



TECHNICAL UNIVERSITY OF MOMBASA

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 question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question One

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)**

Question Two

- 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 **(12 marks)**
 - i. Severe bleeding
 - ii. Burns and scalds
 - iii. Fractures

Question Three

- a) Discuss the uses of the following common plumbing tools **(15 marks)**
 - i. Stock and die
 - ii. Pipe reamer
 - iii. Hacksaw
 - iv. Wheel cutter
 - v. Vice
- 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 **(16 marks)**
 - i. Water closet
 - ii. Flushing cistern
 - iii. Bathtub
 - iv. Bidet

Question Five

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