

1704/203
BUILDING CONSTRUCTION II AND
COMPUTER AIDED DESIGN
June/July 2017
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**CRAFT CERTIFICATE IN BUILDING TECHNOLOGY
MODULE II**

BUILDING CONSTRUCTION II AND COMPUTER AIDED DESIGN

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

- Answer booklet;*
- Computer with CD writer loaded with CAD software;*
- Blank writable CD;*
- A3 printing paper;*
- Scientific calculator.*

This paper consists of SEVEN questions in TWO sections: A and B.

Answer FIVE questions choosing THREE questions from Section A and TWO questions from Section B including the compulsory question.

All questions carry equal marks.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

This paper consists of 4 printed pages.

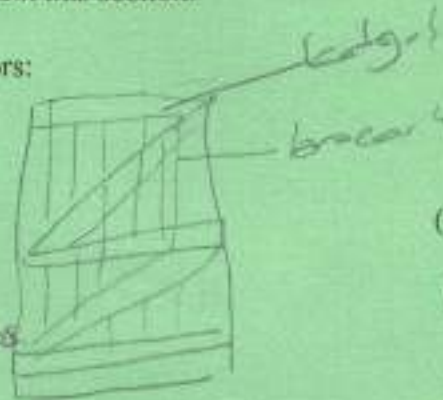
Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A: BUILDING CONSTRUCTION II

Answer **THREE** questions from this section.

1. (a) Sketch and label the following types of doors:

- (i) ledged and braced door;
- (ii) ledged and framed door.



(10 marks)

(b) State **four** functions of windows.

Handwritten notes:
 → act as ventilator
 → act as wall puncture when closed

(2 marks)

(c) Describe the following types of windows:

- (i) fixed;
- (ii) double-hung sash;
- (iii) casement;
- (iv) awning.

(8 marks)

2. (a) Define the following terms in staircase construction:

- (i) newel post;
- (ii) baluster. *- A vertical piece which holds a hand rail*

(2 marks)

(b) State **six** functional requirements of a good roof.

(6 marks)

(c) Explain the process of preparing and applying oil paint on a new timber surface.

(12 marks)

3. (a) (i) Define the term scaffolding; *→ a temporary structure on the side of wall which help in*

(ii) With the aid of sketches describe the following types of scaffolding:

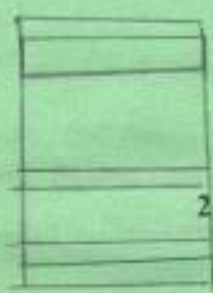
- I. put log;
- II. independent.

(15 marks)



(b) Describe each of the following interior finishes of a building:

- (i) skirting;
- (ii) cornice.



Handwritten label: STILE

(5 marks)

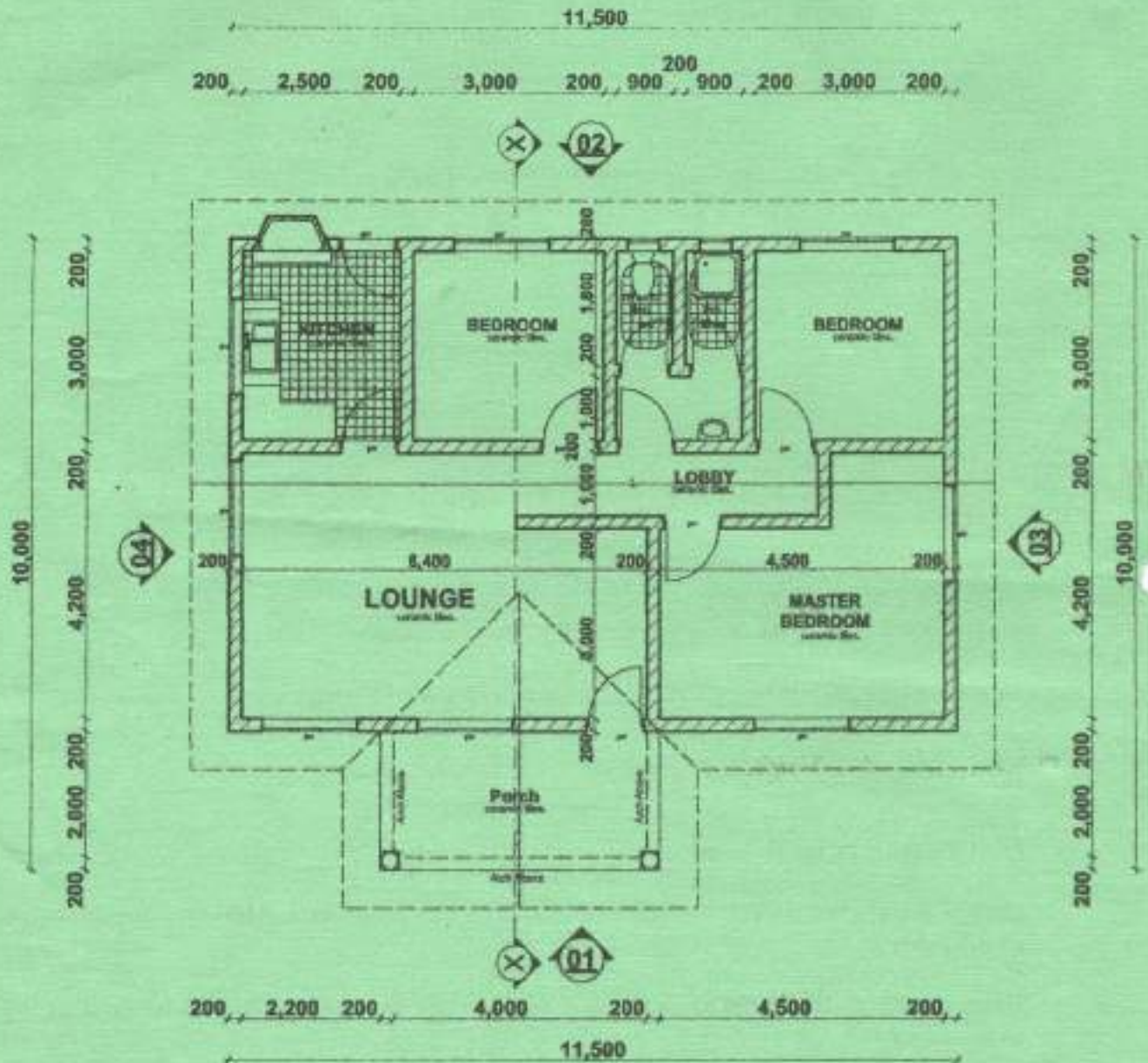
4. (a) State **four** factors to consider in selection of trees for landscaping. (4 marks)
- (b) Outline **two** functional requirements of chimneys, flues and fireplace construction. (4 marks)
- (c) With the aid of sketches, describe the following types of fences:
- (i) lattice fence;
 - (ii) balustrade fence;
 - (iii) ha-ha fence.
- (12 marks)

SECTION B: COMPUTER AIDED DESIGN (CAD)

Answer question 5 (COMPULSORY) and any other ONE question from this section.

Use Drawing 01 to answer the following questions.

5. To a scale of 1:20 and using CADD software draw the following:
- (a) eave detail A;
 - (b) strip foundation detail B.
- Print the drawing on an A3 paper. (20 marks)
6. Using CADD software and to a scale of 1:50 draw elevations 01 and 03. Print the drawings on an A3 paper. (20 marks)
7. Using CADD software and to a scale of 1:50 draw and label section X-X. Print the drawing on an A3 paper. (20 marks)



FLOOR PLAN.

THIS IS THE LAST PRINTED PAGE.