



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

((A Constituent College of JKUAT)

(A Centre of Excellence)

**Faculty of Engineering
& Technology in Conjunction with
Kenya Institute of Highways and
Building & Technology (KIHBT)**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING ECONOMICS

EBE 3111: SPECIFICATIONS & QUANTITIES I

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Calculator*
- *Drawing Instrument*

This paper consists of **FIVE** questions

Answer any **THREE** questions

All questions carry equal marks
This paper consists of **THREE** printed pages

Question One (20 Marks)

- a) Briefly describe the following types of specifications in civil engineering construction.
- i) General specifications
 - ii) Project specifications
 - iii) Manufacturers specifications
 - iv) Standard specifications. **(8 marks)**
- b) State the **FOUR** main sources of information in civil engineering specifications writing. **(6 marks)**
- c) Briefly describe the **THREE** main components of specifications. **(6 marks)**

Question Two (20 marks)

- a) State the role of the civil engineer in specifications writing in the various stages of construction. **(10 marks)**
- b) A new site in an urban settlement is to be cleared for a new proposed construction. Under appropriate headings write specification notes for the works. **(10 marks)**

Question Three (20 marks)

- a) State **FOUR** roles of specifications in civil engineering construction. **(8 marks)**
- b) A Trench is to be excavated for construction of a foundation for a proposed new building. Write specification notes on timbering to sides of excavations under the following headings.
- i) Formwork material
 - ii) Preparation of works
 - iii) Setting up
 - iv) Striking off. **(12 marks)**

Question Four (20 marks)

- a) Write specification notes on concrete block walling in foundations under the following headings.
- i) Walling material
 - ii) Setting up
 - iii) Bonding
 - iv) Wall protection
 - v) Curing **(10 marks)**
- b) A newly cast concrete slab is to be finished with current sand screed preparation for tiling. Under **FOUR** appropriate heading, write specification notes for the works. **(10 marks)**

Question Five (20 marks)

- a) A timber roof is to be finished with pre-painted corrugated iron sheeting. Write specifications notes for the work under the following headings:
- i) Fabrication of truss
 - ii) Roofing materials
 - iii) Fixing of sheeting
 - iv) Roof drainage. **(10marks)**

- b)** A hardwood external door is to be fixed in a masonry walling. Write specification notes for the work under the following headings.
- i)** Preparation of opening
 - ii)** Fixing of frame
 - iii)** Fixing of shutter
 - iv)** Iron mongery
 - v)** Surface finish
- (10 marks)**