



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

DIRECTORATE OF TVET

SECOND YEAR FIRST TERM EXAMINATION FOR

CERTIFICATE IN BUILDING TECHNOLOGY

CERTIFICATE IN CIVIL ENGINEERING

BUILDING SERVICES

DATE: 22/7/2022

TIME: 11:30 – 2:30 PM

## INSTRUCTIONS

- *This paper consists of **Five** questions.*
- *Answer **All** questions*
- *Maximum marks for each part of the question are as shown.*

- a) Define the term welding (2 marks)
  - b) Explain **TWO** types of welding. (4 marks)
  - c) Describe **FOUR** methods through which welding is done. (8 marks)
  - d) Give **THREE** advantages and disadvantages of welding. (6 marks)
- a) Describe **TWO** methods used to supply cold water in a building. (4 marks)
  - b) State and explain the functions of **FIVE** parts of an unvented hot water systems. (10 marks)
  - c) Outline **THREE** types of hot and cold water system. (6 marks)
- a) State **FOUR** materials/components used in hot and cold water Supply systems. (4 marks)

- b) Differentiate between soil appliances and waste appliances. (4 marks)
- c) With the aid of a diagram, sketch and describe an indirect cold water supply system. (6 marks)
- d) Explain **THREE** types of hot water supply systems. (6 marks)
4. a) Define the term fire (2 marks)
- b) Explain **THREE** classifications of fire giving the type of extinguishers used in each case. (6 marks)
- c) Describe **FOUR** types of equipment used in firefighting. (8 marks)
- d) Describe **FOUR** safety regulations observed when fighting and handling fire. (4 marks)
5. a) Describe **THREE** types of drainage systems. (6 marks)
- b) Define **TWO** terms used in drainage systems. (4 marks)
- c) Explain **FIVE** main stages of sewage treatment. (10 marks)