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## Question Paper Code : 85029

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2025.

First Semester

Civil Engineering

ME25C01 — ENGINEERING DRAWING

(Common to : Aeronautical Engineering/Aerospace Engineering/Automobile Engineering/Civil Engineering (Environmental Engineering)/Environmental Engineering/Environmental Science and Technology/Geoinformatics Engineering/Industrial Engineering and Management/Manufacturing Engineering/Marine Engineering/Mechanical Engineering/Mechanical Engineering (Specialised in Automobile)/Mechanical Engineering (Specialised in Smart Manufacturing)/Mechanical and Automation Engineering/Mechatronics Engineering/Robotics and Artificial Intelligence/Robotics and Automation/Agricultural Engineering)

(Regulations 2025)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

(5 × 20 = 100)

1. (a) Draw a parabola when the distance between focus and directrix is 50 mm. Draw a tangent and normal at a point 70 mm from the directrix.

Or

- (b) Draw a hyperbola whose distance of focus from directrix is 60 mm. The eccentricity is  $3/2$ . Also draw a tangent and normal at any point P on the curve.

2. (a) Draw the projection of points on a common reference line. Take 25 mm distance between the projectors:

Point Q is on both HP and VP

Point A is 25 mm below HP and 20 mm behind VP

Point Z is 10 mm above HP and 25 mm in front VP

Point H is 10 mm above HP and on the VP

Point U is 20 mm below HP and 20 mm in front of VP

Or

(b) Draw the projections of a pentagonal sheet of 26 mm side, having its surface inclined at  $30^\circ$  to VP. Its one side is parallel to VP and inclined at  $45^\circ$  to HP.

3. (a) A hexagonal prism, side of base 20 mm and axis 60 mm long lies with one of its longer edges a on HP and its axis is parallel to both HP and VP. Draw its projections.

Or

(b) Draw the development of the complete surface of a Galvanized Iron (G.I) cylindrical drum figure 3 (b) with lid. Diameter is 30 cm and height is 1.6 times the diameter.

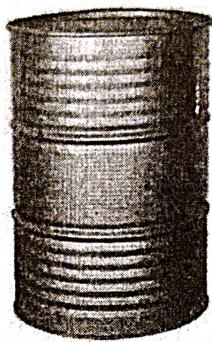


Fig. 3 (b)

4. (a) Draw the isometric projection of a frustum of square pyramid of shorter base edge 30 mm and longer base edge 50 mm with the axial height of 60 mm, kept on HP on its longer end and two of its edges are parallel to V.P.

Or

(b) Figure 4 (b) shows multiple views of an object using third angle projection method; draw an isometric drawing of the object (taking appropriate dimensions as per your choice).

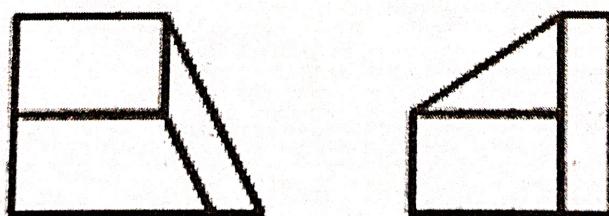
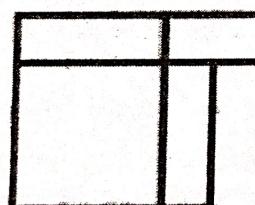


Fig. 4 (b)

5. (a) A square prism of base  $25 \times 25$  mm and height 40 mm rests on the GP on one of its ends with a rectangular face receding away from the PP towards right making  $60^\circ$  with PP. The corner nearest to the PP is 40 mm to the left of the station point and 20 mm behind the PP. The station point is 60 mm above the GP and 50 mm in front of the PP. Draw the perspective view of the prism by visual ray method. Use the top view and the front view.

Or

(b) A rectangular prism sides of base  $50 \text{ mm} \times 30 \text{ mm}$  and height 55 mm rests with its base on the ground plane. A vertical edge is in the picture plane and one of the longer edges of its base is inclined at  $45^\circ$  to PP and behind it. The station point is 50 mm in front of PP, 75 mm above the ground plane and lies in a central plane which passes through the center of the prism. Draw the perspective protection of the solid.

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