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Total No. of Questions : 5

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EA-47

B.E. (IInd Sem.) CGPA Examination-2011

ENGINEERING GRAPHICS

Paper - CE-205

Time Allowed : Three Hours

Maximum Marks : 60

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Note : Answer any five questions.

All questions carry equal marks.

30
Q.1 (a) A 3.2 cm long line represents a length of 4 metres. Extend this line to measure lengths upto 25 metres and show on it units of metre and 5 metres. Show the length of 17 metres on this line. 6

(b) The major axis of an ellipse is 120 mm long and the minor axis is 80 mm long. Draw the ellipse by oblong method. 6

or

Construct a hypocycloid, rolling circle 50 mm diameter and directing circle 175 mm diameter. Draw a tangent to it at a point 50 mm from the center of the directing circle. 12

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P.T.O.

(2)

Q.II

A line PQ 100 mm long, is inclined at 30° to the H.P. and at 45° to the V.P. Its mid point is in the V.P. and 20 mm above the H.P. Draw its projections, if its end P is in the third quadrant and Q is in the first quadrant. 12

or

The ends of a line PQ are on the same projector. The end P is 30 mm below the H.P. and 12 mm behind the V.P. The end Q is 55 mm above the H.P. and 45 mm in front of the V.P. Determine the true length and traces of PQ and its inclination with the two planes. 12

Q.III

A thin rectangular plate of sides 60 mm x 30 mm has its shorter side in the V.P. and inclined at 30° to the H.P. Project its top view if its front view is a square of 30 mm long sides. 12

or

A tetrahedron of 75 mm long edges has one edge parallel to the H.P. and inclined at 45° to the V.P. while a face containing that edge is vertical. Draw its projections. 12

Q.IV

A square pyramid, base 40 mm side and axis 65 mm long, has its base on the H.P. and all the edges of the base equally inclined to the V.P. It is cut by a section plane, perpendicular to the V.P. inclined at 45° to the H.P. and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section. 12

or

(3)

Draw the projections of a cone resting on the ground on its base and show on them, the shortest path by which a point P, starting from a point on the circumference of the base and moving around the cone will return to the same point. Base of cone 65 mm diameter axis 75 mm long.

Q.V A triangular pyramid having a base with a 60 mm side and an 80 mm long axis, is resting on its base on the H.P. with an edge of the base parallel to the V.P. It is cut by an A.I.P. inclined at 45° with the H.P. and bisecting the axis. Draw its isometric view.

or

As shown in figure the orthographic projections of an object. Draw its isometric view. All the dimensions in mm.

