

UNIVERSITY OF RUHUNA – FACULTY OF TECHNOLOGY

BACHELOR OF ENGINEERING TECHNOLOGY

Level II (Semester II) Examination, April 2019.

Course Unit: ENT2262 Technical Drawing & Computer Aided Drafting.

Time Allowed Three Hours

[Answer All (5) Questions, Each question carries 10 marks]

1. Draw the following Trajectories having the specific distance between the focus and the directrix (FD), and eccentricities (e).
 - a) An ellipse with $FD=50$ mm and $e=2/3$ (5 marks)
 - b) A parabola with $FD=50$ mm and $e=1$ (5 marks)

2. (a) Construct a regular **Heptagon** having sides of 50mm length (General Method). (4 marks)

(b) Using Tangent arc drawing method, draw the figure illustrated in **Figure Q2**. you should clearly show the Construction Lines. (all dimensions are given in millimeters) (6 marks)

3. With reference to the object shown in **Figure Q3**, draw the following orthographic views using the first angle Projection. (all dimensions are in millimeters)
 - a) **Sectional Front View** across the A-A plane by looking in the X arrow direction. (6 marks)

 - b) **Top view** (4 marks)

4. a) A circle of Diameter 60mm is rolling on the outside surface of another circle of radius 100mm, without any slip. If the starting point on rolling circle is P, Draw the moving path of P for one complete revolution, showing all the construction lines. (6 marks)

b) Draw **Involute** of a circle. Take the Diameter and the String length as **4cm** and **10 cm** respectively. (4 marks)

5. **Figure Q5**, shows the Orthographic Projections of an object drawn in the third angle Projection. Draw the **Isometric view** of the object by looking in the direction shown by the arrow. Use the Isometric Scale. (all dimensions are given in millimeters)

(10 marks)

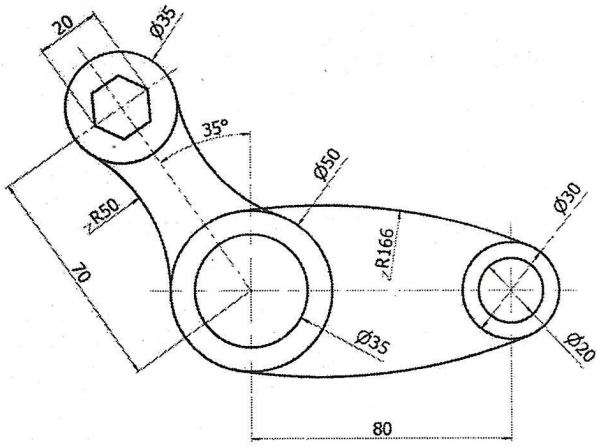


Figure Q2

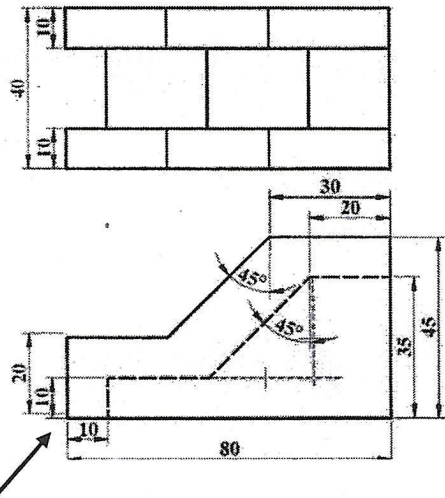


Figure Q5

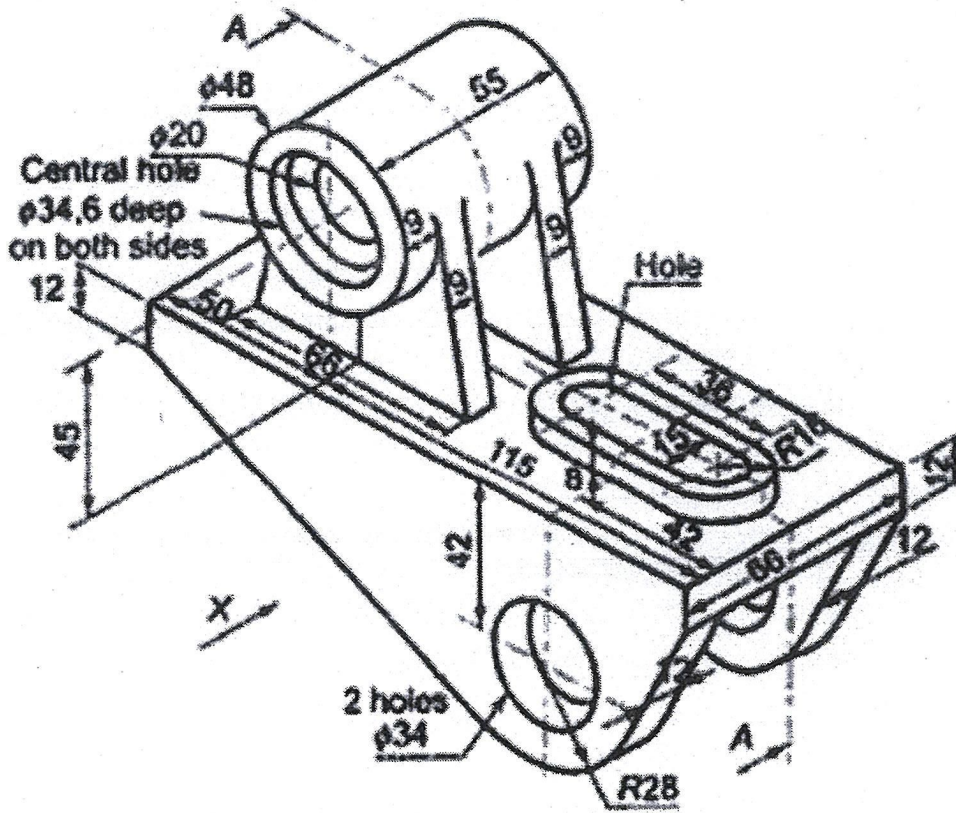


Figure Q3