

1157**Code : 15ME-12D**Register
Number

--	--	--	--	--	--	--	--

I Semester Diploma Examination, April/May-2016**ENGINEERING GRAPHICS – I**
(Conventional)**Time : 4 Hours****[Max. Marks : 100]**

- Note :**
- (i) Part – A is *compulsory*.
 - (ii) Answer any **two** full questions from Part – B, C and D.
 - (iii) Adopt first angle projections.

PART - A

1. (a) Write the uses of the following drawing instruments

- (i) Protractor
- (ii) French curve
- (iii) Bow compass
- (iv) Clinograph
- (v) Minidrafter

BETA CONSOLE!

- (b) Give the conventional representation for the following materials.

- (i) Cast iron (ii) Lead (iii) Porcelain (iv) Glass (v) Wood.



Diploma Question Papers [2015-19]
Beta Console Education

PART - B

2. Construct a Hyperbola when the distance of the focus from the directrix is 30 mm and eccentricity is equal to 9/7. **15**
3. An ellipse has the major axis and the minor axis in the ratio of 3 : 2. Draw the ellipse when the major axis is 135 mm by concentric circle method. **15**
4. A circle of 50 mm diameter rolls on a line. A point on the circumference of the circle is in contact with the line in the beginning and after one complete revolution. Draw the cycloidal path of the point. Draw a tangent and normal at any point on the curve. **15**

PART - C

5. Draw the projections of the following points : **15**
- Point 'A' is 30 mm below the HP and 35 mm in front of the VP.
 - Point 'B' is 25 mm above the HP and 35 mm in front of the VP.
 - Point 'C' is 40 mm in front of the VP and in the HP.
 - Point 'D' is 25 mm above the HP and 40 mm behind the VP.
 - Point 'E' is 35 mm below the HP and 30 mm behind the VP.
6. (a) Draw the projections of a line 60 mm long placed parallel to VP, perpendicular to HP. The line is 40 mm in front of VP and 25 mm in front of right PP. The lower end of the line is 20 mm above HP. **7**
- (b) A line AB 80 mm long is inclined at 45° to VP and parallel to HP. The end nearer to VP is 30 mm in front of VP, 60 mm above HP and 100 mm in front of right PP. Draw its projections. **8**

BETA CONSOLE!

7. A line AB is 65 mm long has one of its extremities 25 mm in front of VP and 20 mm above HP. The line is inclined at an angle of 30° to HP and 40° to VP. Draw its top and front views. **15**

Diploma Question Papers [2015-19]

8. A hexagonal lamina of 30 mm sides rests on HP on one of its sides. The side which is on HP is perpendicular to VP and the surface of the lamina is inclined to HP at 45° . The lamina is then rotated through 90° such that the side on HP is parallel to the VP, while the surface is still inclined to HP at 45° . Draw the front view and the top view of the lamina in its final position. **15**

9. 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**

10. A square lamina of 40 mm sides rests with one of its corner on HP. The diagonal passing through this corner is inclined at 45° to HP and appears to be inclined at 30° to VP. Draw its projections. **15**