An AUTONOMOUS Institutio

ACE
Engineering College
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ACE-R20

Question Paper Code: | ME204ES

Semester End Examination
I B. Tech- II Semester- September 2021
Engineering Graphics
BRANCH : EEE,IT,CSD

Time: 3 Hours   **Max. Marks: 70**

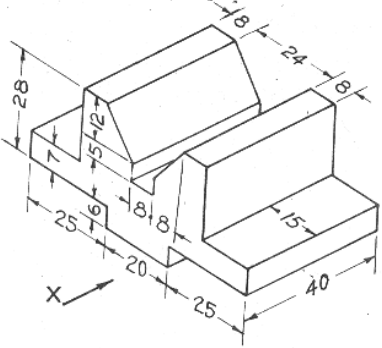| H. T. No										

Answer any five full questions from the following. All Questions carry equal marks.
M=Marks; CO=Course Outcomes; PO= Program Outcomes

Q.No	Question	M	CO	PO
1. a)	Draw an ellipse when the distance of focus from the directrix is equal to 50 mm and eccentricity is 2/3. Also draw a tangent and normal to the curve at appoint 35 mm from the fixed straight line.	7	1&2	1,2,3,10
b)	A circle of 40mm diameter rolls along a line for one revolution clockwise. Draw the locus of a point on the circle which is in contact with the line. Name the curve	7	1&2	1,2,3,10
2. a)	A point 'M' is 20 mm above HP and 25 mm in front of VP. Another point 'N' is 30 mm behind VP and 35 mm below HP. Draw the projections of point M and N locating the distance between the projectors equal to 50 mm. Also draw a straight line joining their front views and their top views.	7	1&2	1,2,3,10
b)	Draw the projection of a straight-line AB, 100mm long at 45° to HP and 30° to VP. The end A is in HP and the end B is in VP. Find the shortest distance between the straight-line AB and the line of intersection of planes of projections.	7	1&2	1,2,3,10
3.	A regular pentagonal prism lies with its axis inclined at 60° to HP and 30° to VP. The prism is 60mm long and has a face width of 25mm. the nearest corner is 10mm away from VP and resting on base edge on HP. Draw the projections of the solid.	14	1&2	1,2,3,10
4.(a)	Draw a plain scale to show kilometer and hectometer when R.F=1/35000 and long enough to measure 5km. Measure and mark 3.7km on the scale	7	1&2	1,2,3,10
4(b)	Draw a hypocycloid of a circle of 50mm diameter which rolls inside another circle of 200mm diameter for one revolution. Draw a tangent and normal at any point on it.	7	1&2	1,2,3,10
5.	A pentagonal pyramid with side of base 25mm and axis 50mm long is resting on one of its slant faces on H.P, such that its axis is parallel to V.P. Draw the projections.	14	1&2	1,2,3,10
6.	A cylinder of diameter of base 40mm and axis 55mm long is resting on its base on HP. It is cut by a section plane perpendicular to VP and inclined at 45 degrees to HP. A section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder.	14	1&2	*1,2,3,10*

7.	A vertical cylinder of 80 mm diameter is completely penetrated by another cylinder of 60 mm diameter, their axes bisecting each other at right angles. Draw their projections showing curves of penetration, assuming the axis of the penetrating cylinder to be parallel to the VP.	**14**	**1&2**	**1,2,3,10**
8.	Sketch the elevation, top view and side view of the following objects shown in below Fig.1. All dimensions are in mm. Fig.1	**14**	**1&2,3**	**1,3**