

2710/206
ARCHITECTURAL DESIGN
AND LANDSCAPING
Oct. / Nov. 2022
Time: 4 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN ARCHITECTURE
MODULE II

ARCHITECTURAL DESIGN AND LANDSCAPING

4 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Drawing paper size A3;

Drawing instruments;

Computer with CADD software.

This paper consists of EIGHT questions in TWO sections; A and B.

Answer FIVE questions choosing TWO questions from section A and THREE questions from section B.

All questions carry equal marks.

Maximum marks for each part of a question are indicated.

Candidates should answer the questions in English.

This question paper consists of 7 printed pages.

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

SECTION A: THEORY

Answer TWO questions from this section.

1. (a) Outline **three** functions for each of the following parties in the design process of an architectural project:
- (i) architect;
 - (ii) quantity surveyor.
- (12 marks)
- (b) Describe each of the following types of plants:
- (i) shrubs;
 - (ii) ground covers;
 - (iii) grasses;
 - (iv) climbers.
- (8 marks)
2. (a) Describe the following types of soils:
- (i) loam soil;
 - (ii) clay soil;
 - (iii) sandy soil.
- (9 marks)
- (b) Define each of the following terms:
- (i) land scaping;
 - (ii) fence;
 - (iii) land forms.
- (3 marks)
- (c) Explain the following type of designs:
- (i) system design;
 - (ii) product design.
- (8 marks)
3. (a) State **four** factors that influence trench depth in design of drainage systems.
- (4 marks)
- (b) Outline **four** factors to consider in the design of a vehicular parking.
- (6 marks)

(c) Illustrate the following land scaping tools:

- (i) transplanting spade;
- (ii) leaf rake;
- (iii) landscape rake;
- (iv) hand tamper;
- (v) mulch fork.

(10 marks)

SECTION B: PRACTICE

Answer **THREE** questions from this section.

4. Using CADD software and drawing **no. 01**, draw, dimension and label the floor plan layout to a scale of 1:100 to include the following:

- (i) 200 mm thick walling;
- (ii) doors and windows;
- (iii) rooms furniture;
- (iv) sanitary fittings.

Print the drawing on an A₃ paper.

(20 marks)

5. Using CADD software and drawing **No. 02**, draw and dimension foundation layout plan to a scale of 1:100 taking trench width as 1000 mm. Print the drawing on an A₃ paper.

(20 marks)

6. Using CADD software and drawing **No. 03**, draw and label section H-H to a scale of 1:20 . Print the drawing on an A₃ paper.

(20 marks)

7. Using CADD software and drawing **No. 04**, draw and label cross-section X - X to a scale of 1:100. Print the drawing on an A₃ paper.

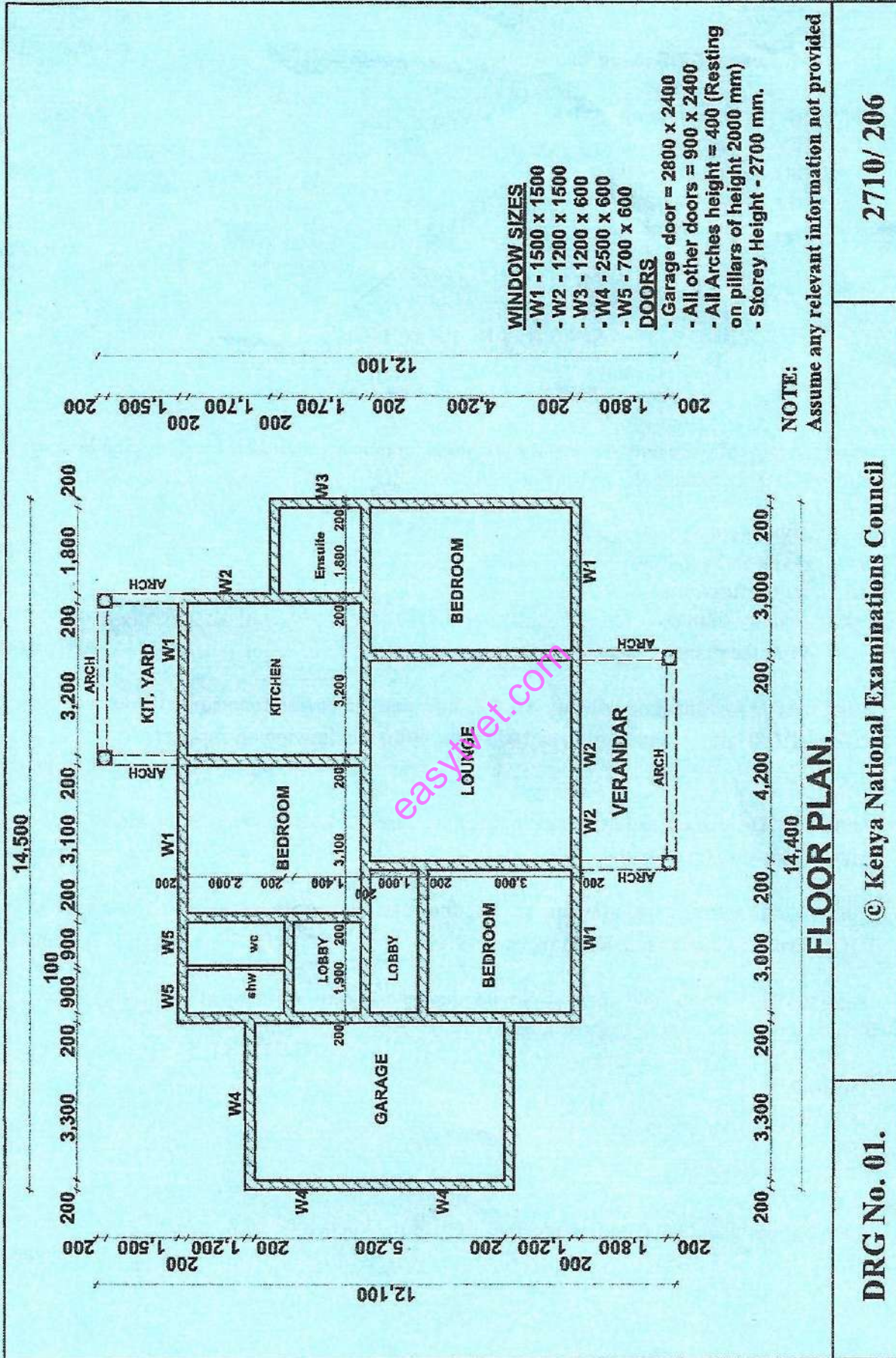
(20 marks)

8. Using CADD software and drawing **No. 04**, design and draw a U-shaped kitchen layout to include the following to a scale of 1:20.

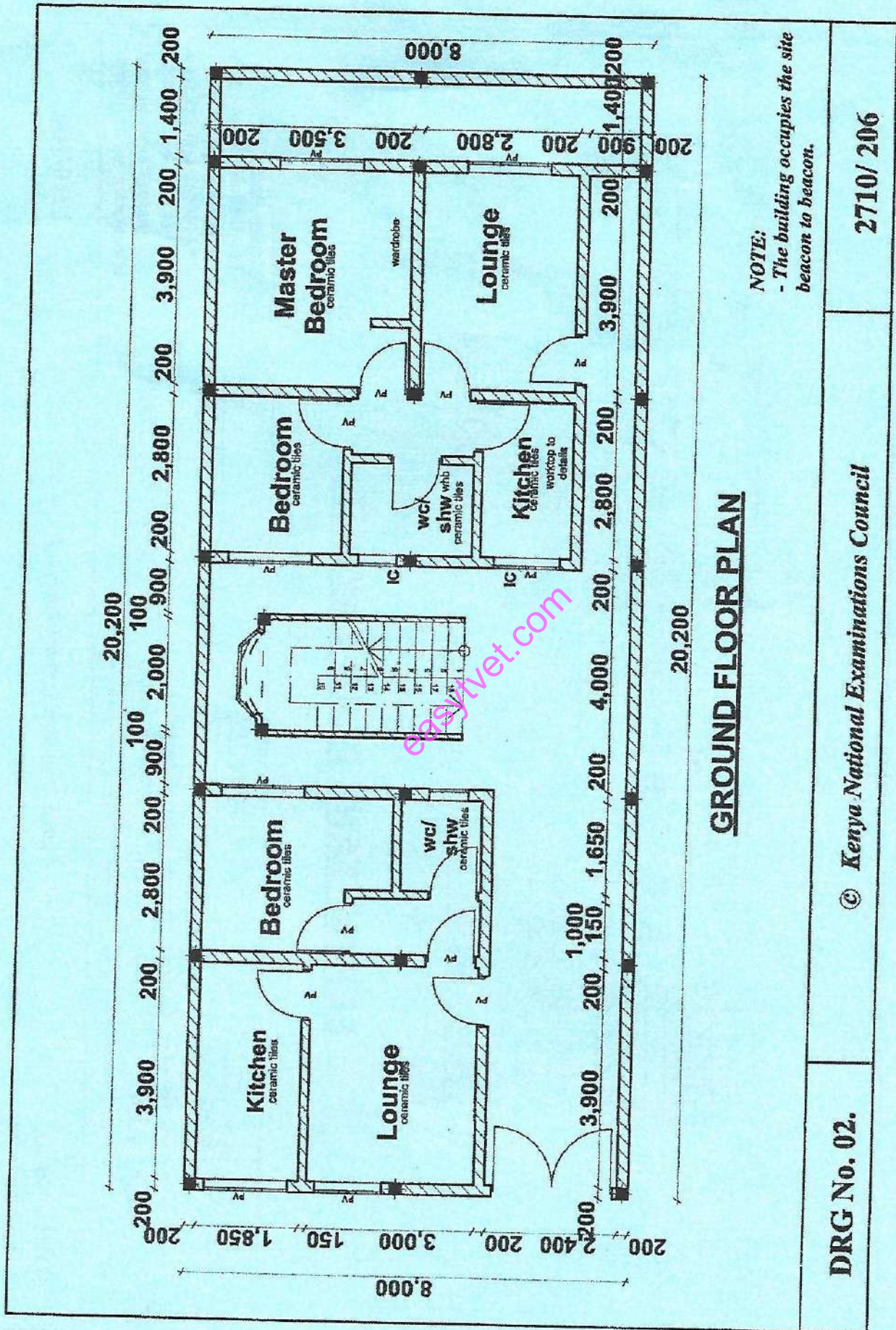
- worktop;
- cooker;
- sink;
- high level cabinets.

Print the floor plan layout and perspective view of the kitchen on an A₃ paper.

(20 marks)



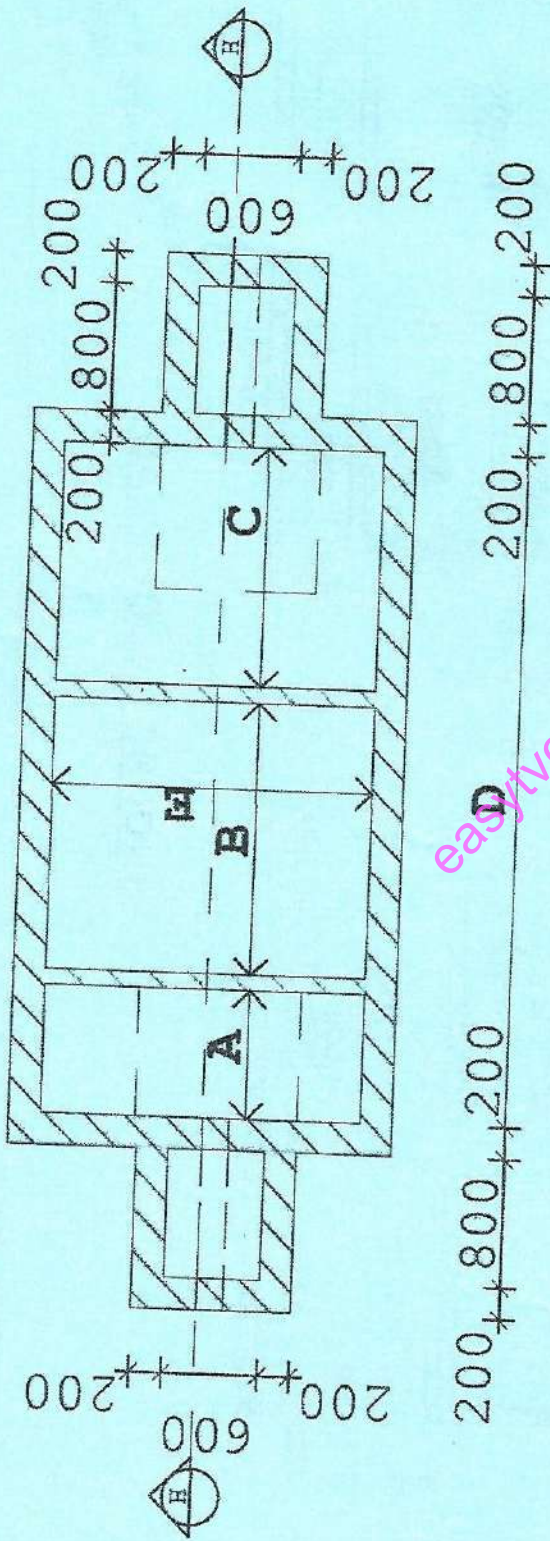
2710/206
10/05/2022



DRG No. 02.

© Kenya National Examinations Council

2710/ 206



SEPTIC TANK PLAN LAYOUT.

CAPACITY IN LITRES	NO OF PERSONS	DESLUDDING INTERVALS (YEARS)	DIMENSIONS IN MM						
			A	B	C	D	E	F1	F2
24000	120	2	800	2100	1800	5000	2800	1800	1600

NOTES:

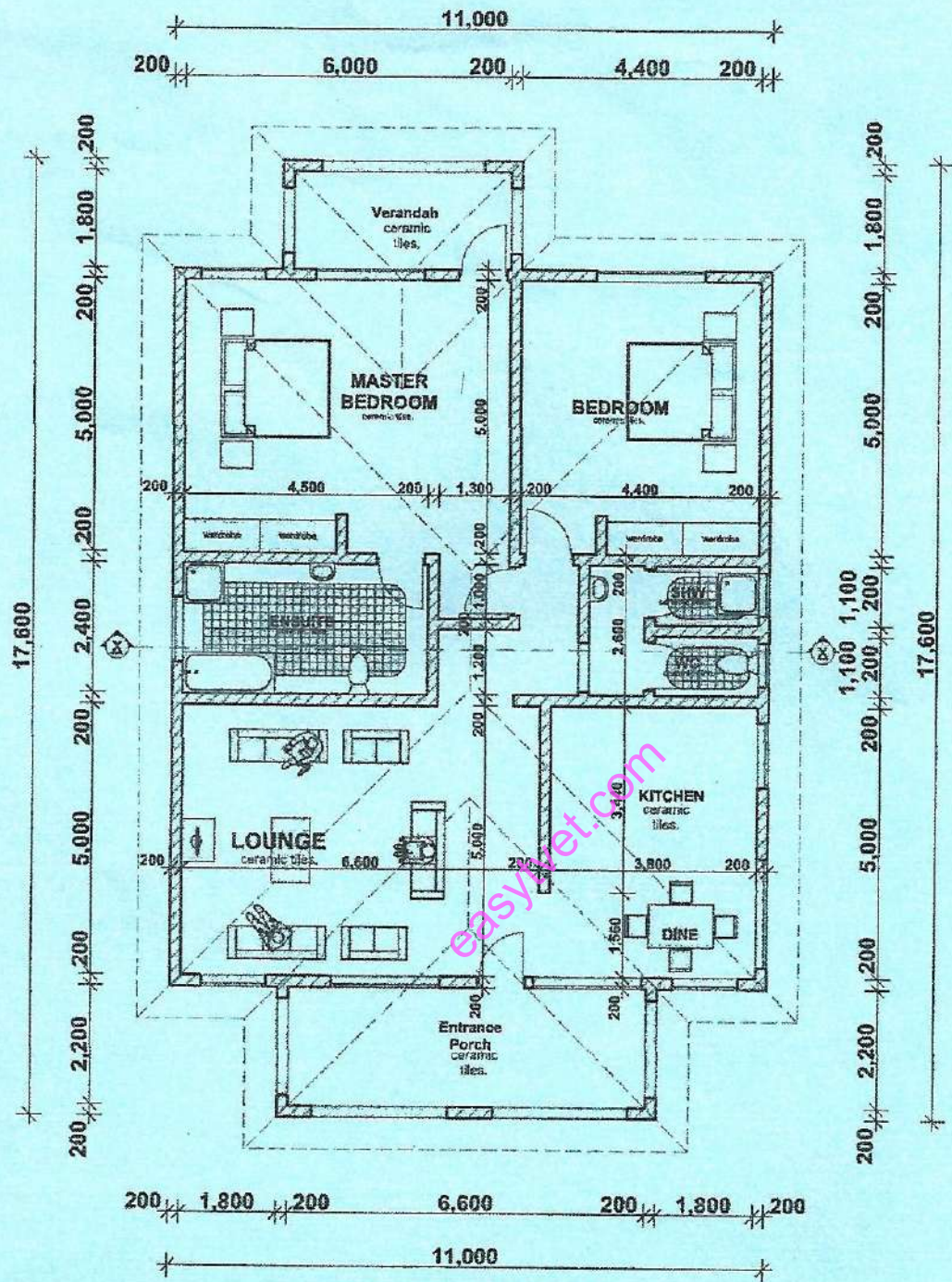
Window sizes:

- F1 - 1800mm (Depth from inlet MH to Septic floor).
- F2 - 1600mm (Depth from outlet MH to Septic floor).
- Assume any other necessary information not provided.

DRG No. 03.

© Kenya National Examinations Council

2710/206



FLOOR PLAN

NOTE:
ROOF DETAILS:
 - Roof pitch 22.5° - Purlis - 100 x 50mm
 - Rafters - 100 x 50mm - Struts - 100 x 50mm
 - Tie beam - 100 x 50mm - Wall plate - 100 x 50 mm
 - Fascia board - 200 x 25mm
FOUNDATION DETAILS:
 - Adopt details for a Typical Strip Foundation.
 - Assume any relevant information not provided

DRG No. 04.	© Kenya National Examinations Council	2710/206
-------------	---------------------------------------	----------

THIS IS THE LAST PRINTED PAGE