



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 (DBC 10B)

DIPLOMA IN ARCHITECTURE (DA 10B)

EBC 2333: CIVIL WORKS SPECIFICATIONS

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2012

TIME: 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 **THREE** printed pages

Question One

- a) Briefly describe the **FOUR** types of Civil Engineering specifications. **(8 marks)**
- b) Briefly describe the step by step process to ISO Certification in an organization. **(12 marks)**

Question Two

- a) Under appropriate headings, write specification notes for survey works for the design and construction of a storm water drainage system. **(10 marks)**
- b) Write specification notes on construction of a sewer line under the following headings:
- (i) Materials
 - (ii) Earthworks
 - (iii) Pipe laying
 - (iv) Jointing of pipes
 - (v) Man holes
- (10 marks)**

Question Three

- a) Write general specification notes on structural steel works under the following headings:
- (i) Quality of steel
 - (ii) Testing
 - (iii) Workmanship
 - (iv) Inspection
 - (v) Erection
- (10 marks)**
- b) Write specifications notes on the following methods of connections in steel works.
- (i) Bolting
 - (ii) Riveting
 - (iii) Welding
 - (iv) Scams
 - (v) Brazing
- (10 marks)**

Question Four

- a) Under appropriate headings write specification notes for the survey works for a proposed road construction. **(10 marks)**
- b) Write general specification notes on road works in concrete carriage construction under the following headings:
- (i) Water proof underlay
 - (ii) Road base
 - (iii) Concrete mix
 - (iv) Reinforcements
 - (v) Concreting
- (10 marks)**

Question Five

- a) Write specifications notes on Railway Track Construction under the following headings.

- (i) Preliminaries
- (ii) Earth works
- (iii) Surface drainage
- (iv) Subsoil stabilization
- (v) Grading of formation

(10 marks)

b) Write specification notes on railway track materials under the following headings.

- (i) Ballast
- (ii) Sleepers
- (iii) Rails
- (iv) Fish plates
- (v) Rail fitments

(10 marks)