



TECHNICAL UNIVERSITY OF MOMBASA
**Faculty of Engineering &
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING (HDBCE 12S)

EBC 3208: TRAFFIC ENGINEERING I

END OF SEMESTER EXAMINATION

SERIES: APRIL 2014

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer booklet*

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

Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

- a) Define the following terms as used in traffic engineering:
(i) Traffic signs
(ii) Traffic signals
(iii) Luminosity
(iv) Pancing **(8 marks)**
- b) Differentiate between one way street and side streets as used in the management of traffic. **(4 marks)**
- c) Discuss the traffic lights as used either at junctions or rou-abouts. **(4 marks)**
- d) Discuss the following terms used in traffic engineering:
(i) Road intersections
(ii) Road road-abouts **(6 marks)**
- e) With the help of an illustration define 3 leg inter sections traffic control device. **(6 marks)**
- f) Define a good drives hence discuss the three visual skills a driver must possess. **(10 marks)**

Question Two

- a) The safety of the highway depends on the driver and other factors. Discuss the factors that influence directly or indirectly the manner and rate at which accidents occur. **(14 marks)**
- b) Sate the basic steps recommended for a detailed accident study. **(6 marks)**

Question Three

- a) Most traffic management measures are aimed at segregating pedestrians from vehicles where physical measures are not possible restriction measures are used. Briefly discuss the restrictions. **(10 marks)**
- b) Discuss FIVE consequences of high speed on both highway and rural roads. **(10 marks)**

Question Four

- a) Four vehicle 18, 21 and 22 ft long are distributed over a length of a freeway lane ft long. What is the lane occupancy and density? Hence define lane occupancy. **(4 marks)**
- b) Differentiate between:
(i) Interrupted traffic flow
(ii) Uninterrupted traffic flow **(4 marks)**
- c) State the principles of roadside traffic signs and briefly elaborate on them. **(12 marks)**

Question Five

- a) Discuss the types of traffic signs as it is in traffic engineering. **(8 marks)**

- b) Clearly state the meaning of closing side streets and hence give the advantages and disadvantages of closing side streets. **(12 marks)**