1049

Code : 15ME12D

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I Semester Diploma Examination, Oct./Nov.-2019

ENGINEERING GRAPHICS-I

Time : 3 Hours] [Max. Marks : 100

Note : (i) PART – A is compulsory.

(ii) Answer any two full questions each from PART – B, C & D.

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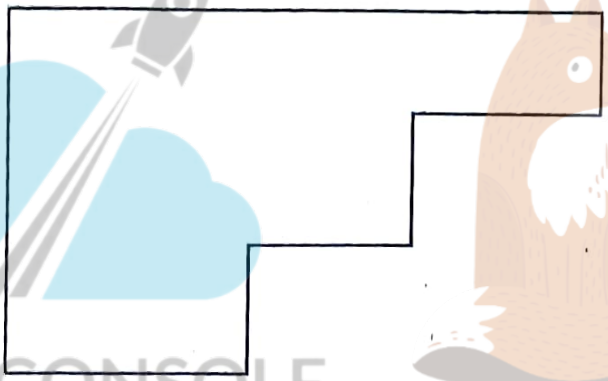
PART – A

1. Copy the following sketch to 1 : 1 scale & dimension it by adopting aligned system with chain dimensioning method. 10



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PART – B

2. (a) List the standard sizes of drawing sheet along with their designation. 5

(b) Inscribe an ellipse in a rectangle of 130 mm × 80 mm by intersecting lines method. 10

3. A stone thrown from the ground level reaches a maximum height of 50 m and falls on the ground at a distance of 100 m from the point of projection. Trace the path of the stone in the space by selecting a suitable scale. Name the path of curve. 15

4. Draw the involute of a circle of radius 30 mm. Draw a tangent and normal at any point on the curve. 15

PART – C

5. (a) Draw the symbolic representation of first angle projection method. 5

(b) Draw the projection of the following points on a common reference line : 10

(i) Point P is 30 mm above HP and 45 mm behind VP.

(ii) Point Q is 25 mm below HP and 40 mm behind VP.

(iii) Point R is 50 mm above HP and in VP.

(iv) Point S is 45 mm infront of VP and in HP.

6. (a) A line AB, 80 mm long, is inclined at 30° to HP and parallel to VP. The line is 40 mm infront of VP. The lower end A is 20 mm above HP and 100 mm infront of RPP. Draw the three principal views of the line. 7

(b) A line PQ, 70 mm long, is lying in HP and inclined at 45° to VP. The front end P is 15 mm infront of VP and rear end Q is 40 mm infront of RPP. Draw the three principal views of the line. 8

7. A line AB mensuring 70 mm has it's end A 20 mm infront of VP and 15 mm above HP. The other end B is 50 mm infront of VP and 60 mm above HP. Draw the projections of the line and find its true inclinations with HP & VP. 15

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PART – D

8. An equilateral triangular lamina of side 50 mm rests with one of it's sides on HP such that the surface of the lamina is inclined at 45° to HP. The side on which the lamina rests is inclined at 60° to VP. Draw the projections of the lamina. 15

9. A hexagonal lamina of side 30 mm is resting with one of its corners on HP such that the diagonal passing through that corner is inclined at an angle of 60° and appears to be inclined at 30° to VP. Draw the top & front views of the lamina. 15

10. A circular lamina of 60 mm diameter rests on HP such that the surface of the lamina is inclined at 30° to HP. The diameter through the point on which the lamina rests on HP appears to be inclined at 45° to VP in the top view. Obtain its projections. 15