

I B. Tech II Semester Regular/Supplementary Examinations July/Aug. - 2015  
**ENGINEERING DRAWING**

(Computer Science Engineering)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**  
Answering the question in **Part-A** is Compulsory,  
Three Questions should be answered from **Part-B**

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**PART-A**

1.(a) Draw the isometric view as shown in fig.1

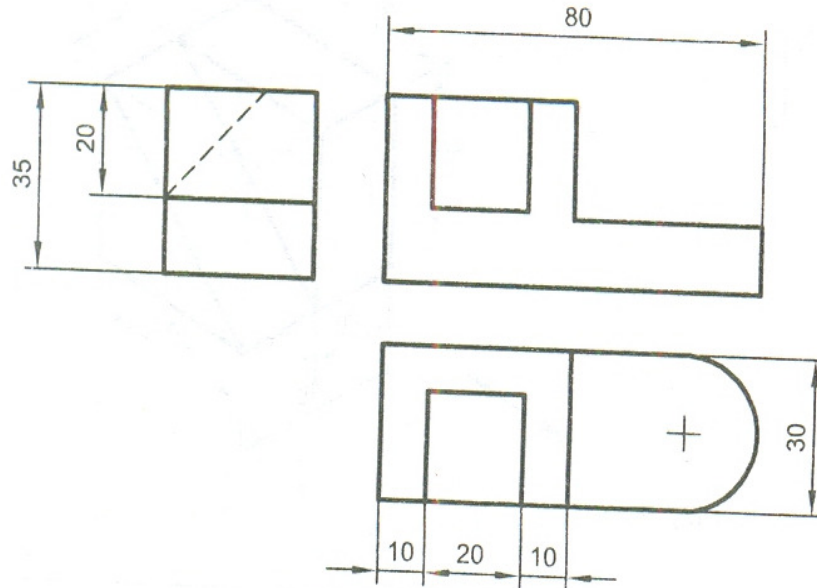


Fig.1 (Note: all dimensions are in mm)

(b) A plate having shape of an isosceles triangle has base 50mm long and altitude 70mm. It is also placed that in the front view. It is seen as an equilateral triangle of 50mm sides and one side inclined at  $45^\circ$  to xy. Draw its top view.

[12+10]

**PART-B**

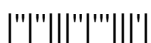
2. A plot of ground is in the shape of a rectangle 110m x 50m. Inscribe an elliptical lawn in it. Take a suitable scale.

[16]

3.(a) A point A is 35mm above HP and 20mm in front of VP. Draw the front, top and right side view.

(b) A vertical line AB, 75mm long, has its end A in the HP and 25mm in front of the VP. A line AC, 100mm long, is in the HP and parallel to the VP. Draw the projections of the line joining B and C, and determine its inclination with the HP.

[8+8]



- 4. The midpoint M of a straight line AB is 60mm above HP and 50mm in front of VP. The line measures 80mm long and inclined at an angle of  $30^\circ$  to HP and  $45^\circ$  to VP. Draw its projections. [16]
- 5. Draw the projections of a rhombus having diagonals 125mm and 50mm long; the smaller diagonal of which is parallel to both the principle planes while the other is inclined at  $30^\circ$  to the HP. [16]
- 6. Draw the projections of a cone, base 30mm diameter and axis 50mm long, resting on HP on a point of its base circle with the axis making an angle of  $45^\circ$  with HP and parallel to VP. [16]
- 7. Draw (i) Front View (ii) Top View (iii) Side View from the left as shown in fig.2 [16]

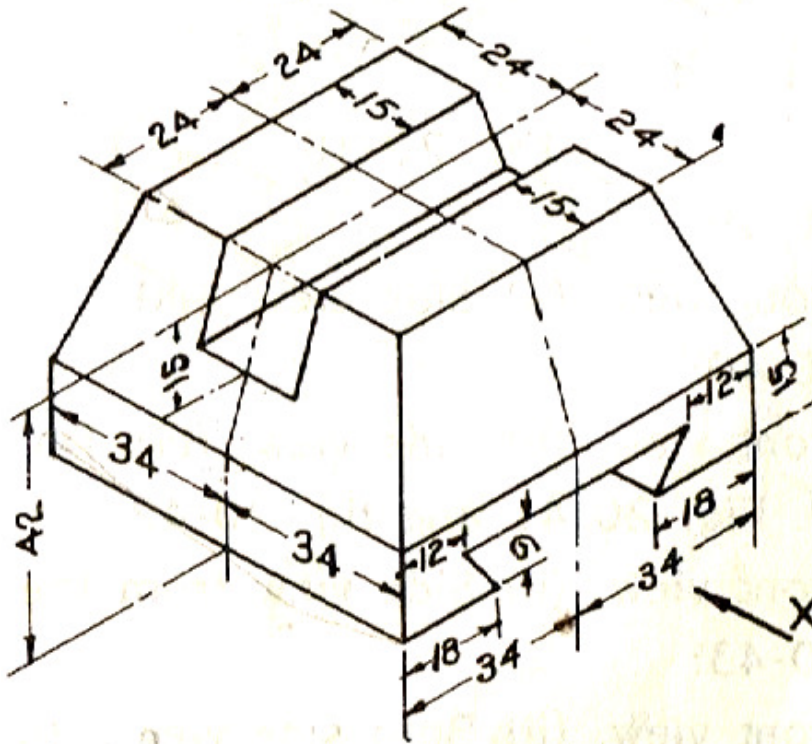
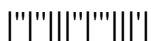


Fig.2 (Note: all dimensions are in mm)

[16]

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Subject Code: R13209/R13

Set No - 2

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**PART-A**

- 1.(a) Draw (i) Front View (ii) Top View (iii) Side View as shown in fig.1

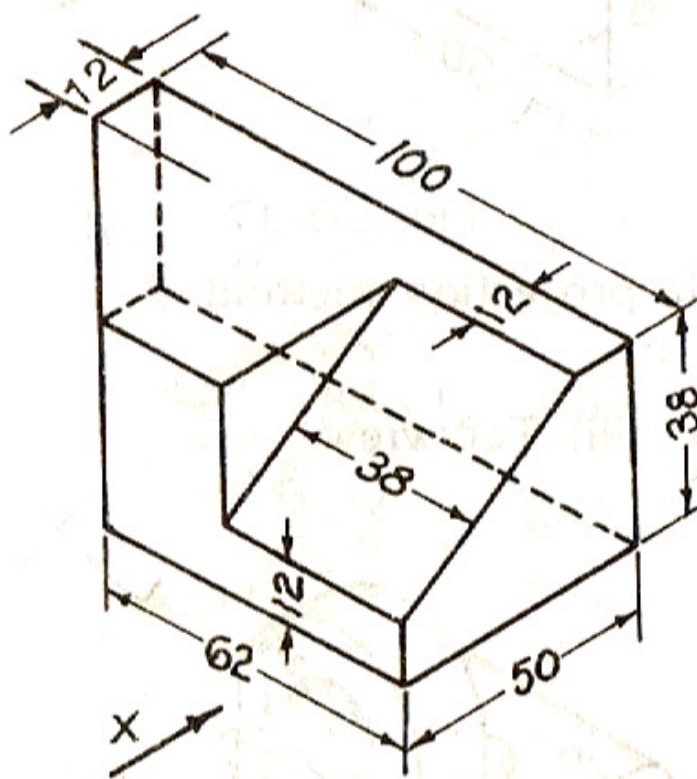


Fig.1 (Note: all dimensions are in mm)

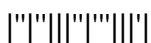
- (b) A square pyramid, base 40mm side and axis 90mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of  $45^{\circ}$

[12+10]

**PART-B**

- 2.(a) Draw heptagon given the length of side 25mm  
(b) Divide a straight line of 80mm length into six equal parts.

[8+8]



- 3.(a) A point 30mm above xy line is the plan view of two points P and Q. The elevation of P is 45mm above the HP while that of the point Q is 35mm below the HP. Draw the projections of the points and state their position with reference to the principle planes and the quadrant in which they lie.
- (b) The front view of a line, inclined at  $30^\circ$  to the VP is 65mm long. Draw the projections of the line, when it is parallel to and 40mm above the HP; its one end being 30mm in front of the VP
- [8+8]
4. A line measuring 80mm long has one of its ends 60mm above HP and 20mm in front of VP. The other end is 15mm above HP and in front of VP. The front view of the line is 60mm long. Draw the top view.
- [16]
5. A circular lamina of 60mm diameter rests on HP on a point on the circumference. The lamina is inclined to HP such that the top view of it is an ellipse of minor axis 35mm. The top view of the diameter through the point makes an angle of  $45^\circ$  with VP.
- (i) Draw the projections
- (ii) Determine the angle made by the lamina with HP
- [16]
6. A pentagonal prism, side of base 25mm and axis 50mm long, rests with one of its edges on HP such that the base containing that edge makes an angle of  $30^\circ$  to HP and its axis is parallel to VP. Draw its projections.
- [16]
7. Draw the isometric view as shown in fig.2

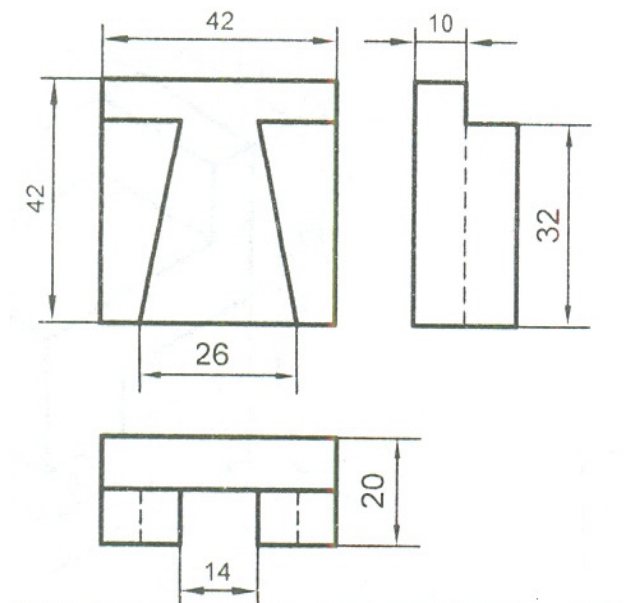
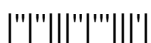


Fig.2 (Note: all dimensions are in mm)

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Subject Code: R13209/R13

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**PART-A**

- 1.(a) Draw the isometric view as shown in fig.1

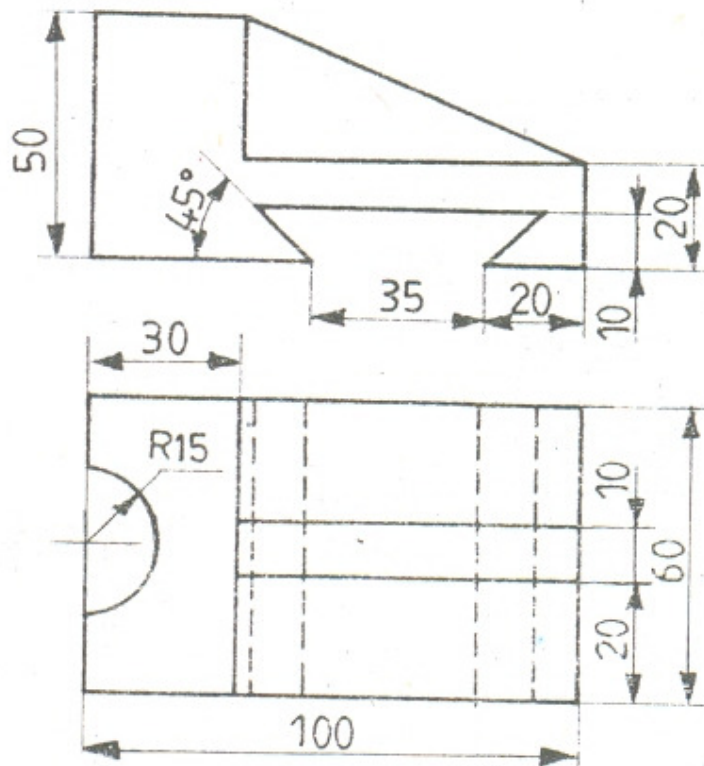


Fig.1 (Note: all dimensions are in mm)

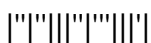
- (b) Draw the projections of a cone, base 50mm diameter and axis 75mm long, lying on a generator on the ground with the top view of the axis making an angle of  $45^\circ$  with the VP.

[12+10]

**PART-B**

- 2.(a) Construct a vernier scale to read meters, decimeters and centimeters and long enough to measure up to 4m. RF of the scale is  $1/20$ . Mark on your scale a distance of 2.28m.  
(b) Construct a regular pentagon of side 30mm

[8+8]



- 3.(a) Draw the projections of a line CD 50mm long, parallel to HP and inclined to VP. The end C is 10mm in front of VP and D is 30mm in front of VP. The line is 15mm above HP.
  - (b) A line AB 25mm long is parallel to VP and perpendicular to HP. Point A is 35mm above HP and 20mm in front of VP. Point B is 10mm above HP. Draw the projections of the line AB.
- [8+8]
- 4. Draw the projections of a straight line AB of 100mm length when one of its ends is touching the VP and the other end touching HP. The angles of inclinations with HP and VP are  $40^\circ$  and  $50^\circ$  respectively.
- [16]
- 5. A thin  $30^\circ$ - $60^\circ$  set square has its longest edge in VP and inclined at  $30^\circ$  to HP. Its surface makes  $45^\circ$  with VP. Draw its projections.
- [16]
- 6. Draw the projections of a cube of side 40mm when it rests on the ground on one of its corners and a face containing that corner is inclined at  $30^\circ$  to the ground and perpendicular to VP.
- [16]
- 7. Draw (i) Front View (ii) Top View (iii) Side View as shown in fig.2

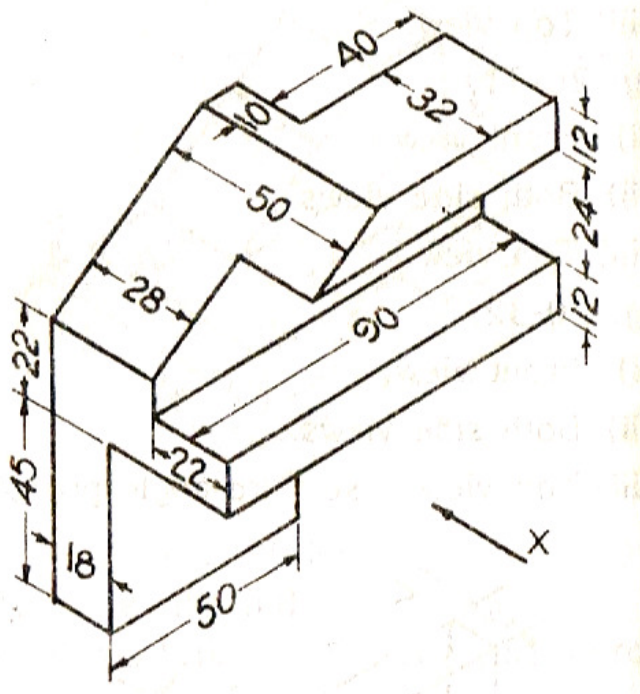
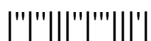


Fig.2 (Note: all dimensions are in mm)

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[16]



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**PART-A**

1.(a) Draw (i) Front View (ii) Side View from the right (iii) Top View as shown in fig.1

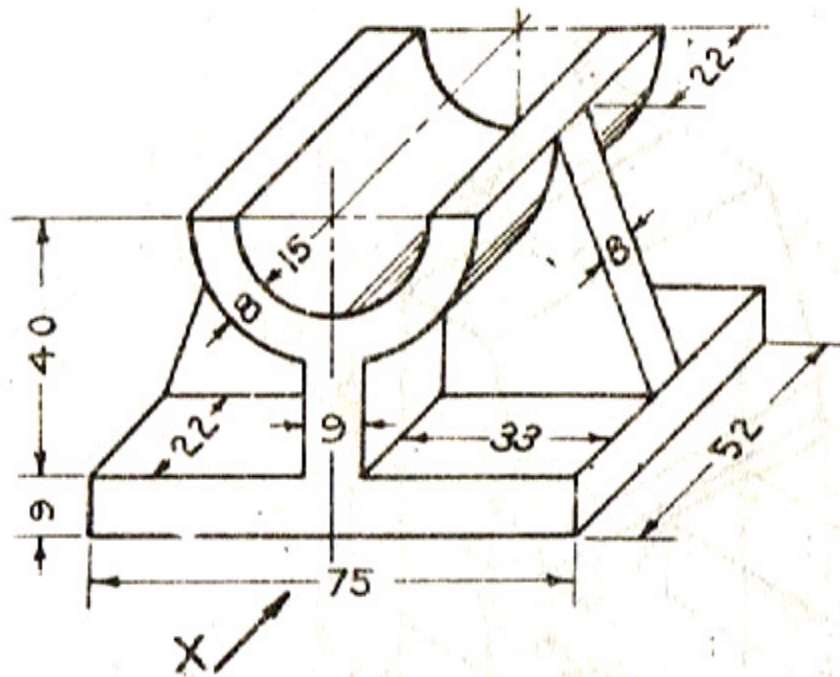


Fig.1 (Note: all dimensions are in mm)

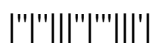
(b) Draw an equilateral triangle of 75mm side and inscribe a circle in it. Draw the projections, when its plane is vertical and inclined at  $30^{\circ}$  to the VP and one of the sides of the triangle is inclined at  $45^{\circ}$  to the HP.

[12+10]

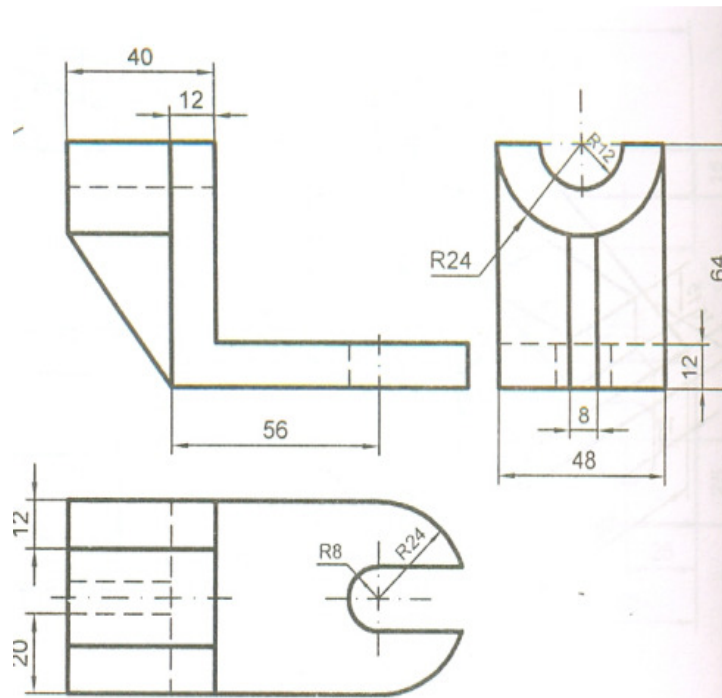
**PART-B**

2. The foci of an ellipse are 90mm apart and the minor axis is 65mm long.  
(i) Determine the length of the major axis and draw half the ellipse by concentric circles method and the other half by oblong method.  
(ii) Draw tangent and normal to the curve drawn.

[16]



- 3.(a) A line CD is parallel to VP and inclined at  $40^\circ$  to HP. C is in HP and 25mm in front of VP. Top view is 50mm long. Find its true length.
- (b) Draw the projections of the following points on the same ground line, keeping the projectors 25mm apart.
- (i) A, in the HP and 20mm behind the VP
  - (ii) B, 40mm above the HP and 25mm in front of the VP
  - (iii) C, in the VP and 40mm above the HP
- [8+8]
4. The projections of the ends of a line EF are on the same projector. The end E is 10mm above HP and 15mm in front of VP. The end F is 35mm above HP and 45mm in front of VP. Draw the projections. Find the true length, true inclinations and traces.
- [16]
5. A thin circular plate of 70mm diameter is resting on its circumference such that its plane is inclined at  $60^\circ$  to the HP and  $30^\circ$  to the VP. Draw the projections of the plate.
- [16]
6. A hexagonal prism, side of base 25mm and axis 50mm long rests with one of its base corners on HP such that its base makes an angle of  $60^\circ$  to HP and its axis is parallel to VP. Draw its projections.
- [16]
7. Draw the isometric view as shown in fig.2



[16]

\*\*\*\*\*

Fig.2 (Note: all dimensions are in mm)

