



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)
Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN & CIVIL ENGINEERING

ECE 2204: ENGINEERING DRAWING II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing Paper Size AC*
- *Drawing Board & Instruments*

This paper consists of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** plus any other **TWO** questions

Maximum marks for each part of a question are clearly shown

This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question 1 (30 marks)

- a) Outline the general procedure for approval of building plans by local authorities in Kenya
(10 marks)
- b) Explain the purposes of the following types of drawings in working drawing.
(10 marks)
- (i) Details
 - (ii) Elevations
 - (iii) Sections
 - (iv) Floor plans
 - (v) Roof design
- c) The following information refers to a proposed maisonette.
- Ground/subsoil condition – firm soil

- Roof type – GCI sheets on timber roof
- Loading bearing wall – 200mm thick concrete blocks
- Floors – 100mm thick plain concrete.

Using a scale of 1:50 draw and detail a suitable foundation type. Assume any other information not given (10 marks)

SECTION B (Attempt any TWO questions)

Question 2 (20 marks)

a) Briefly outline the procedure for arranging furniture in a room (10 marks)

b) Sketch the conventional symbol for the following building materials in section

- (i) Hard core
- (ii) Planed timber
- (iii) Ground/Earth
- (iv) Stone wall
- (v) Roof tiles

(10 marks)

Question 3 (20 marks)

a) State **TWO** specific requirements for the following areas in a residential building

- (i) Bedrooms
- (ii) Kitchen
- (iii) Dining room
- (iv) Living room

(8 marks)

b) Using a scale of 1:20, draw a cross-section of a stair from the ground floor up to and including the first landing given the following information.

- (i) Flight width - 1200mm wide
- (ii) Tread size - 300 mm
- (iii) Waist - 150mm
- (iv) Storey height - 4500mm

Assume any other information not given

(12 marks)

Question 4 (20 marks)

a) Write the following abbreviations in full

- (i) DPM
- (ii) G.L
- (iii) RWP
- (iv) WC
- (v) VP

(5 marks)

- b) Figure 1 below shows the design of a one-bedroomed house. Using the scale of 1:50 draw the floor plan and dimension it, indicating the door and windows.

Assume any information not given.

(15 marks)

5500

Question 5 (20 marks)

Design and draw a 2 bedroom bungalow satisfying the following requirements.

- Bedrooms - minimum floor area = 10 m²
- Least room dimension = 3m
- Sitting room – minimum floor area = 15 m²
- Corridors/lobbies: - at least 1000mm wide
- Verandah - at least 1800m wide
- WC and bathroom (separate)

(20 marks)