



**TECHNICAL UNIVERSITY OF MOMBASA**  
***Faculty of Business & Social Studies***

DEPARTMENT OF BUSINESS STUDIES

DIPLOMA IN LOGISTICS AND TRANSPORT MANAGEMENT

**BLT 2105: TRANSPORT PLANNING**

SPECIAL/SUPPLEMENTARY EXAMINATIONS

**SERIES:** FEBRUARY 2015

**TIME:** 2 HOURS

**INSTRUCTIONS:**

- This paper consists of **FIVE** questions.
- Answer question **ONE (Compulsory)** and any other **TWO** questions.

***This paper consists of Three printed pages.***

### QUESTION 1 (Compulsory)

- a) Differentiate between transport supply and transport demand. **(6 marks)**
- b) How can transport pricing be used to control transport demand. **(6 marks)**
- c) Explain TIME-TABLING in transport planning and by making the necessary assumptions develop a timetable for a transport firm in a route with n-stops and K+1 buses. **(8 marks)**
- d) Explain vehicle scheduling and how it is done. **(10 marks)**

### QUESTION 2

- a) Define link flows. **(2 marks)**
- b) To get link flows from demographic data most regions, a four step process mode is used, draw schematic diagram of the four step process and explain the various steps. **(18 marks)**

### QUESTION 3

- a) Explain how transport planners determine reasonable frequency of transport service on a particular route. **(6 marks)**
- b) State the formula for obtaining the optimal frequency and define all the terms. **(6 marks)**
- c) Coast bus is considering changing the frequency on Mombasa-Nairobi route. Currently the route serves 1,200 passengers in the peak hour, operating at a frequency of 12 buses per hour.

Using Mohring's formula determine the optimal frequency for this route given cost per bus – hour of operation is \$66, a value of time of \$11 per hour and a route round-trip time of 95 minutes.

- d) The process of planning and designing of public transit service is called serving planning. Identify the activities associated with service planning. **(5 marks)**

### QUESTION 4

- a) Define transport planning. **(2 marks)**
- b) Why is it necessary to carry out transport planning of a region or town. **(8 marks)**
- c) Outline transport planning steps. **(10 marks)**

## QUESTION 5

- a) In Kenya, Mombasa Port is operating 24 hours a day. This is supposed to have evenly distributed the freight trucks transporting cargo from the port to other destinations. Yet there is still peak hours from around 4pm to 8pm leading to serious traffic snarl ups a long Jomvu Miritini stretch and in Mariakani weigh bridge. What are the reasons for this un even departure times and how can it be improved. **(10 marks)**
- b) Explain the implications of the introduction of standard gauge railway in Kenya transport system both in passenger transport and freight transport. **(10 marks)**