



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN BUILDING AND CIVIL ENGINEERING

(INSTITUTION BASED EXAMINATION)

EBC 2201: WORKSHOP TECHNOLOGY AND PRACTICE II

SERIES: MARCH 2017

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

-Pocket calculator

This paper consists of **FIVE** questions. Attempt any **THREE** questions

Do not write on the question paper

Mobile Phones are NOT allowed inside the examination room

QUESTION ONE

- a) Define scaffolding (4 Marks)

- b) Draw the following types of scaffolding and give a brief explanation of each;
 - i. Independent scaffolding (8 Marks)
 - ii. Depended scaffolding (8 Marks)

QUESTION TWO

- a) Explain using sketches, where the following file are applied.
 - i. Flat hand file

- ii. Three square files
 - iii. Half round files
 - iv. Round file (6 Marks)
- b) Explain the difference between a reamer and a drill (2 Marks)
- c) Explain factors to consider in the proper use of hacksaw (4 Marks)
- d) Name and draw four types of carpentry hand tools (8 Marks)

QUESTION THREE

- a) Explain the responsibilities of all employees according to operational health and safety act (5 Marks)
- b) Briefly discuss the safety precaution observed when using a hand grinder (5 Marks)
- c) Explain briefly the precautionary measures taken when filing (5 Marks)
- d) Most of the accidents in the workshop are caused through the work explain (5 Marks)

QUESTION FOUR

- a) Outline the appropriate tools used when making a door frame (5 Marks)
- b) Sketch the appropriate joints used when making
- i. Door frame (5 Marks)
 - ii. Roof truss (5 Marks)
- c) With the Aid of a sketch outline the procedure of joining two pieces of materials by welding (5 Marks)

QUESTION FIVE

- a) Draw the following types of hinges
- i. Butt hinges
 - ii. Strap hinge
 - iii. Toe hinge
 - iv. Parliament hinge
 - v. Rising butt hing (5 Marks)
- b) Name and draw five types of screws (5 Marks)
- c) Explain what are fixings and give two types of fixings (3 Marks)
- d) Give five advantages of screws over nails (5 Marks)
- e) Explain how screws and nails are fixed (2 Marks)