velocity of flow required---0.8ms (10marks)

Q4 (a) Define the following terms;

(i) Manhole.

(ii) Stairs (4marks)

(b) Draw a well labeled diagram of an inspection chamber (5marks)

(c) Sketch and label a timber stair (11mrks)

Q5 (a) Draw a section of cranked stair (5mrks)

(b) With the aid of a diagram, explain a grillage foundation (7mrks)

(c) Sketch a continuous column foundation (8mrks)