TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING (HDBC 12J)

EBC 3211: TRAFFIC ENGINEERING

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2013
TIME ALLOWED: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
-   *Answer Booklet*

This paper consists of **FIVE** questions.
 Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

a) Name and explain the **SIX** main parts in a road section   **(12 marks)**

b) Sketch and label the following at Grade Junctions:
    (i)   Rotary Roundabout
    (ii)   Staggered skewed
    (iii)   Multiway   **(8 marks)**

Question Two

a) With aid of suitable sketches, state **FOUR** purposes of channelization   **(12 marks)**

b) Explain **FOUR** advantages of a Rotary   **(8 marks)**

Question Three

a) State the **SEVEN** objectives of Traffic Volume study   **(7 marks)**

b) With the aid of a sketch, explain Modal Average form of representing spot speed.   **(8 marks)**

c) State **FIVE** reasons for conducting spot speed   **(5 marks)**

Question Four

a) Explain the term Traffic capacity   **(10 marks)**

b) (i) State **FIVE** questions that are addressed in origin and destination studies.

    (ii) State **FIVE** uses of O and D studies   **(10 marks)**

Question Five

a) State the **FOUR** assumptions made while analyzing any particular accident   **(8 marks)**

b) Name and explain **TWO** categories of Traffic signs   **(8 marks)**

c) State **SIX** advantages of traffic signals   **(6 marks)**