



**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  
AND  
DIPLOMA IN QUANTITY SURVEYING

EBC 2101 : WORKSHOP TECHNOLOGY AND PRACTICE I

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) In workshop technology and practice what do you understand by the term PPEs (2 marks)
- b) Discuss any six safety rules and regulations/precautionary measures that should be taken into consideration when in the workshop (6 marks)
- c) Briefly discuss the first aid procedures for the following
  - i. Severe bleeding
  - ii. Burns and scalds
  - iii. Fractures(12 marks)

### Question Two

- a) Discuss the major functions of pipe fittings (5 marks)
- b) With the aid of sketches discuss the following types of pipe fittings
  - i. Coupler
  - ii. Bend
  - iii. Tee
  - iv. Reducer tee
  - v. Hose nipple(15 marks)

### Question Three

- a) Discuss the uses of the following common plumbing tools
  - i. Stock and die
  - ii. Pipe reamer
  - iii. Hacksaw
  - iv. Wheel cutter
  - v. Vice(15 marks)
- b) Discuss the importance of manholes in sewerage systems (5 marks)

### Question Four

- a) Define “fixture” in the plumbing context. (4 marks)
- b) Write short notes on the working and uses of the following fixtures
  - i. Water closet
  - ii. Flushing cistern
  - iii. Bathtub
  - iv. Bidet(16 marks)

### Question Five

You have been recruited as part of the staff in a project that involves the renovation of the TUM sewerage and water system.

- i. State the factors that you would put into consideration in choosing the pipe material to be used (2 marks)
- ii. Discuss the various tools and equipment that will be required for this project (9 marks)
- iii. Discuss the possible hazards that the workers could likely be exposed to during the implementation of the project and necessary PPEs required for the job. (9 marks)