



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING

ECV 2303: CIVIL ENGINEERING CONSTRUCTION II

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

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 (20 Marks)

- a) Define Dredging and hence describe various methods used in dredging. **(5 marks)**
- b) With a well labeled diagram describe any two types of dredging plants. **(5 marks)**
- c) Briefly describe the following methods of reclamation.
 - i) Dyke
 - ii) Filling **(10 marks)**

Question Two (20 Marks)

- a) Using a well labeled diagram, describe various railway components. **(8 marks)**
- b) What do you understand by the following terms used in railway design?
 - i) Horizontal curve
 - ii) Vertical curve
 - iii) Gradient **(6 marks)**
- c) Briefly elaborate on signs and signals that are applied on railway station. **(6 marks)**

Question Three (20 Marks)

Describe any **FOUR** forms of crossing drainage giving its:

- a) Functional requirements when constructing. **(8 marks)**
- b) Describe the construction any two types of bridges. **(12 marks)**

Question Four (20 Marks)

- a) Describe any **TWO** types of dams and hence explain the methods of construction of each dam. **(10 marks)**
- b) Briefly describe the following types of wads.
 - i) Earth
 - ii) Gravel
 - iii) Macadam
 - iv) Bituminous
 - v) Concrete **(10 marks)**

Question Five (20 Marks)

- a) Using a well labeled diagram, explain one method of highway drainage. **(10 marks)**
- b) Briefly elaborate **TWO** methods of pavement construction. **(10 marks)**