



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT BUILDING AND CIVIL ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

**BSC IN CIVIL ENGINEERING**

**EEE 4230: WORKSHOP TECHNOLOGY AND PRACTICE II**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: 13 May 2016**

## **Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, Drawing Instruments, Scientific calculator, examination pass and student ID*

This paper consists of five questions. Attempt question ONE (Compulsory) and any other TWO questions.

## **QUESTION ONE (Compulsory)**

(a) Distinguish between the two:

- i. Physical planning and
- ii. Economic planning (4 marks)

(b) Discuss the following terms using appropriate examples

- i. Urban form
- ii. Transportation planning (8 marks)

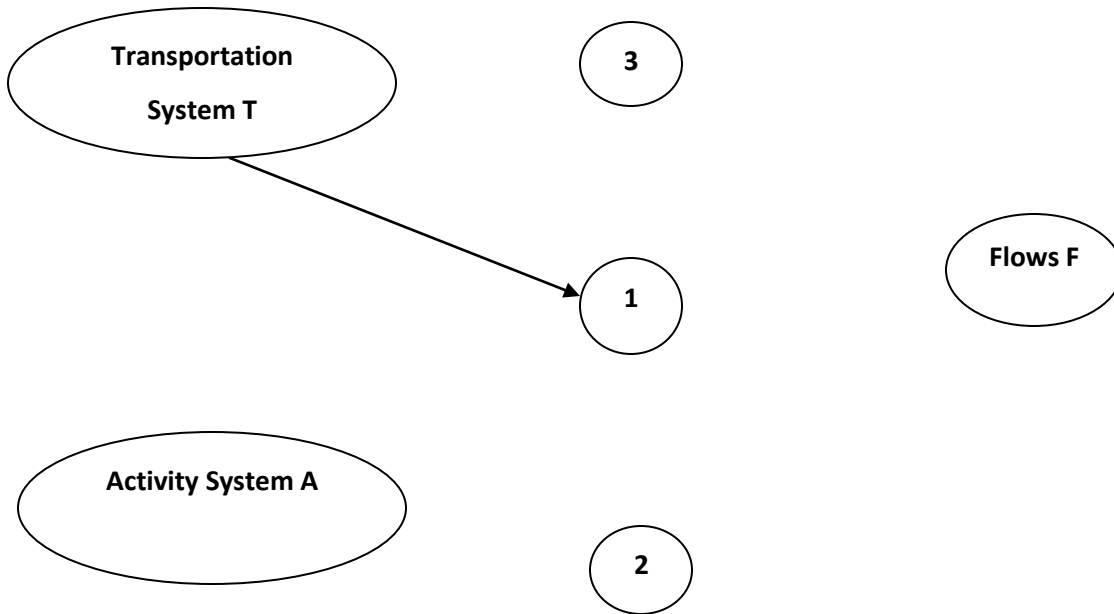
(c) What is urbanization? Mention the main causes of urbanization and, list five basic elements of urbanization. (6 marks)

(d) “Transport planning cannot be isolated from land – use planning”. Discuss using a schematic representation. (12 marks)

**QUESTION TWO**

The relationship between transport and activity system is shown in the figure below.

- (a) Complete the figure by showing the directions of the missing arrows. (3 marks)
- (b) Discuss the significance of bubbles 1, 2 and 3 in that order. (12 marks)



- (c) Mention the TWO types of nodes and explain their significance in relation to urban spatial structure. (5 marks)

**QUESTION THREE**

- (a) Explain the role of transport in regional development. (5 marks)
- (b) Discuss the major components of the spatial imprint of urban transportation. (15 marks)

#### **QUESTION FOUR**

- (a) What is a desire Path (2 marks)
- (b) Mention the **five** urban travel demands exhibited in most cities. (3 marks)
- (c) Both land use and transportation are part of a dynamic system that is subject to external influences. Discuss the most significant components of urban dynamics. (15 marks)

#### **QUESTION FIVE**

- (a) Define the following terms used in transportation planning:-
- I. Intra-zonal trips
  - II. External trips
  - III. Accessibility
- (6 marks)
- (b) Discuss the Von Thunen's Regional land use model (14 marks)