



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012
SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (CIVIL ENGINEERING)
ECV 306: TRANSPORTATION PLANNING AND DEVELOPMENT

DATE: THURSDAY, 12TH APRIL 2012

TIME: 8.00 A.M. – 10.00 A.M.

INSTRUCTIONS

- (a) This paper contains **FIVE** (5) questions.
- (b) You are required to answer **THREE** (3) questions only.

QUESTION ONE

- (a) Define transportation (2 marks)
- (b) Outline 3 significance of transportation planning in developing world. (6 marks)
- (c) Discuss the following transportation systems (12 marks)
 - I. Fixed facilities
 - II. Flow entities
 - III. Control systems

QUESTION TWO

- (a) Highlight 3 criteria used in classification of transportation systems (3 marks)
- (b) State four major transportation subsystems (4 marks)
- (c) Discuss briefly FIVE classes of rural roads (7.5 marks)
- (d) Using a neat sketch define the road reserve (3 marks)
- (e) State atleast FIVE principles of route location (2.5 marks)

QUESTION THREE

- Discuss in details the contents of route location report. (20 marks)

QUESTION FOUR (20 MARKS)

- (a) Differentiate between plans and planning (4 marks)
- (b) Discuss the methodologies of transportation planning (9 marks)
- (c) Highlight the basic steps in system planning approach. (7marks)

QUESTION FIVE (20 MARKS)

- (a) Define the term Sustainable transportation. (2 marks)
- (b) Briefly shows how various indicators can measure various levels of impacts, from planning process to travel behaviour, effects on people, economy and environment. (12 marks).
- (c) Discuss urban land use and energy intensity as performance indicators of sustainable transportation. (6 marks)