



MACHAKOS UNIVERSITY

University Examination 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST YEAR THIRD SEMESTER EXAMINATION FOR

DIPLOMA IN BUILDING TECHNOLOGY

DIPLOMA IN CIVIL ENGINEERING

2705/2707/105D: TECHNICAL DRAWING

DATE: 14/12/2020

TIME: 2.30-5.30 PM

INSTRUCTIONS

ANSWER ALL QUESTIONS

1. Using the concentric/auxiliary circles method construct an ellipse whose major axis $AB=100\text{mm}$ and minor axis $CD=70\text{mm}$ and on it produce a normal and a tangent at a point P which is 20mm from point B and is at right angles to line AB (20 marks)
2. Figure 1 shows a cylinder penetrating a right cone:
 - a) Draw the elevation and show the line of intersection
 - b) Draw the plan
 - c) Draw the surface development of the cylinder (20 marks)
3. Draw the views of the block shown in figure 2 in first angle projection with the front elevation looking in the direction of arrow X (20 marks)
4. The front elevation of a hexagonal pyramid of base sides 30mm and height 75mm is given in figure 3. the pyramid has been cut by a plane at 30° . draw the following views
 - i) The given elevation
 - ii) The plan
 - iii) The true shape of the cut surface
 - iv) The development (20 marks)
5. From figure 4, draw the following
 - a) the plan and elevation as shown
 - b) the sectional plan
 - c) development of the frustum
 - d) the true shape of the cut section (20 marks)