TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE 13M)

EBC 2102: WORKSHOP TECHNOLOGY I

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2013
TIME ALLOWED: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
 Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

Question One

a) Explain the conditions of using the following building material.
    (i) Rapid hardening cement
    (ii) Low heat cement
    (iii) Steel reinforcement
    (iv) River sand   (10 marks)

b) Sketch the following:
    (i) King closer
    (ii) Steel float
    (iii) Internal angle tool
    (iv) Tingle plate
    (v) Bull nose brick   (10 marks)

Question Two

a) Explain the procedure of constructing a rubble wall   (8 marks)

b) State FOUR reasons of bonding a wall.   (4 marks)

c) With the aid of a sketch, explain the procedure of finishing solid ground floor using cement mortar (screed)   (8 marks)

Question Three

a) Differentiate the following:
    (i) Compaction from curing
    (ii) Batching from mixing
    (iii) Course from mortar
    (iv) Return wall from squint wall.   (8 marks)

b) State FOUR roles of a safety supervisor in building industry   (4 marks)

c) With the aid of a sketch, explain the procedure of concreting a Lintel   (8 marks)

Question Four

a) State FOUR reasons of using reinforced concrete in the construction of buildings.   (4 marks)

b) Explain FOUR different ways of transporting concrete to a use point.   (8 marks)

c) With the aid of sketches, explain the fixing of FOUR different types of coping   (8 marks)

Question Five

a) With the aid of sketches, outline the procedure of setting out a rectangular building using Mason's square   (10 marks)

b) With the aid of sketches, differentiate:
  (i)   Battering from Timbering
  (ii)   Return wall from cavity wall   (10 marks)