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**BUILDING CONSTRUCTION III, DRAWING III
AND SERVICES**

Oct. /Nov. 2022

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN BUILDING TECHNOLOGY
DIPLOMA IN ARCHITECTURE**

MODULE III

BUILDING CONSTRUCTION III, DRAWING III AND SERVICES

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

answer booklet;

scientific calculator;

drawing instruments;

drawing paper size A₃.

This paper consists of EIGHT questions in THREE sections A, B and C.

Answer TWO questions from section A, TWO questions from section B and ONE question section C.

Each question in section A carries 25 marks, section B carries 15 marks and section C carries 20 marks.

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

Candidates should answer the questions in English.

This paper consists of 5 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 III

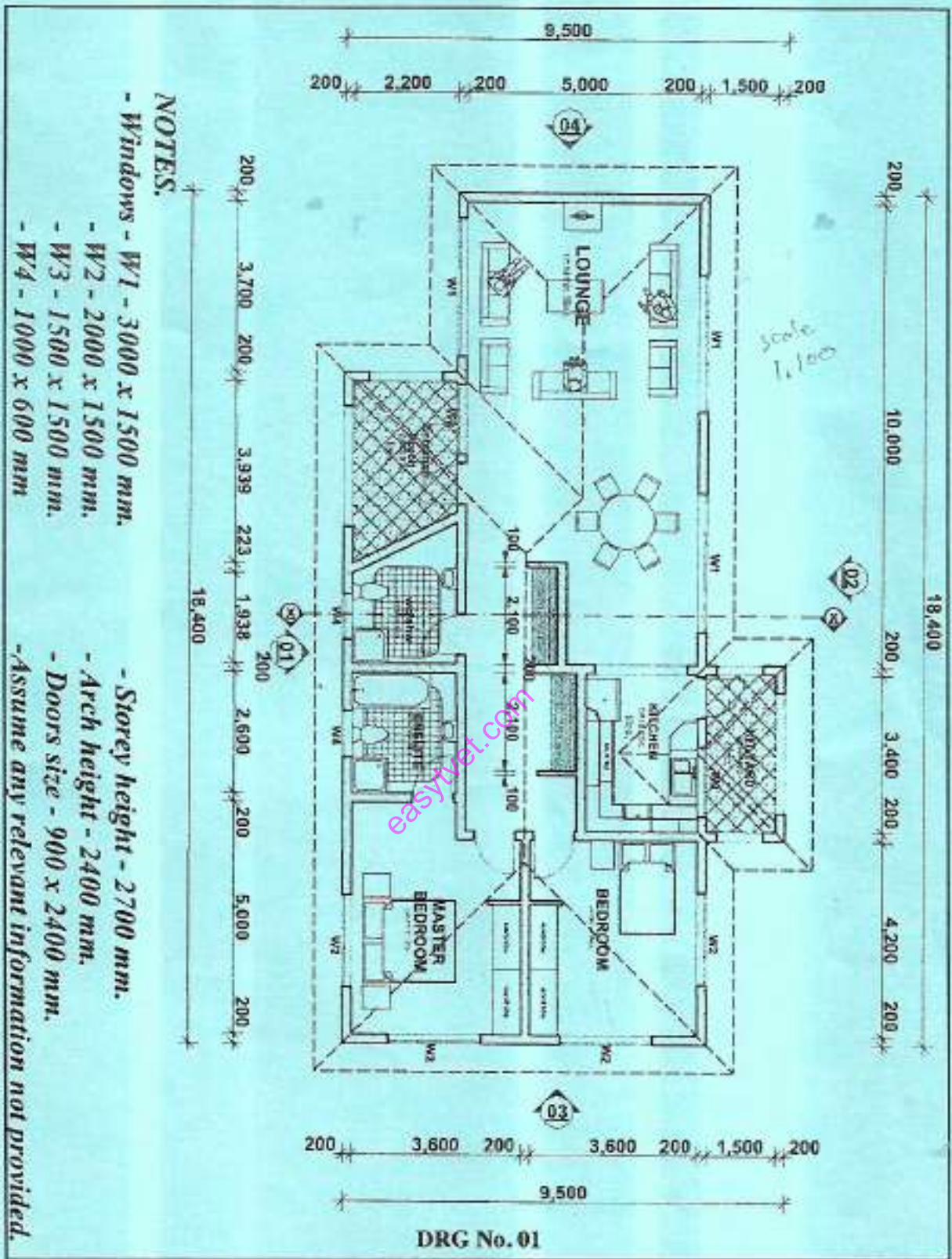
Answer **TWO** questions from this section.

1. (a) Outline four causes of formwork failure. (6 marks)
improper bracing, vibrations from machines
- (b) Describe each of the following types of drainage systems: (9 marks)
- (i) separate system;
 - (ii) combined system;
 - (iii) partially separate system.
- (c) (i) Explain two main functions of paint. (10 marks)
- prevent corrosion, - improve aesthetic appearance
- (ii) Describe the following types of paints:
- (I) oil-based paints. *Paints*
 - (II) water based paints.
2. (a) (i) State four advantages of demolition by use of explosives. (10 marks)
- It is quick, - cheap, - saves on time
- (ii) Describe each of the following methods of demolition: (10 marks)
- (I) jack hammer;
 - (II) ball and crane;
 - (III) hydraulic breaker.
- (b) Describe the following types of plaster: (8 marks)
- (i) sand faced plaster;
 - (ii) rough cast plaster.
- (c) (i) Define the term underpinning.
- (ii) Outline three reasons for underpinning a building. (7 marks)

SECTION C: BUILDING SERVICES

Answer *ONE* question from this section.

7. (a) Outline **three** advantages of indirect water supply systems. (6 marks)
- (b) Describe the following types of boilers:
- (i) independent boiler;
 - (ii) back boiler.
- (8 marks)
- (c) Sketch and label a bell type flashing cistern. (6 marks)
8. (a) Outline **two** functional requirement of sanitary appliances. (4 marks)
- (b) (i) State **three** advantages of siphonic water closets;
- (ii) Describe the following types of water closets:
- (I) wash down type;
 - (II) siphonic type.
- (9 marks)
- (c) Sketch and label a plunger type flashing cistern. (7 marks)



- NOTES.**
- Windows - W1 - 3000 x 1500 mm.
 - W2 - 2000 x 1500 mm.
 - W3 - 1500 x 1500 mm.
 - W4 - 1000 x 600 mm.
 - Storey height - 2700 mm.
 - Arch height - 2400 mm.
 - Doors size - 900 x 2400 mm.
 - Assume any relevant information not provided.

THIS IS THE LAST PRINTED PAGE.

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