TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY IN CONJUCTION WITH KENYA INSTITUTE OF HIGHWAYS AND BUILIDNG TECHNOLOGY (KIHBT)

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

HIGHER DIPLOMA IN BUILDING ECONOMICS

EBE 3105: CONSTRUCTION TECHNOLOGY I A

END OF SEMESTER EXAMINATIONS
SERIES: OCTOBER 2016

TIME: 2HOURS

Instruction to candidates

You should have the following for this examination

- Answer booklet
- Pocket Calculator

This paper consist of five question.
Answer any three questions of the five questions
All question carry equal marks
Maximum marks for each part of a question are as shown
This paper consist of two printed pages

QUESTION 1

a) Outline six advantages of timber as a construction materials (6 mrks)
b) State FIVE clay products and their point of application in building works (5mrks)
c) State THREE main categories of stone classification depending on their origin or composition (9mrks)

QUESTION 2

a) Define the term dewatering (2mrk)
b) With aid of a diagram explain THREE methods of dewatering 9mrk
c) Explain three factors which make underpinning necessary in foundations (6mrks)
d) State three advantages of framed structures (3mrk)

QUESTION 3

a) In aid of diagram, explain procedures of placing bored piles (8mrk)
b) Explain THREE basic forms of framed structures 6mrk
c) Draw a steel grillage foundation (6mrk)

QUESTION4

a) Procedure of mixing, handling and placing of plain concrete. (10 mrk)
b) Outline purposes of site clearance (4mrk)
c) Explain the following terms
    i. Manual excavation
    ii. Mechanical excavation
    iii. Backfilling (6mrks)

QUESTION 5

a) With aid of a diagram explain the following types of foundations
    i. Strip
    ii. Stepped
    iii. Isolated column
    iv. iv) Beam and strip
    (12mrk)

b) Define the following terms as used in construction work
    i. i). Backfilling
    ii. ii). Timbering
    iii. iii). Profile board
    iv. iv). Dead loads
    (4mrk)

c) State FOUR TYPES of waterproof materials and points of application. (4mrk)