



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

University Examination 2010

**THIRD YEAR/FIRST SEMESTER EXAMINATION
FOR THE DEGREE IN BACHELOR OF SCIENCE IN CIVIL ENGINEERING**

ECE 2308: TRANSPORTATION PLANNING DEVELOPMENT (TPD)

SERIES: APRIL/MAY 2010

TIME: 2 HOURS

Instructions:

Attempt Question **One** and any other **TWO** questions.
The total mark is 70 marks.

QUESTION ONE

- (a) Define the following
- (i) Transportation engineering (6 marks)
 - (ii) Traffic engineering (6 marks)
- (b) An airline company has determined that the price of a seat on a particular route can be represented by the expression;
- $$p = 230 - 0.06n.$$
- The demand for this route by air has also been found to be expressed by:
- $$n = 9000 - 15p,$$
- where, p is the price in Kenya shillings, and n is the number of seats sold per day.
- Determine the equilibrium price charged and the number of seats sold per day. (18 marks)

QUESTION TWO

- (a) Describe **5** typical negative environmental impacts of the construction of a road. (10 marks)

- (b) State and name **6** transportation modes in use in Mombasa town. (10 marks)

QUESTION THREE

Illustrate the typical land use/Transportation cycle and briefly describe the relationship of the cycle elements. (20 marks)

QUESTION FOUR

- (a) State six (**6**) categories of human behavior that are affected by transportation. (10 marks)
- (b) State the land use location theory equation and describe all the equation elements. (10 marks)