



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

FIRST SEMESTER EXAMINATION FOR

DIPLOMA IN MECHANICAL ENGINEERING (PLANT PRODUCTION)

ENGINEERING DRAWING I

DATE: 6/9/2021

TIME: 2:30 – 5:30 AM

INSTRUCTIONS:

- This Examination contains two sections A and B
 - Attempt all the questions
1.
 - a) By use of a simple sketch, differentiate between isometric and oblique projection. (6 marks)
 - b) Construct a cylinder on a horizontal plane given the diameter 80mm and height 70 mm in isometric projection. (10 marks)
 - c) By use of simple sketch, differentiate between first and third angles of projection. (4 marks)
 2. Figure 1 shows three complete orthographic views in third angle projection. Draw an isometric block fully dimensioned with corner x as the lowest point. (20 marks)
 3. Figure 2 shows a block in isometric projection. Draw in third angle projection the following
 - i. Front view in the direction of the arrow
 - ii. End elevation
 - iii. The plan (20 marks)
 4. Figure 3 shows a block in isometric projection. Draw in first angle projection the following
 - i) Front view in the direction of the arrow
 - ii) End elevation
 - iii) The plan (20 marks)
 5.
 - a) Construct an Internal tangent to two unequal circles diameter 40 mm and 60mm with centers O, O₁ radii R and r, 120mm apart respectively. (10 marks)
 - b) Construct a nonagon given the circumscribing circle of diameter 80 mm. (10 marks)