



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
Department of BUILDING & Civil engineering
UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN CIVIL ENGINEERING
ECV 4502 : TRANSPORT ENGINEERING II

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) Differentiate between Formal land use and Functional land use (4 marks)
- b) Differentiate between accessibility and mobility as used transport engineering (2 marks)
- c) Briefly explain how transportation affect economic development of an area (6 marks)
- d) Explain briefly the Sector and multiple nuclei land use Models (6 marks)
- e) Discuss **THREE** typologies of decentralization (6 marks)
- d) Discuss the **FOUR** different approaches to the concept of decentralization as classified by James W. Fesler. (6 marks)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 Marks)

- a) What is the usefulness of “Desire path” in transportation planning (2 marks)
- b) Mention **FOUR** Merits and demerits of centralization (8 marks)
- c) Discuss the Von Thunen’s Regional Land Use Model (10 marks)

QUESTION THREE (20 Marks)

- a) Explain the relationship between transportation and land development. (4 marks)
- b) Explain clearly the role of Transport in Regional Development (8 marks)
- c) Discuss the Most significant components of urban dynamics in most cities (8 marks)

QUESTION FOUR (20 Marks)

- a) Discuss in detail the Burgess Concentric Model of land use (9 marks)
- b) Explain clearly the Emerging Land Use Concerns about urban sprawls (7 marks)
- c) State **FOUR** factors that govern the issue of centralization versus decentralization (4 marks)

QUESTION FIVE (20 Marks)

- a) Discuss the following **THREE** New approaches to development:
 - i) Neo-traditional Design
 - ii) Cluster Development
 - iii) Transfer or purchase of development rights (9 marks)
- b) Discuss the various State Roles in Land Use Activities (11 marks)