



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ARCHITECTURE

DIPLOMA IN QUANTITY SURVEYING

EAR 2209: BUILDING SERVICES I (WATER RETICULATION)

END OF SEMESTER EXAMINATION

YEAR TWO SEMESTER TWO

SERIES: MAY 2025

TIME: 2 HOURS

DATE: MAY,2025

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE (30 MARKS)-COMPULSORY

- a) Define the following terminologies.
 - i. Water reticulation. (2 marks)
 - ii. Flow rate. (2 marks)
 - iii. Pipe Fittings. (2 marks)
 - iv. Pumps. (2 marks)
- b) Describe THREE problems that can occur in hot water distribution system. (6 marks)
- c) State FIVE design objectives of a water reticulation system. (5 marks)
- d) Explain the function of any THREE types of valves. (6 marks)

- e) List FIVE purposes of assessing and reducing distribution risk. (5 marks)

QUESTION TWO (15 MARKS)

- a) Stating ONE advantage for each describe TWO methods of cold water distribution. (5 marks)
b) Explain FIVE factors affecting cold water distribution. (10 marks)

QUESTION THREE (15 MARKS)

- a) Define the term water reticulation system. (2 marks)
b) State THREE types of water reticulation system. (3 marks)
c) With the aid of a simple diagram, describe FOUR types of layouts of a water distribution network. (10 marks)

QUESTION FOUR (15 MARKS)

- a) State FIVE functions of pumps. (5 marks)
b) Describe FIVE classification of pumps. (10 marks)

QUESTION FIVE (15 MARKS)

- a) Define the term pipe. (2 marks)
b) State THREE major types of pipes. (3 marks)
c) Describe FIVE steps involved in the process of installation of pipes. (10 marks)