



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING  
DIPLOMA IN BUILDING & CIVIL ENGINEERING  
DIPLOMA IN ARCHITECTURE

EBC 2305: SPECIFICATIONS

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2013**

**TIME ALLOWED: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*
- *Scientific Calculator*

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** main contract documents in Civil Engineering Construction. **(10 marks)**
- b) Write specification notes for construction of a Railway Track from Lamu to Juba under the following headings:
- (i) Preliminary survey
  - (ii) Excavation works
  - (iii) Formation stabilization
  - (iv) Surface drainage
  - (v) Grading of formation **(10 marks)**

### Question Two

- a) State the main sources of information in specification writing. **(8 marks)**
- b) Write general specification notes on construction of Bitumen Road under the following headings.
- (i) Excavation works
  - (ii) Sub Base Formation
  - (iii) Base course
  - (iv) Stabilized layer
  - (v) Bitumen surfacing
  - (vi) Surface drainage **(12 marks)**

### Question Three

- a) A site is to be fenced with corrugated iron sheeting hoarding write specification notes for the works under the following headings:
- (i) Site layout
  - (ii) Construction of framework
  - (iii) Fixing cladding
  - (iv) Access to site
  - (v) Security **(10 marks)**
- b) Write specification notes for construction of a concrete road pavement under the following headings.
- (i) Road base formation
  - (ii) Water proof underlay
  - (iii) Concrete mix
  - (iv) Reinforcement
  - (v) Placing of concrete **(10 marks)**

### Question Four

- a) The soffit of a suspended concrete floor is to be supported with timber formwork.
- (i) Materials for formwork
  - (ii) Setting up
  - (iii) Fabrication of formwork

(iv) Striking off formwork

**(8 marks)**

b) Write specification notes for a reinforced concrete suspended beam under the following headings:

- (i) Material for concrete
- (ii) Formwork
- (iii) Reinforcement
- (iv) Concrete mix
- (v) Transportation and placing
- (vi) Compaction

**(12 marks)**

#### **Question Five**

a) Write specification notes for water supply to site for construction purposes under the following headings.

- (i) Preliminary survey
- (ii) Application for connection
- (iii) Procurement of materials
- (iv) Connection to mains
- (v) Distribution on site

**(10 marks)**

b) An Excavated Trench of a proposed sewer is to remain open for several day for completion of the works. Write specification notes for support sides of excavation the works under the following headings.

- (i) Materials for Timbering
- (ii) Construction of Supports
- (iii) Safety Measures
- (iv) Dewatering
- (v) Striking off

**(10 marks)**