Course Code: 23ES1T03

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I B.Tech I Semester Regular End Examinations (BR23), December-2024

ENGINEERING GRAPHICS (CSE)

Duration:3 hours (F/N) Max. Marks:70

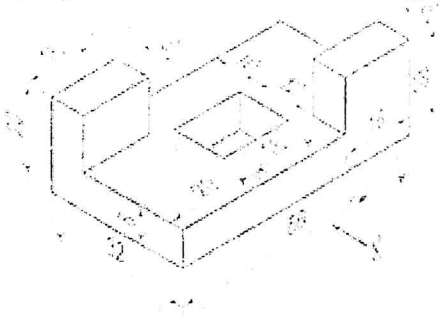
Paper consists of five questions, Each question has internal choice, and either of them can be answered

All Questions carry Equal Marks

		BTL	CO	Marks
	UNIT-I			
1 a)	Draw the parabola (e=1), with the distance of the focus from the directrix as 50 mm, and draw the tangent and normal at any point on the curve.	3	CO1	(14M)
	(OR)			
1 c)	Draw the Involute of a circle of radius 20 mm. Draw a normal and tangent to a curve at any point on the curve.	3	CO1	(14M)
	UNIT-II			
2 a)	A line AB line 100 mm length is inclined at a angel of 35^0 to HP and 50^0 to VP. The point A is 15 mm above HP and 20 mm in-front of VP. Draw the projections of line.	3	CO2	(14M)
	(OR)			
2 c)	A hexagonal plane of side 30 mm is parallel to HP and 30^0 incline to HP and 45^0 inclined to VP. One of its side parallel and 15 mm above HP and one of its corner 10 mm in-front of VP. Draw its projections.	3	CO2	(14M)
	UNIT-III			
3 a)	A hexagon prism, with side 25 mm and axis 50 mm long, is resisting on HP. Draw the projections of the Prism, when its axis is making 30^0 with HP and parallel to VP.	3	CO3	(14M)
	(OR)			
3 c)	Pentagonal pyramid, with the side of base 25 mm and axis 60 mm long, resisting on HP. Draw the projections of the prism, when the axis is inclined at 45^0 to HP and parallel to VP.	3	CO3	(14M)
	UNIT-IV			
4 a)	A Hexagonal pyramid of base side 25 mm and height 60 mm, is resisting on the HP. It is cut by an axis 30 mm above the base and parallel to H.P. Draw front view, sectional top view.	3	CO4	(14M)
	(OR)			
4 c)	A Pentagonal Prism with side of base 25 mm and height 60 mm, it is on HP and one of its side is parallel to VP. The cutting plane inclined at 45^0 to the axis of the prism and passing through the midpoint of the axis. Develop the lateral surface of the prism.	3	CO4	(14M)

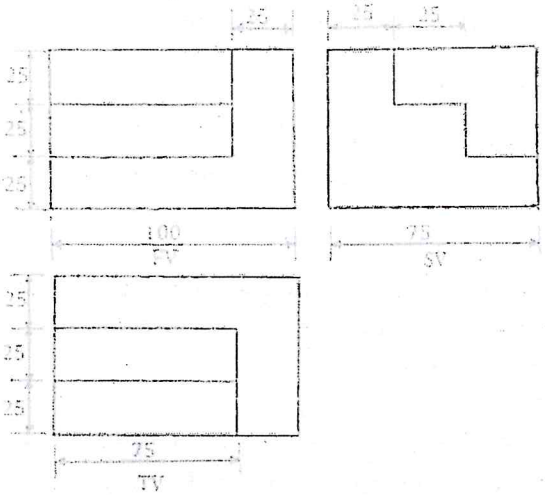
UNIT-V

5 a) Draw the Front view, top view and side view from given isometric view. 3 CO5 (14M)



(OR)

5 c) Draw the Isometric view from given orthographic view. 3 CO5 (14M)



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Course Code: [23ES1T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I B.Tech I Semester Regular/ Supplementary End Examinations (BR23), December-2024

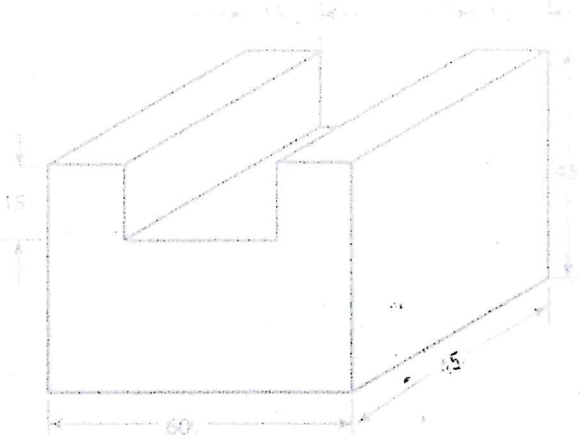
ENGINEERING GRAPHICS (A.N) (Common to CSE & Allied Branches)

Duration: 3 hours Max. Marks: 70

Paper consists of five questions, Each question has internal choice, and either of them can be answered

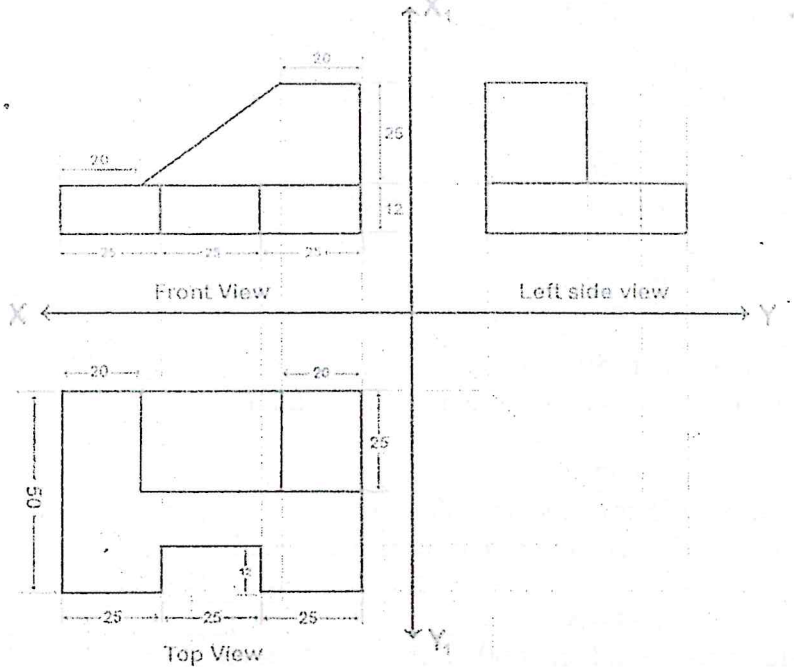
All Questions carry Equal Marks

	UNIT-I	BTL	CO	Marks
1 a)	Draw the hyperbola (e<1 or 3/2), with the distance of the focus from the directrix as 50 mm, and draw the tangent and normal at any point?	CO1	CO1	(14M)
	(OR)			
1 c)	Draw the Involute of regular pentagon of side 30 mm. Draw a normal and tangent to a curve at any point?	CO1	CO1	(14M)
	UNIT-II			
2 a)	A line AB line 70 mm length is inclined at a angel of 30^0 to HP and 45^0 to VP. The point A is 15 mm above HP and 20 mm in-front of VP. Draw the projections of line.	CO2	CO2	(14M)
	(OR)			
2 c)	A pentagonal plane of side 30 mm is parallel to VP and 30^0 incline to VP and 45^0 inclined to HP. One of its side parallel and 15 mm above HP and one of its corner 10 mm in-front of VP. Draw its projections	CO2	CO2	(14M)
	UNIT-III			
3 a)	A Pentagonal prism, with side 25 mm and axis 50 mm long, is resisting on HP. Draw the projections of the Prism, when its axis is making 30^0 with HP and parallel to VP?	CO3	CO3	(14M)
	(OR)			
3 c)	Hexagonal pyramid, with the side of base 25 mm and axis 60 mm long, resisting on VP. Draw the projections of the prism, when the axis is inclined at 45^0 to VP and 35^0 to HP.	CO4	CO3	(14M)
	UNIT-IV			
4 a)	A Pentagonal pyramid of base side 25 mm and height 60 mm, is resisting on the HP. It is cut by an axis 30 mm above the base. Draw front view, sectional top view and true shape of the section?	CO4	CO4	(14M)
	(OR)			
4 c)	A Hexagonal Prism with side of base 25 mm and height 60 mm, it is on HP and one of its side is parallel to VP. The cutting plane inclined at 45^0 to the axis of the prism and passing through the midpoint of the axis. Develop the lateral surface of the prism.	CO4	CO4	(14M)
	UNIT-V			
5 a)	Draw the Front view, top view and side view from given isometric view	CO4	CO5	(14M)



(OR)

5 c)	Draw the Isometric view from given orthographic view?	CO4	CO5	(14M)



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Course Code: 23ES1T03

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I B.Tech I Semester Regular/ Supplementary Examinations (BR23), December-2024

ENGINEERING GRAPHICS

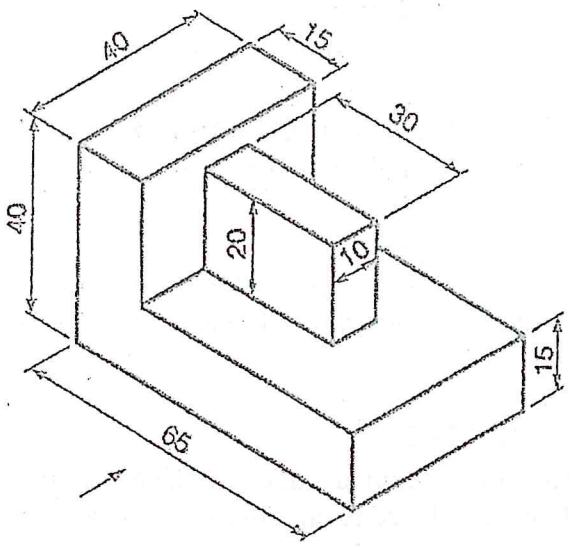
(Common to CSE, CSE(AI&DS), AI&ML & CSE(AI&ML))

Duration: 3 hours Max. Marks: 70

Paper consists of five questions, each question has internal choice, and either of them can be answered

All Questions carry Equal Marks

	UNIT-I	BTL	CO	Marks
1.a)	A 3.2 cm long line represents a length of 4 meters. Extend this line to measure lengths up to 25 meters and show on it units of meter and 5 meters. Show the length of 17 meters on this line.	1	CO1	(7M)
b)	Construct a cycloid of a circle of diameter 50 mm for one revolution. Also, draw a tangent and a normal to the curve at a point 35 mm above the base line.	3	CO1	(7M)
	(OR)			
1. c)	Construct a hyperbola, with the distance between the focus and the directrix as 50 mm and eccentricity as 3/2. Also, draw a normal and tangent to the curve at a point 30 mm from the directrix.	3	CO1	(10M)
d)	Construct a regular pentagon of side 30 mm.	3	CO1	(4M)
	UNIT-II			
2. a)	A pentagonal plane with a 30 mm side rests on H.P. on an edge such that the surface is inclined at 45 degrees to the H.P. and the edge on which its rest is inclined at 30 degrees to the VP. Draw its projections.	2	CO2	(14M)
	(OR)			
2. c)	Two pegs fixed on a wall are 4.5 meters apart. The distance between the pegs measured parallel to the floor is 3.6 meters. If one peg is 1.5 meters above the floor, find the height of the second peg and the inclination of the line joining the two pegs, with the floor.	1	CO2	(7M)
d)	The top view of a line measures 60 mm. The line is parallel to the VP and inclined 45° to the HP. One end of the line is 25mm in front of the VP and lies on the HP. Draw its projections and determine the true length.	4	CO2	(7M)
	UNIT-III			
3.a)	A square prism, base 40 mm side and height 65 mm, has its axis inclined at 45^0 to the HP and has an edge of its base, on the H.P and inclined at 30^0 to the VP. Draw its projections.	1	CO3	(14M)
	(OR)			
3. c)	A hexagonal pyramid of base side 25 mm and axis 60 mm is freely suspended from one of the corners of the base. Draw its projections when its axis is perpendicular to the VP.	1	CO3	(7M)
d)	A pentagonal prism of base edge 30 mm and axis 60 mm rests on an edge of its base in the HP. Its axis is parallel to VP and inclined at 45° to the HP. Draw its projections.	3	CO3	(7M)
	UNIT-IV			
4. a)	A cone, base 75 mm diameter and axis 80 mm long is resting on its base on the HP. It is cut by a section plane perpendicular to the VP, inclined at 45° to the HP. and cutting axis at a point 35 mm from the apex. Draw it front view, sectional top view, sectional side view and true shape of the section.	4	CO4	(14M)

	(OR)			
4. c)	A cylinder of base 50 mm diameter and axis 60 mm long is resting on its base on HP. It is cut by section plane perpendicular to VP and Inclined at 45° to HP and cuts all the generators from extreme left generator. Develop the lateral surface of the truncated cylinder.	3	CO4	(14M)
	UNIT-V			
5. a)	Draw the following views for the object shown in figure. All dimensions are in mm. i) Front view ii) Top view iii) Left Side view 	2	CO5	(14M)
	(OR)			
5. c)	A sphere with a 50 mm diameter rests centrally over a cube with a 60 mm side. Draw its isometric view.	2	CO5	(14M)

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Course Code: [23ES1T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I B.Tech I Semester Supplementary Examinations (BR23), March-2025

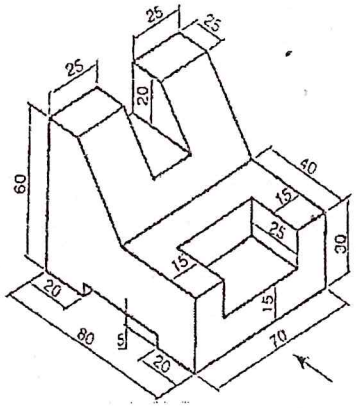
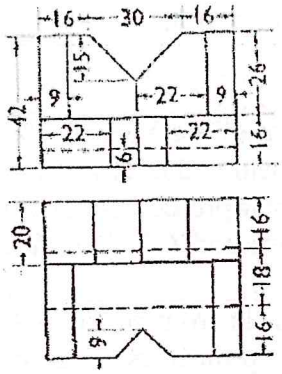
ENGINEERING GRAPHICS

(Common to CSE & Allied Branches)

Duration: 3 hours Max. Marks: 70

Paper consists of five questions, Each question has internal choice, and either of them can be answered
All Questions carry Equal Marks

	UNIT-I	BTL	CO	Marks
1.a)	Construct an ellipse, with a distance of the focus from the directrix as 50 mm and eccentricity as 2/3. Also, draw normal and tangent to the curve at any point on the curve.	3	CO1	(14M)
	(OR)			
1. c)	Draw a hypo-cycloid of a circle of 40 mm diameter which rolls inside another circle of 120 mm diameter, for one revolution counter clockwise. Draw a tangent and normal to it at any point from the center of the directing circle.	2	CO1	(10M)
1.d)	Construct a regular hexagon of side 35 mm.	3	CO1	(4M)
	UNIT-II			
2.a)	A line AB, 70 mm long, has its end A is 10 mm above H.P. and 15 mm in front of the V.P. Its front view and top view measures 50 mm and 60 mm respectively. Draw the projections of the line and determine its inclinations with H.P and the V.P.	3	CO2	(14M)
	(OR)			
2. c)	A point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25 mm behind the V.P. and 40 mm below the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views.	4	CO2	(7M)
2.d)	Two points A and B are in the H.P. Point A is 30 mm in front of the V.P., while B is behind the V.P. The distance between their projectors is 75 mm and the line joining their top views makes an angle of 45 degrees with xy. Find the distance of the point B from the V.P.	3	CO2	(7M)
	UNIT-III			
3.a)	Draw the projections of a cone, base 45 mm diameter and axis 50 mm long, when it is resting on the ground on a point on its base circle with the axis making an angle of 30 degrees with the H.P.	3	CO3	(14M)
	(OR)			
3.c)	A hexagonal pyramid of base side 30 mm and axis 60 mm has an edge of its base on the ground. Its axis is inclined at 30° to the ground and parallel to the VP. Draw its projections.	3	CO3	(7M)
3.d)	Draw projections of a cube of edge 45 mm, resting on one of its corners in the HP with a solid diagonal vertical.	3	CO3	(7M)
	UNIT-IV			
4.a)	A hexagonal prism with edge of base 30 mm and height 80 mm rests on its base with one of its base edges perpendicular to V.P. An inclined plane at 45 degrees to H.P. cuts its axis at its middle. Draw the development of the truncated prism.	4	CO4	(14M)
	(OR)			

4.c)	A pentagonal pyramid has is base on the H.P. and the edge of the base nearer the V.P., parallel to it. A vertical section plane, inclined at 45^0 to the V.P., cuts the pyramid at a distance of 6 mm from the axis. Draw the top view, sectional front view and true shape of the section take base of the pyramid 30 mm sides; axis 50 mm long.	4	CO4	(14M)
	UNIT-V			
5.a)	Draw the elevation, top view, and side view of the object shown in the figure. 	3	CO5	(14M)
	(OR)			
5.c)	Draw the isometric view of orthographic drawing shown below (All dimensions are in mm). 	3	CO5	(14M)

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Course Code: 23ES1T03

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I-B.Tech I-Semester Supplementary Examinations (BR23), July-2024

ENGINEERING GRAPHICS

(Common to CSE/CSE(AI&DS)/AI&ML/CSE(AI&ML))

Duration: 3 hours **Max. Marks: 70**

Paper consists of five questions. Each question has internal choice, and either of them can be answered
All Questions carry Equal Marks

UNIT-I

1.a) Construct an ellipse when the distance between the focus and the directrix is35mm and the eccentricity is ¾. (7M)

b) Construct a diagonal scale of 1:32 to read meters, decimetres, and centimetres and long enough to measure 4m. Show on this scale a distance of 2.46m. (7M)

(OR)

1.c) Circumscribe a regular hexagon about a circle of radius 20mm. (7M)

d) Draw the path traced by a point at the end of a string, when it is wound around asquare of size 40 mm. (7M)

UNIT-II

2.a) A point M is lying in the first quadrant. The shortest distance of the point from XY line is 55mm. If the point is 30mm above HP, draw its projections. (7M)

b) A 60 mm long line AB has its end A 20 mm above the H.P. The line is perpendicular to H.P. and 45 mm in front of the V.P. Draw its projections. (7M)

(OR)

2.c) A point A is 20 mm above HP and 30mm in front of VP. Another point B is 50mm below HP and 60mm behind VP. Draw the projections of these points taking the distance between the end projectors as 40mm. Also find the length of the line joining their plans and elevations. (7M)

2.d) A 80 mm long line AB is inclined at 30° to the V.P. and is parallel to the H.P.The end A of the line is 25 mm above the H.P. and 45 mm in front of the V.P.Draw the projections of the line. (7M)

UNIT-III

3.a) Draw the projections of a regular hexagon of 40 mm sides, having one of its sidein the H.P. and inclined at 60^0 to the V.P. and its surface making an angle of 45°with the H.P. (14M)

(OR)

3.c) Draw the projections of a triangular plate of 30 mm sides, having one of its sides AB in the VP and with its surface inclined at 60^0 to the VP. (7M)

d) A square plane ABCD of 30mm side has its surface parallel to HP and 20mm away from it. Draw its projections of the plane when two of its sides are inclined at 30^0 VP. (7M)

UNIT-IV

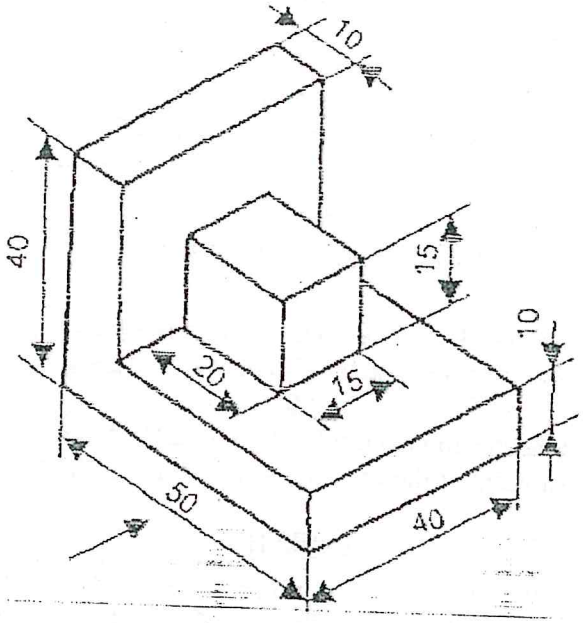
4.a) A square prism of side of base 40mm and axis 80mm long, is resting on its base on HP such that, a rectangular face of it is parallel to VP. Draw the development of the prism. (14M)

(OR)

4.c) A hexagonal prism of base side 25mm and axis 60 mm has one of its bases in the V.P. Draw its projections when a rectangular face is parallel to and 15mm above the H.P. when a section plane inclined at 45^0 to V.P and is passing to midpoint of the axis. Draw sectional front view, Top view and true shape of the section. (14M)

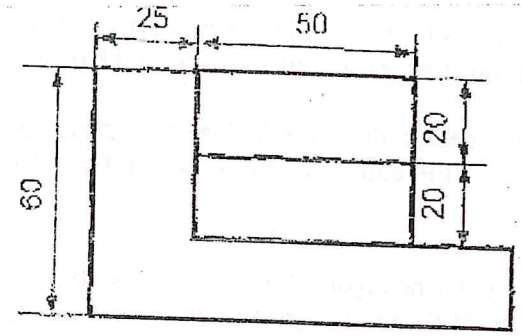
UNIT-V

5.a) Draw the front view, Top view and Side view of the given figure. (14M)

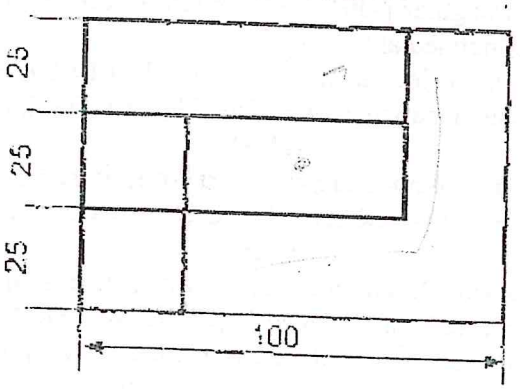


(OR)

5.c) Draw the isometric view of the given orthographic projection of the object. (14M)



FRONT VIEW



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15/02/2024

Course Code: [23ES1T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)
I.B.Tech I Semester Regular End Examinations (BR23)
I B.Tech I Semester Regular End Examinations (BR23) February – 2024
ENGINEERING GRAPHICS (CSE (AI&ML))

Duration: 3 hours **Max. Marks: 70**

Paper consists of five questions, Each question has internal choice, and either of them can be answered
All Questions carry Equal Marks

UNIT-I

1.a) Construct a regular hexagon of 40mm side. (6M)

b) Draw a hyperbola when the distance between its focus and directrix is 50mm andeccentricity is 3/2. (8M)

(OR)

1.c) Draw a scale of 1:50 showing meters and decimetres and measure up to 8 meters. Show the length of 5.4m on it. (8M)

d) Construct a regular pentagon of side 50mm. (6M)

UNIT-II

2.a) Draw the projections of the following points (14M)
(a) Point A, 30mm above the H.P. and 40mm in front of the V.P.
(b) Point B,25 mm below the H.P. and 50 mm in front of the V.P.
(c) Point C,30 mm above the H.P. and 25 mm behind the V.P.
(d) Point D, on the V.P. and 40mm above the H.P.
(e) Point E, 35mmin front of the V.P. and in the H.P.
(f) Point F,20 mm below the H.P. and 30 mm behind the V.P.
(g) Point G, both on the H.P and the V.P.

(OR)

2.c) A line IJ 50mm long has its end I 30mm above the HP and 25mm in front of VP.The line is kept inclined at 40^0 to HP and parallel to VP. Draw its projections. (7M)

2.d) A square plane ABCD of 30mm side has its surface parallel to HP and 20mm away from it. Draw its projections of the plane when two of its sides are inclinedat 30^0 VP. (7M)

UNIT-III

3.a) A pentagonal pyramid of base 30mm and height 60mm rests with one of its baseedges on HP. The axis of the pyramid makes an angle of 45^0 with HP. Draw itsprojections. (14M)

(OR)

3.c) A hexagonal prism with a base side of 25mm and axis 60 mm has one of its bases in the V.P. Draw its projections when a rectangular face is parallel to and 15mm abovethe H. P (7M)

d) Draw the projections of a cylinder, base 40mm diameter and axis 50mm long,resting on its base on the HP. (7M)

UNIT-IV

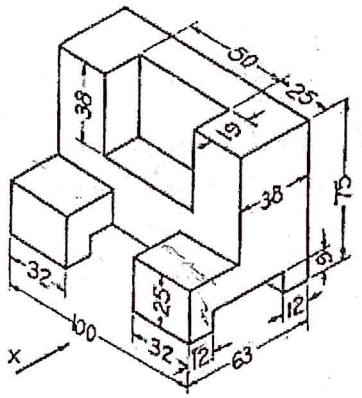
4.a) A square pyramid, base 40 mm side, and axis 65 mm long has its base on the HP with two edges of the base perpendicular to the VP. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP, and bisecting the axis. Draw its sectional top view and the true shape of the section. (14M)

(OR)

4.c) A pentagonal pyramid with a base side of 25mm and a height of 60mm is resting vertically on its base on the ground with one of the sides of the base parallel to the VP. It is cut by a plane perpendicular to the V P and parallel to the HP at a distance of 25mm above the base. Draw the development of the lateral surfaces of the frustum of the pyramid. (14M)

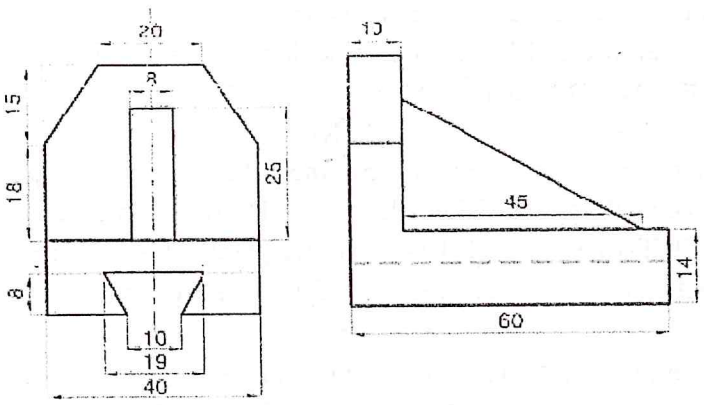
UNIT-V

5.a) A pictorial view of an object is shown in Figure. Draw the following views. (14M)
i) Front view ii) Top view iii) Left Side view



(OR)

5.c) Fig. below shows FV, TV and SV of an object. Draw the isometric view. (14M)



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Course Code: [23ES2T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE: ODALAREVU
(AUTONOMOUS)

I B.Tech II Semester Regular End Examinations (BR23)- June 2025

F/N

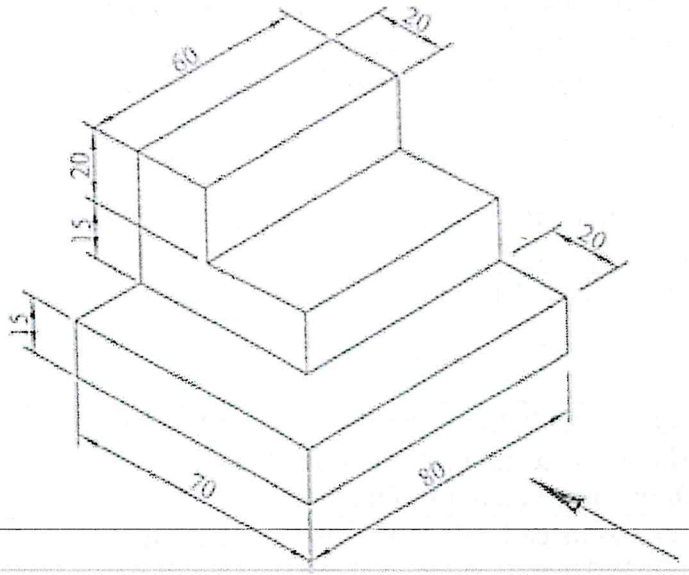
ENGINEERING GRAPHICS (CE, EEE)

Duration: 3 hours Max. Marks: 70

Paper consists of five questions. Each question has an internal choice, and either of them can be answered

All Questions carry Equal Marks

		BTL	CO	Marks
	UNIT-I			
1.(a)	Construct an ellipse when the distance of the focus from the directrix is equal to 50 mm and eccentricity is 2/3. Also, Draw a tangent and normal to the ellipse at a point 70 mm away from the directrix.	3	1	(14M)
	(OR)			
1.(c)	Construct a diagonal scale of RF = 1/6250 to read up to 1 km and to read meters on it. Show a length of 674 m on the scale	3	1	(7M)
1.(d)	Draw an Involute of an Equilateral Triangle with a side length of 35 mm.	2	1	(7M)
	UNIT-II			
2.(a)	A 80 mm long line PQ has end P 20 mm above H.P. and 40 mm in front of the V.P. The line is inclined at 30° to the H.P. and is parallel to the V.P. Draw the projections of the line	2	2	(7M)
2.(b)	A 70 mm long line PQ, has its end P 20 mm above the H.P. and 30 mm in front of the V.P. The line is inclined at 45° to the H.P. and 30° to the V.P. Draw its projections.	3	2	(7M)
	(OR)			
2.(c)	A rectangle ABCD of size 40×25 mm, has the corner A, 10mm above HP and 15mm in front of VP. All the sides of the rectangle are equally inclined to H.P. And parallel to V.P. Draw its projections.	3	2	(14M)
	UNIT-III			
3.(a)	A pentagonal prism of base edge 30 mm and axis 60 mm rests on an edge of its base in the H.P. Its axis is parallel to V.P. and inclined at 45° to the H.P. Draw its projections	3	3	(14M)
	(OR)			
3.(c)	A pentagonal prism of base side 30 mm and axis 60 mm has one of its bases in the V.P. Draw its projections when a rectangular face is parallel to and 15 mm above the H.P	3	3	(14M)
	UNIT-IV			
4.(a)	A cone, base 75 mm diameter and axis 80 mm long is resting on its base on the HP. It is cut by a section plane perpendicular to the VP. Inclined at 45^0 to the HP, and cutting the axis at a point 35 mm from the apex. Draw its front view, sectional top view, and true shape of the section.	3	4	(14M)

	(OR)			
4.(c)	A pentagonal prism of base side 30 mm and axis 70 mm is resting on its base on the H.P. with a rectangular face parallel to the V.P. It is cut by an auxiliary inclined plane (A.I.P.) whose V.T. is inclined at 45° to the reference line and passes through the mid-point of the axis. Draw the development of the lateral surface of the truncated prism	3	4	(14M)
	UNIT-V			
5.(a)	Draw the Front View, Top View and Side View of the Following Figure. 	4	5	(14M)
	(OR)			
5(c)	Draw an isometric view of a cylinder, with a 50mm base diameter and a 70mm long axis when one of the generators is on the HP?	3	5	(7M)
5(d)	Draw the isometric view of a Hexagon with 40mm side such that its surface is Parallel to the HP and a side Parallel to the VP?	3	5	(7M)

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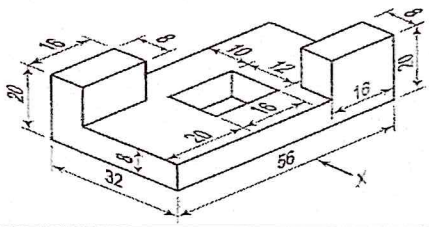
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Course Code: [23ES2T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE: ODALAREVU
(AUTONOMOUS)
I B.Tech II Semester Regular End Examinations (BR23)- June 2025
ENGINEERING GRAPHICS (ECE) [A.N]

Duration: 3 hours | Max. Marks: 70

Paper consists of five questions. Each question has an internal choice, and either of them can be answered
All Questions carry Equal Marks

	UNIT-I	
1.a)	Construct an ellipse when the distance of the focus from the directrix is equal to 50 mm and the eccentricity is 2/3.	(7M)
1.b)	Construct a plane scale of RF=1:4 to show centimetres and decimetres long enough to measure up to 5 decimetres show a distance of 2.7 dm.	(7M)
	(OR)	
1.c)	Construct a cycloid, given that the diameter of the generating circle is 60 mm. Draw a normal and a tangent at any point on the Cycloid.	(14M)
	UNIT-II	
2.a)	Draw the projections of the following points on the same ground line, keeping the projectors 25 mm apart. i)A, in the H.P., and 20 mm behind the V.P. ii) B, 40 mm above the H.P. and 25 mm in front of the V.P. iii) C, in the V.P. and 40 mm above the H.P. iv) D,25 mm below the H.P. and 25 mm behind the V.P. v) E, 15 mm above the H.P. and 50 mm behind the V.P. vi) F, 40 mm below the H.P. and 25 mm in front of the V.P. vii) G, in both the H.P. and the V.P.	(14M)
	(OR)	
2.c)	A 100 mm long line is parallel to and 40 mm above the H.P. Its two ends are 25 mm and 50 mm in front of the V.P., respectively. Draw its projections and find its inclination with the V.P.	(7M)
2.d)	A square ABCD of 40 mm side has a corner on the H.P. and 20 mm in front of the V.P. All the sides of the square are equally inclined to the H.P. and parallel to the V.P. Draw its projections.	(7M)
	UNIT-III	
3.a)	Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long,resting on one of its rectangular faces on the H.P., with the axis inclined at 45^0 to the V.P.	(14M)
	(OR)	
3.c)	A square prism, base on the H.P., a side of the base inclined at 30° to the V.P., and the axis 50 mm in front of the V.P. The side of the base is 40 mm, and the axis is 65 mm long.	(7M)
3.d)	A cylinder, axis perpendicular to the V.P. and 40 mm above the H.P., one end 20 mm in front of the V.P. The diameter of the base is 50 mm, and the axis is 65 mm long.	(7M)
	UNIT-IV	
4.a)	A cube of 35 mm long edges is resting on the H.P.on one of its faces with a vertical face inclined at 30° to the V.P. It is cut by a section plane parallel to the V.P. and 9 mm away from the axis and further away from the V.P. Draw its sectional front view and the top view.	(14M)
	(OR)	
4.c)	Draw the development of the lateral surfaces of a right square prism of edge of base 40 mm and axis 60 mm long.	(14M)
	UNIT-V	
5.a)	Draw the front view, top view, and side view of the object as shown in the figure below.  	(14M)
	(OR)	
5.c)	Draw the isometric view of a cone, base 40 mm diameter and axis 55 mm long (i) when its axis is vertical and (ii) when its axis is horizontal.	(14M)

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Course Code: [23ES2T03]

BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE::ODALAREVU
(AUTONOMOUS)

I B.Tech II Semester Regular/Supplementary Examinations (BR23) JUNE-2025.

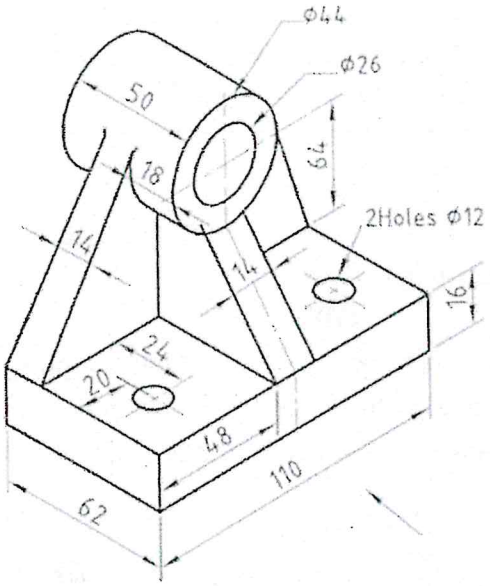
ENGINEERING GRAPHICS (Common to CE, EEE, ME & ECE)

Duration: 3 hours Max. Marks: 70

Paper consists of five questions, Each question has internal choice, and either of them can be answered

All Questions carry Equal Marks

	UNIT-I	
1.a)	Construct an ellipse when its major axis is 120mm and the distance between the foci is 108 mm. Determine the length of the minor axis.	(14M)
	(OR)	
1.c)	A coin of 35 mm diameter rolls over dining table without slipping. A point on the circumference of the coin is in contact with the table surface in the beginning and after one completer revolution. Draw the curve traced by the point. Draw a tangent and normal at any point on the curve.	(14M)
	UNIT-II	
2.a)	A point S is on both HP and VP. Another point T is 35mm above HP and 40 mm in front of VP. Draw its projections when the line joining their top view is 70mm. Also draw and measure the line joining their front views.	(7M)
b)	A 75 mm long line PQ has its end P 15 mm from both H.P. and V.P. The other end Q is 35 mm above H.P. and 45 mm in front of V.P. Draw the projections of the line and determine the inclinations with H.P. and V.P.	(7M)
	(OR)	
2.c)	A line AB 120mm long is inclined at 45^0 to the H.P. and 30^0 to the V.P. Its midpoint C is in V.P. and 20mm above H.P. The end A is in the third quadrant and B is in the first quadrant. Draw the projections of the line.	(14M)
	UNIT-III	
3.a)	A circular lamina of 60mm diameter rests on HP on a point on the circumference. The lamina is inclined to HP such that the top view of it is an ellipse of minor axis 35mm. The top view of the diameter through that point makes an angle of 45° with VP. (i) Draw the projections. (ii) Determine the angle made by the lamina with the HP.	(14M)
	(OR)	
3.c)	Draw the projections of a circle of 40 mm diameter, resting on HP on a point on the circumference. Its plane is inclined at 30^0 to the HP. and perpendicular to the VP. Its centre is 35mm in front of the VP.	(7M)
d)	A regular pentagon ABCDE of side 30mm is parallel to the VP. The side AB is perpendicular to the HP. Draw the projections of the pentagon.	(7M)
	UNIT-IV	
4.a)	A pentagonal prism 25mm side of base and 60mm axis length rests on HP on one of its edges of the base which is inclined at VP at 30^0. Draw the projections of the prism when the axis is inclined to HP at 40^0.	(14M)
	(OR)	

4.c)	A hexagonal prism, base 30 mm side and axis 75 mm long, has an edge of the base parallel to the H.P. and inclined at 45° to the V.P. Its axis makes an angle of 60° with the H.P. Draw its projections.	(14M)
	UNIT-V	
5.a)	Draw the front view, top view and side view of object as shown in fig. below? 	(14M)
	(OR)	
5.c)	Draw the isometric view of a cylinder with 40 mm base diameter and a 70 mm long axis when one of the generators is on the H.P.	(14M)

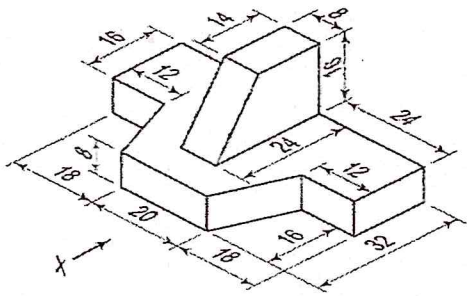
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BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE: ODALAREVU
(AUTONOMOUS)

I B.Tech II Semester Supplementary Examinations (BR23)- September-2025
ENGINEERING GRAPHICS (Common for CE, EEE, ME & ECE)

Max. Marks: 70 Duration: 3 hours

Paper consists of five questions. Each question has an internal choice, and either of them can be answered
All Questions carry Equal Marks

	UNIT-I	
1.a)	Construct a Hyperbola when the distance of the focus from the directrix is equal to 50 mm and the eccentricity is 3/2.	(14M)
	(OR)	
1.c)	Construct an Involute, given that the diameter of the generating circle is 50 mm. Draw a normal and a tangent at any point on the Involute.	(14M)
	UNIT-II	
2.a)	A point P is 50 mm from both the reference planes. Draw its projections in all possible positions.	(14M)
	(OR)	
2.c)	The top view of a 75 mm long line measures 55 mm. The line is in the V.P., its one end being 25 mm above the H.P. Draw its projections.	(7M)
2.d)	A regular pentagon of 25 mm side has one side on the ground. Its plane is inclined at 45° to the H.P. and perpendicular to the V.P. Draw its projections.	(7M)
	UNIT-III	
3.a)	Draw the projections of a cylinder 75 mm in diameter and 100 mm long, lying on the ground with its axis inclined at 30^0 to the V.P. and parallel to the ground.	(14M)
	(OR)	
3.c)	A hexagonal pyramid of base 40 mm long and axis 65 mm long on the H.P. and an edge of the base parallel to V.P. Its axis is inclined to 45^0 to H.P. Draw its projections.	(14M)
	UNIT-IV	
4.a)	A pentagonal pyramid, base 30 mm side and axis 65 mm long, has its base horizontal and an edge of the base parallel to the V.P. A horizontal section plane cuts it at a distance of 25 mm above the base. Draw its front view and sectional top view.	(14M)
	(OR)	
4.c)	Draw the development of the lateral surfaces of a truncated cylinder of base 40 mm and axis 60 mm long. The section plane cuts the cylinder at a distance of 25 mm from the base and makes an inclination 30^0 to the H.P.	(14M)
	UNIT-V	
5.a)	Draw the front view, top view, and side view of the object as shown in the figure below. 	(14M)
	(OR)	
5.c)	A cylindrical block of base, 60 mm diameter and height 80 mm, standing on the H.P. with its axis perpendicular to the H.P. Draw its isometric view.	(14M)