TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE 12J)

ECV 2303: CIVIL ENGINEERING CONSTRUCTION II

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME ALLOWED: 2 HOURS

Instructions to Candidates:
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) State SIX functions of railway sleepers **(6 marks)**

b) Sketch and label a rail C.I pot sleeper **(9 marks)**

c) State the FIVE advantages of using plates in railways **(5 marks)**

Question Two

a) Explain the following bridge components:
(i) Abutments
(ii) Anchorage **(4 marks)**

b) Sketch and label a suspension bridge **(8 marks)**

c) State EIGHT points to be attended to while maintaining causeways **(8 marks)**

Question Three

a) With the aid of sketch, outline the construction of tunnels using Full Face Method. **(10 marks)**

b) State the FOUR method of limiting the amount of dust in air due to tunneling **(4 marks)**

c) State THREE advantages of tunneling using Drift Method **(6 marks)**

Question Four

a) Distinguish between flexible and rigid pavements **(4 marks)**

b) Sketch and label a section through a Dummy contraction joint as applied in rigid pavements. **(8 marks)**

c) State FOUR precautions observed during construction of sub-grade **(8 marks)**

Question Five

a) With the aid of sketch, state the THREE traditional types of breakwaters **(9 marks)**

b) Define the following terms as applied in water font structures. **(6 marks)**
(i) Berth
(ii) Quay
(iii) Wharf **(6 marks)**

c) (i) Define the term sea walls
(ii) State THREE factors that determine the type of seawall to be selected. **(5 marks)**