



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH 200: TECHNICAL DRAWING

DATE: 14/12/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS:

This paper consists of two sections A and B

SECTION A

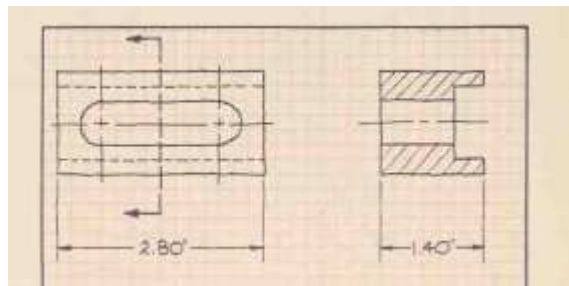
This section has **ONE** question

The question is **COMPULSORY**

The question is 30 marks.

QUESTION ONE (COMPULSORY) (30 MARKS)

- (a) Name the two major types of drawings and explain the difference between them. (5 marks)
- (b) Explain any five areas where technical drawing is applied. (5 marks)
- (c) State any five (5) principal views of orthographic projection (5 marks)
- (d) Identify the basic sketching lines in the diagram below (5 marks)



- (e) Give the reading of the following angles (5 marks)
 - (i) $48^{\circ}28'38''$
 - (ii) $121^{\circ}18'27''$
- (f) Explain the five characteristics of good freehand lettering (5 marks)

SECTION B

This section has **FOUR (4)** questions

Answer **Question TWO (2)** and any other question

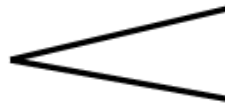
Each question is 20 marks

QUESTION TWO (20 MARKS)

- (a) Explain the general rules applied in sketching techniques. (5 marks)
- (b) On the graph paper provided sketch a 3cm radial circle, highlighting the **six steps** taken. (15 marks)

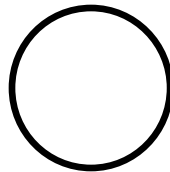
QUESTION THREE (20MARKS)

- (a) Explain the importance of technical drawing to the public health profession. (10 marks)
- (b)
 - i. Highlight the three steps for bisecting an angle. (3 marks)
 - ii. Bisect the angle give and give the angles in degrees (drawing paper provided) (7 marks)



QUESTION FOUR (20 MARKS)

- (a) Explain the step by step procedure (organization) of design process (5 marks)
- (b) Locate the center of the given circle; highlight the steps taken (drawing paper provided) (15 marks)



QUESTION FIVE (20 MARKS)

- (a) Explain the characteristics of any five (5) basic types of lines used in manual drafting (5 marks)
- (b) Given the following figure (3cm across flats), draw a square and highlight the steps taken (drawing paper). (15 marks)

