



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN BUILDING AND CIVIL ENGINEERING

(INSTITUTION BASED EXAMINATION)

EBC 2204: BUILDING TECHNOLOGY II

SERIES: MARCH 2017

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

-Drawing instruments

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

Do not write on the question paper

Mobile Phones are NOT allowed inside the examination room

QUESTION ONE

(a) State **THREE** principal requirements of fire places and flues. (3 marks)

(b) With the aid of sketches explain the construction details of the following elements of fireplaces:-

- (i) Internal projection of chimney breast
- (ii) Hearths

(iii) Chimney stack through flat roof (7 marks)

(c) Briefly describe the procedure adopted when inspecting smoky chimney (10 marks)

QUESTION TWO

(a) State the advantages of dry lining. (3 marks)

(b) Explain the following paint defects and their remedies:-

- i. Blistering
 - ii. Brush marks
 - iii. Chalking
- (7 marks)

(c) State THREE reasons for using suspended ceilings, then sketch and label parts of an open ceiling. (10 marks)

QUESTION THREE

(a) State the principle factors influencing the type of material used for a particular framed construction (4 marks)

(b) With the aid of sketches, explain the following types of stanchion connections

- i. Slab or bloom bases
 - ii. Gusseted base
 - iii. Stanchion cap
 - iv. Beam to stanchion
- (10 marks)

(c) State THREE ways of fire protection to steel frame.(6 marks)

QUESTION FOUR

(a) Explain the following functional requirements of a wall:-

- i. Strength and stability
 - ii. Weather resistant
 - iii. Thermal insulation
- (8 marks)

(b) State SEVEN building code requirements of formwork. (7 marks)

(c) Sketch and label a cross section of typical beam formwork. (5 marks)

QUESTION FIVE

- (a) State SIX functional requirements of cladding (6 marks)
- (b) With the aid of a sketch, describe the construction of concrete cladding panels (8 marks)
- (c) With the aid of a sketch describe the construction of brick facing (6 marks)