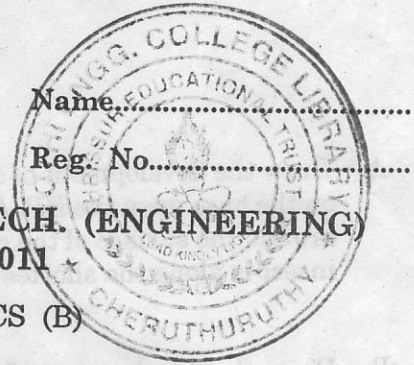


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Name.....

Reg. No.....

COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING)
DEGREE EXAMINATION, MAY 2011

EN 04 106 B—ENGINEERING GRAPHICS (B)

(For CE, CH, ME, PE, AM)

Time : Three Hours

Maximum : 100 Marks

*Answer all questions.
All questions carry equal marks.*

Unit I

- A. A line MN inclined at 40° to VP has its end 50 mm. and 20 mm. above HP. The length of its front view is 70 mm. and its VT is 10 mm. above HP. Find its true length, true inclination with HP and locate the traces.

Or

- B. A line RS of length 120 mm. has its end R 50 mm. in front of VP. The HT of the line is 40 mm. in front of VP and the VT is 48 mm. above the HP. If the distance between HT and VT is 100 mm., draw the projections of the line.

Unit II

- A. A regular hexagonal lamina of 30 mm. side rests on one of its edges upon H.P. Its plane is inclined at 45° to HP and the edge on which it rests is inclined at 30° VP. Draw its projection using auxillary plane method.

Or

- B. A pentagonal pyramid of base side 30 mm. and height 60 mm. has one of its triangular faces on HP. Draw the projection keeping the axis parallel to VP. Add an elevation of the pyramid on an auxillary vertical plane so that the axis is seen as 45° inclined to and the apex is nearer to the reference line in the top view.

Unit III

- A. A cone diameter of base 60 mm. axis 70 mm. long resting on its base on the ground is cut by a sectional plane perpendicular to VP inclined at 70° to HP and passing through the apex. Draw the views and true shape of the section.

Or

- B. A vertical square prism of base side 50 mm. rests on one of its ends on the HP with the base sides equally inclined to the VP. It is penetrated by a horizontal square prism of base side 30 mm. with the base sides equally inclined to the HP. The axis of the penetrating prism is parallel to both the HP and VP and is 9 mm. away from the axis of the other prism. Draw the projection and show the curves of intersection.

Turn over

Unit IV

- A. Draw the development of a right circular cone of base diameter 50 mm. and height 70 mm. resting on the base upon the HP. An ant starts from a point on the base edge on the righthand side, moves around the surface of the cone and finally comes back to the starting point. If the movement of the insect is along the shortest path draw the path of its movement in the front and top views.

Or

- B. Draw the developemnt of a transition piece connecting a 500 mm. diameter pipe and 700 mm. square pipe. Height of the transition pieces is 500 mm. The centre lines of both the circular and square pipes are vertical and in alignment.

Unit V

- A. A flower vase is in the form of a frustum of a pentagonal pyramid, base 24 cm. side and top 40 cm. side. If the height of the object is 54 cm. draw the isometric view of the flower vase.

Or

- B. Draw the perspective view of a rectangular prism by vanishing point method :

Dimensions : 80 cm. \times 48 cm. \times 32 cm.

Position : Lying on the ground such that one of its largest face is on the ground.

A vertical edge is 10 cm. behind PP and longer face containing that edge makes 30° inclination with PP station point.

80 cm. in front of PP and 60 cm. above the ground and lies in a central plane which passes through the centre of the prism.

(5 \times 20 = 100 marks)