



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2023/2024 ACADEMIC YEAR

SECOND YEAR, FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH

COURSE CODE: HEH 211

COURSE TITLE: TECHNICAL DRAWING AND DESIGN

DATE: 5/12/2023

TIME: 8.00-10.00 AM

INSTRUCTIONS TO CANDIDATES:

- ✓ Answer Answer all questions in this section in section A and any two (2) questions in section B
- ✓ Write your registration number on each sheet of paper used
- ✓ Observe neatness
- ✓ All drawings and labelling should be done in pencil

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 3 Printed Pages. Please Turn Over

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION 40 MARKS

1. State any four (4) documents required by the construction approval authorities for buildings approval in Kenya [4 marks].
2. Describe any four (4) ways in which dimensions are shown in a drawing [4 marks].
3. Explain any four (4) reasons why there should be an approved building construction plans before the actual construction sets off [4 marks]
4. Name any four (4) authorities involved in approval of building plans in this country [4 marks]
5. State any four (4) areas from public health point of view where you will apply design and technical drawing as a public health officer [4 marks]
6. Write the following abbreviations in full
 - i. MATL
 - ii. SPEC
 - iii. DIA
 - iv. CYL
7. State any four (4) quality skills that should be remembered a PUBLIC HEALTH OFFICER in design and technical drawing
8. Highlight four (4) types of plans usually required for complete construction of a building [4 marks]
9. A building plan has been brought to your office for approval. Highlight any four (4) factors you will look into when scrutinizing the the building plan [4 marks]
10. Define the following terms as used in technical drawing and design:
 - a) Dimensioning [2 marks]
 - b) Title block [2 marks]

SECTION B (ANSWER ANY TWO QUESTIONS)

This section has three (3) questions

-The section has a total of 30 marks

-Each question carries 15 marks (choose any 2 questions).

Question 1.

To the scale of 1:75, draw a floor plan of a two (2) roomed house whose dimensions are 6.9m by 4.5m. One of the rooms is 4.5m by 4m with through type of ventilation, while the other room has a cross ventilation. The house belongs to Mr and Mrs Makokha Karakacha. Parcel number Butso/Esameyia/680, Box 276-50100, Kakamega. The house has the following

features:

- Wall thickness = 200mm
- Window size 1.2 m high by 0.9m wide
- Door size – 2.1m high by 0.9m wide

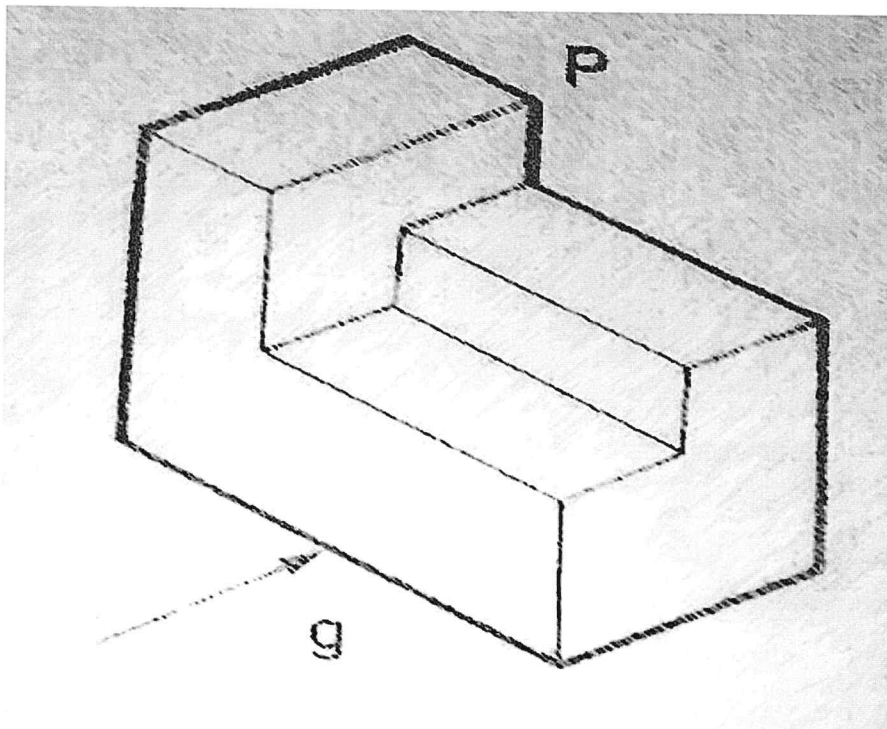
(15marks)

Question 2. Describe the importance of the following departments in the approval of building plans (15 marks)

- i. engineering department
- ii. physical planning
- iii. public health
- iv. urban planning and inspectorate
- v. Lands department

Question 3. Fig. Q3 below shows a solid drawn by a third angle projection. The arrow indicates the direction to obtain the view from the front. Draw the following views in third angle projection.

- a. Front elevation
- b. Left side elevation
- c. Right side elevation
- d. Top view
- e. Bottom view
- f. Rear view
- g. Pictorial view
- h. Hinge lines of pictures planes (12 marks)
- i. The projection simple of third angle projection according to ISO conventions of Figure
- j. Q3 below (3 marks)



Handwritten signature or initials in the top right corner.