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**F Reg. No. :**

**Question Paper Code: 51078A**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2017

First Semester

Civil Engineering

15UME108 – ENGINEERING GRAPHICS

(Common to Mechanical , EEE and Chemical Engineering)

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

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| --- | --- | --- | --- | --- |
| 1. | (a) | Draw an ellipse when the distance of focus from the directrix is equal to 35mm and eccentricity is ¾. Also draw a tangent and normal to the curve at a point 40mm from the straight line. | CO1- App | (20) |
|  |  | Or |  |  |
|  | (b) | A line AB has its end A, 10mm above HP and 20mm in front of VP. The end B is 35mm in front of VP. The front view of the line measures 75mm. The distance between the end projectors is 50mm. Draw the projections of the line and find its true length and its true inclinations with VP and HP. | CO1- App | (20) |
|  |  |  |  |  |
| 2. | (a) | A cone of base diameter 60mm and altitude 80mm rests on the HP with its axis inclined at 30 degrees to the HP and parallel to VP. Draw its top and front views. | CO2- App | (20) |
|  |  | Or |  |  |
|  | (b) | Draw the projections of a hexagonal prism of base side 20mm and axis length 50mm when it rest on the ground on one of the edges of the base and the axis inclined at 35 degrees to the ground and parallel to the VP. | CO2- App | (20) |
|  |  |  |  |  |
| 3. | (a) | A hexagonal prism of base side 30mm and axis length 70mm long rests on one of its ends on the HP with two base edges parallel to VP. It is cut by a plane perpendicular to VP and inclined at 30 degree to the HP. The cutting plane meets the axis at 30mm from the top. Draw the front view, sectional top view and true shape of the section. | CO3- App | (20) |
|  |  | Or |  |  |
|  | (b) | A pentagonal pyramid, side of base 30mm and height 52mm, stands with its base on HP and an edge of the base is parallel to VP and nearer to it. It is cut by a plane perpendicular to VP, inclined at 40 degree to HP and passing through a point on the axis 32mm above the base. Draw the sectional top view. Develop the lateral surfaces of the truncated pyramid. | CO3- App | (20) |
|  |  |  |  |  |
| 4. | (a) | Draw the isometric projections of hexagonal pyramid of side of base 30mm and height 65mm, when its resting on HP such that an edge of the base is parallel to VP. | CO4- App | (20) |
|  |  | Or |  |  |
|  | (b) | A cylinder of diameter of base 60mm and height 70mm rests with its base in HP. A section plane perpendicular to VP and inclined at 45 degree to HP cuts the cylinder such that it passes through a point on the axis 50mm above the base. Draw the isometric view of the truncated cylinder showing the cut surface.  | CO4- App | (20) |
|  |  |  |  |  |
| 5. | (a) | Draw the three orthogonal views of the following figure. | CO5- App | (20) |
|  |  | Or |  |  |
|  | (b) | Draw the three orthogonal views of the following figure. | CO5- App | (20) |
|  |  |  |  |  |