



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

KIBIT EXAMINATIONS FOR:

HIGHER DIPLOMA IN BUILDING AND CIVIL ENGINEERING

(BUILDING ECONOMICS OPTION)

EBC 3203: CONSTRUCTION TECHNOLOGY III

YEAR 2 SEMESTER I

SERIES: DECEMBER 2017

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

-Pocket calculator

This paper consists of **FIVE** questions. Attempt any **TWO** questions

Do not write on the question paper.

Mobile Phones are NOT allowed inside the examination room.

QUESTION ONE

(a) Briefly explain the following terms as applied to stairs

(i) Stair-well

(ii) Noising

(iii) Pitch line

(6 Marks)

(b) Outline **TWO** functions for a good drainage system

(4 Marks)



(c) (i) Briefly explain **THREE** reasons for the increasing use of suspended ceilings in most commercial buildings.

(ii) With aid of a sketch explain the construction procedure for a suspended ceiling

(10 Marks)

QUESTION TWO

(a) State **TWO** reasons for laying a screed to a concrete base in construction of stairs.

(4 Marks)

(b) Outline the aesthetic role of the following as applied to a built environment:

(i) Landscaping

(ii) Planting pleasant vegetation

(7 Marks)

(c) Explain **THREE** main advantages of applying the technique of dry limning in wall finishing.

(9 Marks)

QUESTION THREE

(a) Briefly explain precaution necessary for installation of lifts in buildings.

(8 marks)

(b) With the aid of a sketch explain the installation procedure for a lift in a four storey residential house.

(12 marks)

QUESTION FOUR

(a) Explain the following terms as applied to painting works

(i) Finishing paint

(ii) Undercoating paint

(iii) Priming paints

(6 Marks)

(b) With the aid of a labeled explain the operation principle of a hot water system for a typical residential house. **(6 Marks)**

(c) A straight flight stair is to be constructed to connect the ground floor to the first floor of a building. Use the following information to determine the total going for flight of stairs.

- Finishing level to finished floor level height = 2.7 m
- Recommended maximum size of riser = 190 mm
- Recommended size of tread = 225 mm
- Sum for twice the riser plus the tread shall be between 550 mm 700 mm. **(8 Marks)**

QUESTION FIVE

(a) Sketch and label the following invert levels in man-holes

(i) Back- drop connection

(ii) Ramp connection

(10 Marks)

(b) With the aid of sketches, describe **TWO** methods for testing drains

(10 Marks)