



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology
Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN CIVIL ENGINEERING DCE 2310 : TRAFFIC ENGINEERING II

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: JULY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, Scientific Calculator, examination pass and student ID

This paper consists of five questions.

Attempt any THREE questions.

Do not write on the question paper.

QUESTION ONE

- (a) In regard to setting out, briefly explain FOUR uses of a line level. (6 Marks)
- (b) With the aid of a sketch, briefly describe setting out vertical lines (6 Marks)
- (c) Outline FOUR precautions taken during subgrade construction. (8 Marks)

QUESTION TWO

- (a) Describe the process of spreading bituminous materials. (9 Marks)

- (b) Explain the procedure for compaction during rigid pavement construction. (6 Marks)
- (c) Briefly explain FIVE requirements of joints in rigid pavement. (5 Marks)

QUESTION THREE

- (a) Describe the following road signs:
- (i) Safety barriers
 - (ii) Light and Utility poles
 - (iii) Boundary fences
 - (iv) Raised road markers (12 Marks)
- (b) In regard to maintenance of flexible pavement, outline the procedure for repairing potholes. (8 Marks)

QUESTION FOUR

- (a) Briefly explain SIX requirements of an ideal sleeper. (6 Marks)
- (b) With the aid of a sketch, briefly describe steel trough sleepers. (8 Marks)
- (c) Outline FOUR requisites of a good railway crossing. (6 Marks)

QUESTION FIVE

- (a) With the aid of a sketch, outline the cycle of operation of a backhoe dredger. (10 Marks)
- (b) Identify and explain FIVE methods of transporting dredged spoil. (10 Marks)