C 80648 (Pages : 2) Name.....

Reg. No.....

COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING) DEGREE [SUPPLEMENTARY] [09 SCHEME] EXAMINATION, APRIL 2015

EN 09 108 (B)—ENGINEERING GRAPHICS (B), (CE, CS, IT, ME, CH AND BM)

Time : Three Hours Maximum : 70 Marks

Answer **three** *questions from Part A and any* **two** *questions from Part B. All questions carry equal marks.*

Part A

1. (a) Draw the projections of the line AB of length 80 mm. inclined at 30° with HP and 45° with VP. A point μ on AB, 30 mm. from A is at a distance of 35 mm. above HP and 40 mm. infront of VP.

Or

(b) A circular lamina resting on a point on its circumference on HP appears as an ellipse with major diameter 50 mm and minor diameter 20 mm. in TV. Draw the projections in FV and TV if the minor axis is inclined at 40° with VP in TV.

(14 marks)

2. (a) A pentagonal pyramid edge of base 40 mm. and height 60 mm. resting on a corner of its base in such a way that the slant edge containing the corner makes an angle of 60° with HP and 30° with VP. Draw its projections.

Or

(b) A cone diameter of base 50 mm. and axis 60 mm. long is resting on its base on HP it is cut by a section plane perpendicular to both the reference planes HP and VP in such a way that the true shape of the section having a 40 mm. Base. Draw its front view, top view and sectional side view. Name the curve.

3. (a) A right circular cone of 8 cm. diameter and 10 cm length of axis rests in HP on its base. A plane inclined at 45° to HP and perpendicular to VP cuts the cone through the middle of the axis. Draw the development of the truncated cone.

Or

(b) A square prism base 50 mm. side and 80 mm. long is resting vertically on HP. It is penetrated by a triangular prism of 44 mm. side and 100 mm. length so that their axes intersect each other at right angles. If the faces of the square prism are equally inclined to VP and one of the rectangular face of the triangular prism is parallel to the HP. Draw the projections, showing the lines of intersection.

(3 × 14 = 42 marks)

Turn over

Part B

Answer any **two** *questions.*

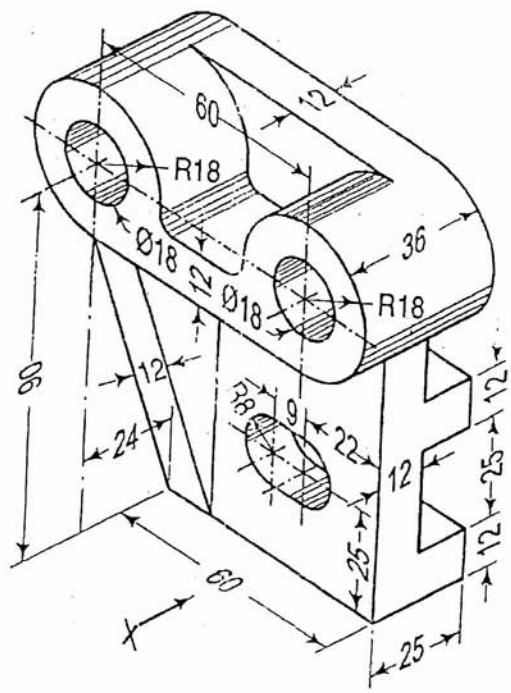
4. (a) A hexagonal prism of side of base 30 mm. and 70 mm. long has a square hole of sides 20 mm. at the centre. The axis of the square hole and hexagonal prism coincide and one of the faces of the square hole is parallel to one of the faces of hexagon. Draw the isometric view of the prism with the role.

(14 marks)

(b) A pentagonal pyramid of side of base 25 mm. and height 50 mm. rests with an edge of the base touching the PP. The station point is on the central plane passing through a apex, 80 mm. infront of PP and 65 mm. above the ground. Draw the perspective view of the solid.

(14 marks)

(c) Draw the dimensional orthographic views (all three) of the object shown in Figure below.



(14 marks)

[2 × 14 = 28 marks]