



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

END OF SEMESTER EXAMINATION

SERIES: APRIL 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 role of the following in the construction industry:
- (i) Quantity surveyor during the pre-construction period
 - (ii) Architect
 - (iii) Project Manager
 - (iv) Mechanical and electrical Engineer
 - (v) 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

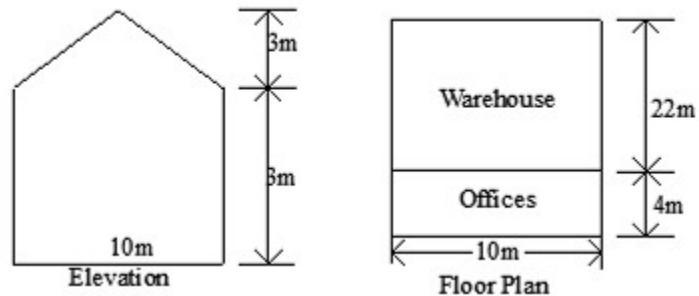
Wall thickness:

215mm

Unit cost per m²:

Warehouse: kshs. 5,000

Offices: kshs. 12,000



QUESTION TWO (20 Marks)

- a) List EIGHT types of Bills of quantities (8 Marks)
- b) Describe the following:
- (i) Provisional sum
 - (ii) Prime Cost Sum
 - (iii) Contingency sum
- (6 Marks)
- c) Describe ways of minimizing Variations (6 Marks)

QUESTION THREE (20 Marks)

- a) Describe the following documents in construction projects
- (i) Articles of agreement
 - (ii) Working drawings
 - (iii) Bills of Quantities

- (iv) Specifications
- (v) Schedule of rates

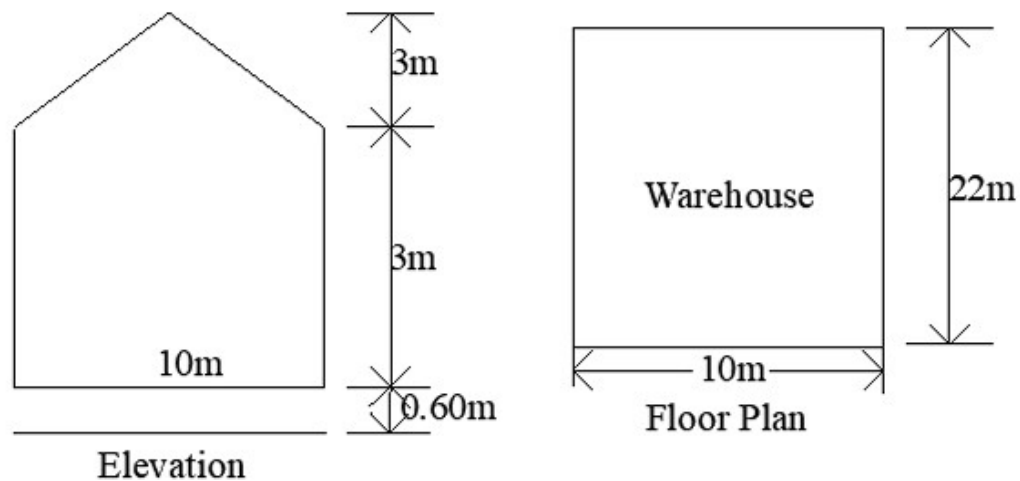
(20 Marks)

QUESTION FOUR (20 Marks)

- a) Describe the functions of an Estimator (14 Marks)
- b) List the factors which will determine the choice of the method of estimating. (4 Marks)
- c) List any FOUR sources of cost Information. (4 Marks)

QUESTION FOUR (20 Marks)

- a) Use the cubic content method to approximate the cost of the warehouse given the cost per m³ is kshs. 1,200. (16 Marks)



- b) State the advantages and disadvantages of the functional unit method. (4 Marks)