

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE IN HORTICULTURE, BACHELOR OF SCIENCE IN
AGRICULTURE EDUCATION, BACHELOR OF SCIENCE IN ENGINEERING**

AGEN 111/ EENG 112: INTRODUCTION TO TECHNICAL DRAWING

STREAMS: BSC (HORT, AGED), EENG

TIME: 2 HOURS

DAY/DATE: MONDAY 10/12/2018

11.30 AM – 1.30 PM

INSTRUCTIONS:

Answer ALL Questions in Section 1 and any other Two in Section II

SECTION 1

1. (a) using relevant examples, highlight three standard conventional lines used in drawing. [6 marks]
- (b) Using the necessary sketches, show how you can dimension the following:
- (i) Projection lines [2 marks]
 - (ii) Circles [2 marks]
 - (iii) Radius curves [2 marks]
 - (iv) Angles [2 marks]
2. Isometrically draw a block measuring 70 mm long by 50 mm high by 30 mm deep. From one of its end draw a table tenon measuring 25 mm by 5 mm by 25 mm [8 marks]
3. (i) Using necessary tools systematically explain and construct an angle of 60° [2 marks]

- (ii) With aid of clear sketch, show the contents of a title block. [2 marks]
4. Using a divider and a set square, divide a line measuring 75 mm into eight equal parts. [4 marks]

SECTION II

5. (a) Draw a cabinet projection of a clock case using oblique projection. The block measures 75 mm long by 65 mm high by 35 mm deep. The hole has a diameter of 50 mm and the thickness around the hole is 5 mm. [10 marks]
- (b) Draw the front view and plan of a regular hexagonal prism in first angle projection. [5 marks]
- (c) Explain and construct an angle of 45° given that one of the sides $AB = 60$ mm [5 marks]
6. (a) Construct and explain how to erect a perpendicular from any point of given line AB. [3 marks]
- (b) Construct and explain a radius curve of 30 mm at an acute angle of 70° [3 marks]
- (c) The figure shown below shows a three view of shaped block. Using A4 paper size draw the pictorial view of the block. [14 marks]

7. (a) Explain ten basic tools that a drafts person needs for his work. [5 marks]
- (b) The figure shown below shws the pictorial view of an engineering component.
Sketch in free hand and in good proportions, suitable front view, end view
and plan view of each component using third angle projection. [15
marks]