



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING

ECV 2301: CIVIL ENGINEERING CONSTRUCTION II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2015

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 of the **FIVE** questions

Maximum marks for each part of a question are as shown

Use neat, large and well labeled diagrams where required

This paper consists of **TWO** printed pages

Question One

- a) Outline EIGHT precaution to be observed when constructing the subgrade in flexible roads (8 marks)
- b) Write short notes on pre-mixed bituminous materials as used in flexible roads (4 marks)
- c) Explain with an aid of a diagram the layers within the flexible pavement (8 marks)

Question Two

- a) With the aid of diagrams outline the FIVE joints in rigid pavement (10 marks)
- b) Name FIVE operations consisted in finishing work then construct a rigid pavement (10 marks)

Question Three

- a) (i) What is a bridge (2 marks)
- (ii) Name FOUR types of bridges (4 marks)
- b) Outline FOUR points to be observed while carrying out inspection and maintenance of masonry bridges (8 marks)
- c) Write briefly about cause way with vents (6 marks)

Question Four

- a) (i) Give FIVE functions of ballast railway (5 marks)
- (ii) With the aid of a diagram, explain briefly about the railway fitting called fish plate (10 marks)
- b) Give FIVE requirements of an ideal sleeper (5 marks)

Question Five

- a) Briefly outline the materials used in tunnel linings (10 marks)
- b) With the aid of a diagram outline FIVE types of currents (10 marks)