



DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
UNIVERSITY EXAMINATIONS FOR THE 2020/2021 ACADEMIC YEAR
FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN CIVIL ENGINEERING
BACHELOR OF EDUCATION IN CIVIL ENGINEERING
BACHELOR OF TECHNOLOGY IN BUILDING CONSTRUCTION

ECE 1211: ENGINEERING DRAWING I

DATE : 28TH SEPTEMBER 2021

TIME : 2:30-5 :30PM

INSTRUCTIONS :

- i. This paper has **FOUR** questions
- ii. Sections 1, 2 and 3 are compulsory; choose one question on Section 2 and one question on Section 3
- iii. Missing and mismatching dimensions, if any, may be suitably assumed and noted.
- iv. Any form of cheating is prohibited and will lead to disqualification
- v. **TYPE** your answers on the provided drawing paper (a max of 7mm letter and number size)
- vi. Draw a border line on the provided drawing paper and a Title Block
- vii. Type the Question(s) number being answered and underline it

SECTION 1: COMPULSORY

QUESTION 1 (30MKS)

- a) Inscribe a regular hexagon in a circle of 100mm dia., measure and print the angle between the sides of the hexagon
(5mks)
- b) Identify the line types as applied in Fig Q1b
(5mks)

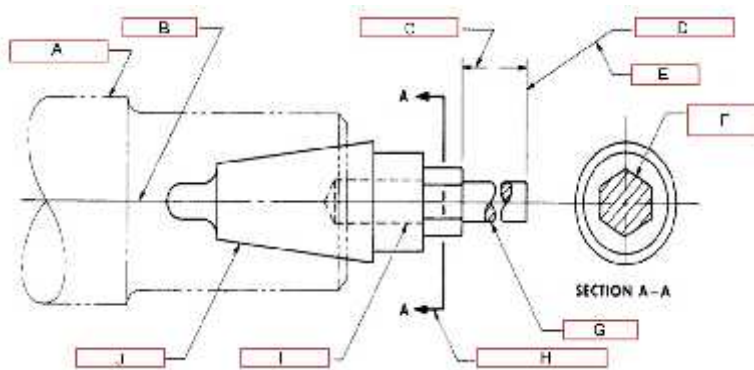


Fig. Q2

For every correctly identified line assign (½ mark)

- c) Construct an ellipse when its major axis is 90mm and minor axis is 55mm (5mks)
- d) List **FIVE** reducing and enlarging scales that can be used when drawing (hint: Type your answer)
(5mks)
- e) Draw the isometric view of the given orthographic projection of the object shown in Q1e. The units is given in mm
(10mks)

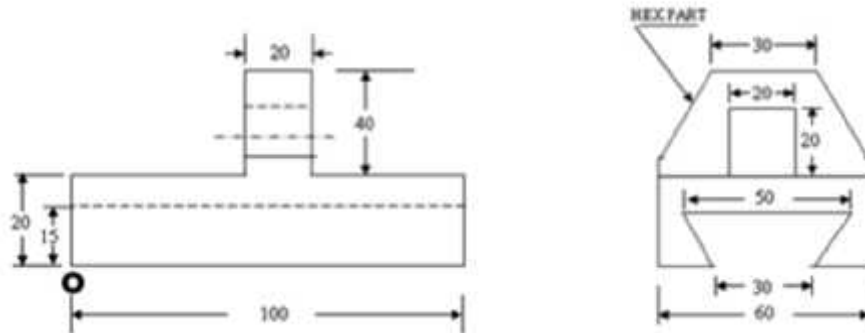


Fig. Q1e

SECTION 2 (Choose any two questions)

QUESTION 2 (15MKS)

- a) Draw an isometric of a frustum with a square base pyramid of length 60mm and top square of length 50mm.

(5mks)

- b) A ball is thrown from a building of 8m high and its highest flight just crosses a Blue gum tree 14m high. Trace the path of the stone if the distance between the building and the tree measured along the ground is 4m.

(10mks)

QUESTION 3 (15MKS)

- a) With freehand, type the following phrase by using single stroke vertical CAPITAL letters of 5mm (h) size

THE IMPORTANCE OF GOOD LETTERING CANNOT BE OVER EMPHASIZED.
THE LETTERING CAN EITHER “MAKE OR BREAK” AN OTHERWISE GOOD
DRAWING.

(5mks)

- b) With actual dimensions name and draw the symbols of projections

(4mks)

- c) A cone diameter of base 60mm and height 70mm is lying on the ground with its base parallel to the H.P. Draw the front view and top view

(6mks)

QUESTION 4 (15MKS)

- a) A line is 8cm long. Subdivide the line in the ratio of 1:3:4, Measure and print the size of each part

(5mks)

- b) Fig. Q4b shows orthographic projection of an object, draw the isometric view. The units are given in mm

(10mks)

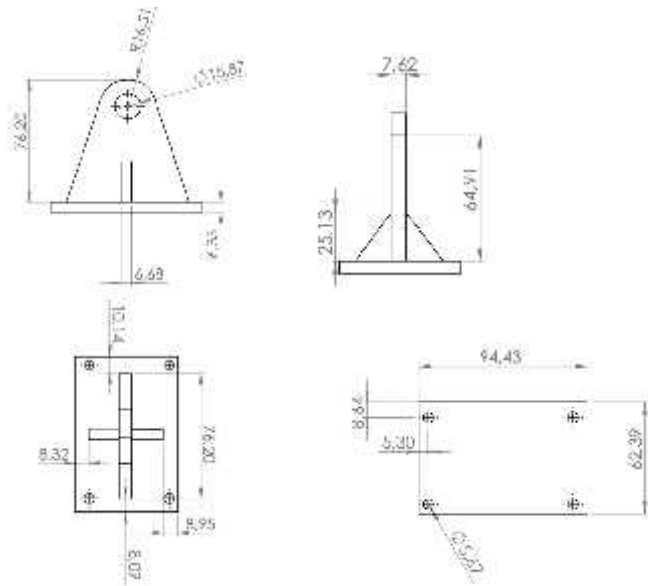


Fig Q4b