



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4421 : INTRODUCTION TO PHYSICAL PLANNING

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: NOVEMBER 2024

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 (COMPULSORY 20 MARKS)

- i. Briefly explain any FOUR types of traffic calming techniques. **(10 marks)**
- ii. Explain briefly the various major road patterns developed in modern urban areas. **(10 marks)**

ANSWER ANY TWO QUESTIONS

QUESTION TWO

- a) Define traffic analysis zone. **(2 marks)**
- b) Briefly explain the advantages and limitations of growth factor model.

(8

marks)

- c) Explain the inventory of transportation facilities. **(10 marks)**

QUESTION THREE

- a) Briefly explain TWO main categories of transport systems. **(6 marks)**
- b) Briefly explain the MAJOR causes of road accidents in Kenya. **(10 marks)**
- c) Explain the advantages of Pre-distribution modal split. **(4 marks)**

QUESTION FOUR

- a) Briefly explain difficulties in transportation planning for small and medium cities. **(10 marks)**
- b) Explain the application of traffic assignment. **(10 marks)**

QUESTION FIVE

- a) Briefly explain the advantages and limitations of growth factor model. **(8 marks)**
- b) Explain the importance of traffic calming especially where we have land use that is mixed use. **(8 marks)**
- c) Explain the role of the 'street' in an urban settlement. **(4 marks)**