



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4326: CONSTRUCTION TECHNOLOGY IV SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MARCH 2025

TIME: 2 HOURS

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 (COMPULSORY) 30 Marks

- a) Draw a typical centralized direct hot water supply to a maisonette, with in the ground floor ; a boiler,, kitchen sink, and supply to the bath and the wash hand basin, while on the first floor hot water is to be supplied to; bath, wash hand basin. The supply is generated from the hot water cylinder located on the first floor. (20 marks)
- b) Show all the necessary control systems for the supply of hot water system described in question a) above. (5marks)
- c) Discuss where this system would not be appropriate and state an alternative solution. (5marks)

QUESTION TWO, (20marks)

- a) State why localized systems, hot water may be ideal in a large establishment. (5marks)
- b) Explain and detail the following localized systems;
 - i) Prismatic,

- ii) Instantaneous gas heater system. (15marks)

QUESTION THREE, (20marks))

With the aid suitable sketches, Outline the construction of a single stack drainage system stating the regulations which should be strictly adhered to.

QUESTION FOUR, (20marks)

- a) State the significance of ventilating drain lines (6marks)
- b) Draw a typical contemporary ventilation system for a drainage system.
(8marks)
- c) Explain where cesspools are ideally deployed and detail a typical cesspool.

QUESTION FIVE, (20mark)

- a) State the factors which govern the size of a septic tank. (6marks)
- b) Detail a typical septic tank, to show the plan and the sectional elevation of a septic tank. (14marks)