



**TECHNICAL UNIVERSITY OF MOMBASA**

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FACULTY OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF BUILDING & CIVIL ENGINEERING

**UNIVERSITY EXAMINATION FOR:**  
DIPLOMA IN BUILDING AND CIVIL ENGINEERING

EBC 2104 : WORKSHOP TECHNOLOGY AND PRACTICE II

END OF SEMESTER EXAMINATION

**SERIES:** DECEMBER 2016

**TIME:** 2 HOURS

**DATE:** 22 Dec 2016

**Instructions to Candidates**

You should have the following for this examination

- Answer Booklet, examination pass and student ID*
- Drawing instruments.*

This paper consists of five questions.

Attempt any THREE questions.

**Do not write on the question paper.**

### Question One

- a) With the aid of a diagram discuss **five** components of a scaffolding (10 marks)
- b) State the uses of the following scaffolding fittings
- i. Reveal pin
  - ii. Base plate
  - iii. Swivel coupler
  - iv. Double coupler
  - v. Putlog coupler
- (10marks)

### Question Two

Sketch the following types of wood joints

- i. Butt joint
  - ii. Scabbed joint
  - iii. Half lap joint
  - iv. Dado and rabbet joint
  - v. Mortise and tenon joints
- (20 marks)

### Question Three

- a) With the aid of sketches, discuss the following commonly used bonds in masonry
- i. Flemish bond
  - ii. Stretcher bond
  - iii. English bond
- (12 marks)
- b) Name and discuss the uses any **four** commonly used tools or equipment in a carpentry and joinery workshop (8 marks)

### Question Four

- a) Define finishing in relation to carpentry and joinery (2 marks)
- b) Discuss four major purposes of finishes in carpentry works (8 marks)
- c) Discuss the following types of finishes stating where they are commonly used
- i. Opaque wood finish
  - ii. Transparent wood finish
- (10 marks)

### Question Five

During a workshop practice activity students were required to prepare mortar by hand mixing

- i. Discuss the possible hazards that the students could likely be exposed to. (5 marks)
- ii. List at least **five** personal protective equipment (PPEs) and any **five** safety measures that you would advise for the success of the activity (10 marks)
- iii. Discuss the various tools and equipment required for this activity (5 marks)