RAYALASEEMA UNIVERSITY COLLEGE OF ENGINEERING, KURNOOL – 518007

B.Tech II Semester (RU23) I Sessional Tests – March 2025

ENGINEERING GRAPHICS (23AES0302)

(CSE-A)

Time: 120 min | Date: 12-03-2025 FN | Max. Marks: 30

Answer ONE FULL question from each unit | **All the Questions Carry EQUAL marks**

Q. No	Question	Unit	BT Level	CO covered	Marks Allotted
1	Plain Scale of RF is 1:40.To read meters and $\frac{1}{10}$ th meter and long enough to measure up to 8m. Show the lengths of 4.3m and 6.2m on the scale.	I	L3	CO1	(10 M)
	(OR)				
2	Draw a hypo-cycloid of a circle of 40 mm diameter which rolls inside another circle of 160 mm diameter for one revolution counter clockwise. Draw a tangent and normal to it at a point 60 mm from the center of directing circle.	I	L3	CO1	(10 M)
3	Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as 4/6. Also draw a tangent and normal to the curve at a point 35 mm from the directrix.	II	L3	CO2	(10 M)
	(OR)				
4	Draw the projections of the following points on the same ground line, Keeping the projectors 25mm apart. (i) D 25mm below the HP and 25mm behind the VP (ii) E 15mm above the HP and 50mm behind the VP (iii) F 40mm below the HP and 25mm in front of the VP	II	L3	CO2	(10 M)
5	Line AB is 75 mm long .It's FV and TV measure 50 mm & 60 mm long respectively. End A is 10 mm above HP and 15 mm in front of VP. Draw projections of line AB if end B is in first quadrant. Find angle with HP and VP.	I	L3	CO1	(10 M)
	(OR)				
6	A Hexagonal plane with a 30mm side has its surface parallel to and 20mm in front of the VP. Draw It's Projections, when (a) a side is perpendicular to HP (b) side is inclined at 45^0 to the HP.	II	L3	CO2	(10 M)

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Answer ONE FULL question from each unit **All the Questions Carry EQUAL marks**

Q. No	Question	Unit	BT Level	CO covered	Marks Allotted
1	Construct a regular pentagon and a hexagon, keeping one of the side horizontal and common to both the polygons. The side of the polygons is 40 mm.	I	L3	CO1	(10 M)
	(OR)				
2	Construct a diagonal scale of RF = 2:125 and least count of 1CM. Show the lengths of 5.99 m, 3.31 m and 2.7 decimeters on it.	I	L3	CO1	(10 M)
3	Construct an ellipse, with distance of the focus from the directrix as 60 mm and eccentricity as 2/3. Also draw a tangent and normal to the curve at a point 35 mm from the directrix.	II	L3	CO2	(10 M)
	(OR)				
4	Draw the projections of the following points on the same ground line, keeping the Projectors 25 mm apart. i) Point A, on the H.P. and 35 mm behind the V.P. ii) Point B, on the H.P. and 25 mm in front of the V.P. iii) Point C, 35mm below the H.P. and 20mm in front of the V.P.	II	L3	CO2	(10 M)
5	Line AB 75mm long makes 45 0 inclination with VP while it's FV makes 55 0 End A is 10 mm above HP and 15 mm in front of VP. If line is in 1st quadrant draw it's projections and find it's inclination with HP.	I	L3	CO1	(10 M)
	(OR)				
6	A Square plane with a 40mm side has its surface parallel to and 20mm above the HP. Draw It's Projections, when (a) a side is parallel to VP (b) a side is inclined at 30^0 to VP.	II	L3	CO2	(10 M)