



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECV 4221 : TRANSPORT PLANNING & DEVELOPMENT

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: JULY 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 **four** questions.

Attempt **question ONE (Compulsory) and any other TWO questions.**

Do not write on the question paper.

QUESTION ONE - Answer ALL questions (30 Marks)

- i. Define evaluation in transport planning and development. **(2 marks)**
- ii. Briefly explain evaluation characteristics to be incorporated in transport planning and development. **(8 marks)**
- iii. The issues considered in a transportation planning process often reflect the changing characteristics of society as a whole. Briefly explain this with relevant examples. **(10 marks)**
- iv. Briefly explain FOUR key transport planning activities. **(10 marks)**

Section B (Choose ANY TWO Questions)

Question 2:

- i. State TWO transportation problems, and discuss appropriate solution. **(5 marks)**
- ii. Briefly describe TWO major tasks guiding transportation network planning. **(5 marks)**
- iii. Discuss ANY FOUR measures one can employ to maximize mobility of people and goods in transportation planning and development. **(10 marks)**

Question 3:

- i. State FOUR comparisons between roads and railways. **(8 marks)**
- ii. Define gauge in railway transportation. **(2 marks)**
- iii. Explain stabilization of soil roads. **(10 marks)**

Question 4:

- i. Briefly explain ANY FOUR factors that determine route allocation. **(4 marks)**
- ii. State THREE requirements that the development and planning facilities should meet. **(6 marks)**
- iii. Briefly explain factors taken into account when designing an airport. **(10 marks)**

Question 5:

- i. Discuss FOUR measures one can employ to maximize mobility of people and goods in transportation planning and development. **(10 marks)**
- ii. Briefly describe TWO major tasks guiding transportation network planning. **(5 marks)**
- iii. Give TWO reasons why transportation is a highly regulated sector. **(5 marks)**