



**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)**