



# UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 1 Examination in Engineering: August 2015

Module Number: ME1201

Module Name: Engineering Drawing

[Three Hours]

[Answer all questions, each question carries 10 marks]

---

- Q1. With reference to the object shown in **Figure Q1**, draw the following views using the Third Angle projection. (Note: all dimensions are given in millimetres)
- Sectional front view across the plane **ABCD**, looking in the direction of arrow **X**.
  - Top view.
  - Right side view.
- [10.0 Marks]
- Q2. A vertical cylinder **A** with 60 mm diameter and 70 mm height is completely penetrated horizontally by a 80 mm long square prism **B** having 35 mm sides. The axes of the cylinder and the prism intersect and bisect each other. Two faces of the penetrating prism are inclined to the horizontal plane by  $30^\circ$  as shown in **Figure Q2**. Taking the **Figure Q2** as the front view, draw the following views, showing the curves of intersection.
- Left side view.
  - Top view.
- [10.0 Marks]
- Q3. A circle with 70 mm diameter rolls along a fixed straight line without any slipping. By considering one complete rotation of the circle, draw the following.
- The curve traced by a point on the circumference of the circle.
  - The curve traced by a point, which is at 28 mm away from the centre.
  - The curve traced by a point, which is at 42 mm away from the centre.
- [10.0 Marks]
- Q4. **Figure Q4**, shows the orthographic projections of an object drawn in the First Angle projection. Draw the isometric view of the object looking in the direction shown by the arrows. Use the Isometric Scale. (Note: all dimensions are given in millimetres)
- [10.0 Marks]
- Q5. The hollow object shown in **Figure Q5** consists of four planer faces and a regular half-cone. Draw the development of the surface of the object. (Note: all dimensions are given in millimetres)
- [10.0 Marks]

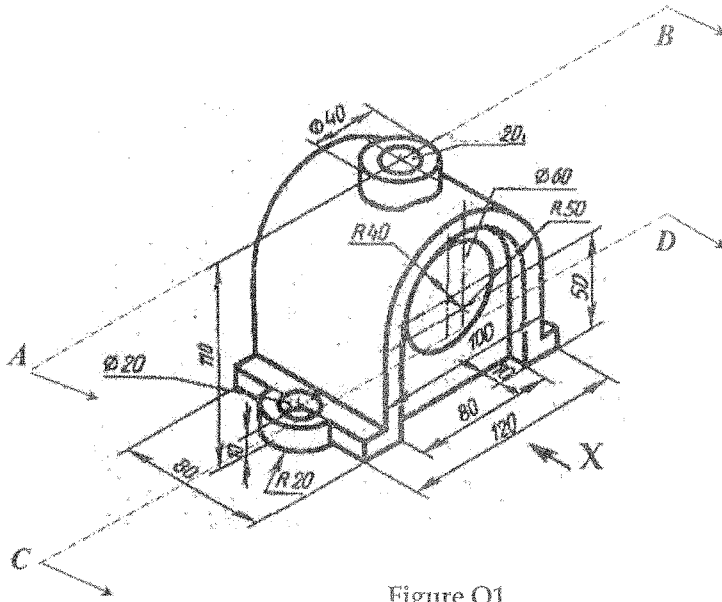


Figure Q1

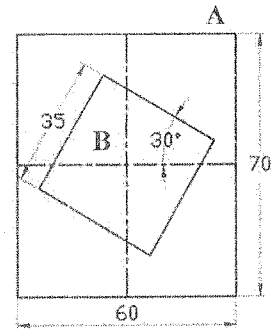


Figure Q2

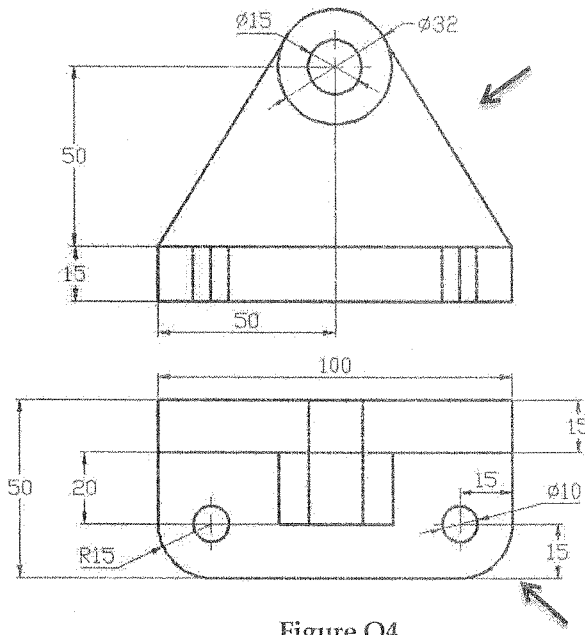


Figure Q4

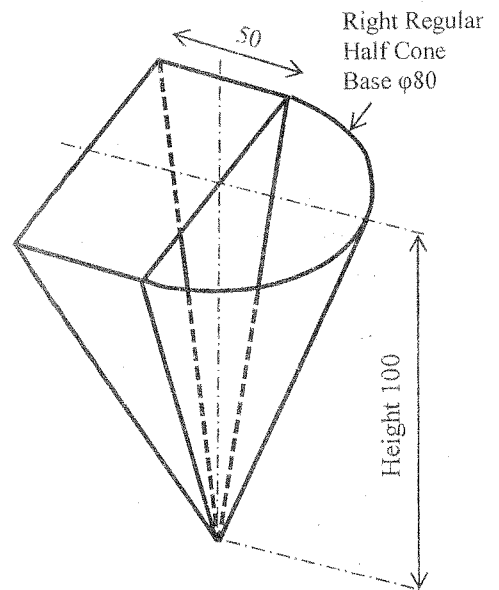


Figure Q5