



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING AND Civil engineering

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN CIVIL ENGINEERING

EBC 2308 : ESTIMATING AND COSTING

SPECIAL/SUPPLIMENTARY EXAMINATION

SERIES: JULY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **five** questions. Attempt any THREE questions.

Do not write on the question paper.

QUESTION ONE (20 Marks)

- a) Describe the following type of payment certificates issued to the contractor
- i) Interim payment certificate
 - ii) Penultimate payment certificate
 - iii) Final payment certificate
- (15 Marks)
- b) Describe Valuation of Variations. (5 Marks)

QUESTION TWO (20 Marks)

- a) Describe the following terms used in Estimating:
- i) Unit rates
 - ii) Profit
 - iii) Overheads
 - iv) All in Labour rates
 - v) All in Mechanical plant rates
- (15 Marks)
- b) List FIVE contract documents in construction projects (5 Marks)

QUESTION THREE (20 Marks)

- a) Describe the purpose of Estimating (2 Marks)
- b) List the purpose of a BQ (6 Marks)
- c) Describe the following sources of cost information
- i) Priced Bills of Quantities
 - ii) Prices from Sub-contractors and suppliers
 - iii) Published analysis
 - iv) Price Books
 - v) Method statement
 - vi) Master (overall) Programme
 - vii) Work programme
- (12 marks)

QUESTION FOUR (20 Marks)

Describe the following Techniques of cost estimating

- i) Functional Unit Method
 - ii) Superficial (area) Method
 - iii) Cube (cube content) method
 - iv) Storey enclosure method
- (20 Marks)

QUESTION FIVE (20 Marks)

- a) Describe the role of the following in the construction industry:
- i) Quantity surveyor during the pre-construction period Architect
 - ii) Project Manager
 - iii) Mechanical and electrical Engineer
 - iv) Contractor
- (10 Marks)
- b) In any construction project there are three types of payment certificates issued to the contractor. List the THREE payment certificates. (3 Marks)
- c) Using the data given below, calculate the approximate cost of the building using floor area method. (7 Marks)

DATA

Wall thickness:
215mm

Unit cost per m²:

Warehouse: kshs. 5,000

Offices: kshs. 12,000

