



Academic year 2023-2024 (Odd Sem)

DEPARTMENT OF
MECHANICAL ENGINEERING
CIE I

Date	28 Dec 2023	Maximum Marks	50
Course Code	ME112GL	Duration	90 Minutes
Course Title	Computer Aided Engineering Graphics	Sem:	1

Instruction: Answer all questions- Manual drawing only.

Q. No.	Questions	M	BT	CO
1	<p>Figure 1 shows the projections of points A, B, C, D and E respectively. State their quadrants and distance from reference planes (distance from VP and HP).</p> <p>Figure 1: Projections of Points A, B, C, D and E</p>	10	2	1
2	<p>The top view pq of a straight line 70mm and makes an angle of 60° with XY line. The end Q is 10mm in front of VP and 30mm above the HP. The difference between the distances of P and Q above the HP is 45mm. Draw the projections. Determine its true length and true inclinations with HP and VP.</p>	10	3	2
3	<p>The hexagonal lamina of 25mm sides resting on one of its corners on HP. The lamina makes 45° with HP and the corner opposite to corner on which it rests is 25mm in front of VP and nearer to it, such that two of its sides are perpendicular to XY line in the top view. Draw its front view and top view.</p>	15	3	2



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4 a	A triangular pyramid of base sides 30mm and axis length 60mm is resting on HP on one of its triangular faces. Draw the projections when the top view of the axis is inclined at 40° to VP.	15	3	2
	OR			
b	A square prism of base side 30mm and axis length 50mm is resting on HP on one of its base edges which is inclined at 30° to VP. Draw the projections when the axis is inclined to HP at 40° .	15	3	2

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	T	Max Marks	-10	40	-	-	-	10	40	-	-	-



Academic year 2023-2024 (Odd Sem)

DEPARTMENT OF MECHANICAL ENGINEERING

Improvement Test

Date	23 Jan 2024	Maximum Marks	50
Course Code	ME112GL	Duration	90 Minutes
Course Title	Computer Aided Engineering Graphics	Sem: 1	

Instruction: Manual drawing only.

Q. No.	Questions	M	BT	CO
1) a)	A point is 30 mm in front of VP, 20 mm above HP and 25 mm in front of LPP. Draw its projections.	05	2	1
b)	Draw the projections of the following points on the same reference line, keeping the projectors 25 mm apart. i. A is in the HP and 20 mm behind the VP ii. B is 40 mm above the HP and 25 mm in front of the VP iii. C is in the VP and 40 mm above the HP. iv. D is 25 mm below the HP and 25 mm behind the VP v. E is 15 mm above the HP and 50 mm behind the VP	05	2	1
2	A line AB 80mm long has its end A 20mm above HP and 30mm in front of VP. It is inclined at 30° to HP and 45° to VP. Draw the projections of the line and find apparent lengths and apparent inclinations.	10	3	2
3	A square lamina ABCD of 40 mm side rests on corner C such that diagonal AC appears to be at 45° to VP. The two sides BC and CD containing the corner C make equal inclination with HP. The surface of the lamina makes 30° with HP. Draw its top and front views.	15	3	2
4 a)	A cone of 40 mm diameter and 50 mm axis length are resting on one of its generators on HP and the top view of the axis makes 30° inclination with VP. Draw its projections.	15	3	2
OR				
4 b)	A pentagonal prism of base sides 30mm and 60mm axis length rests on HP on one of its base corners such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections when the axis is inclined at 40° to HP and appears to be inclined at 45° to XY line.	15	3	2

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	T	Max Marks	10	40	-	-	-	10	40	-	-	-



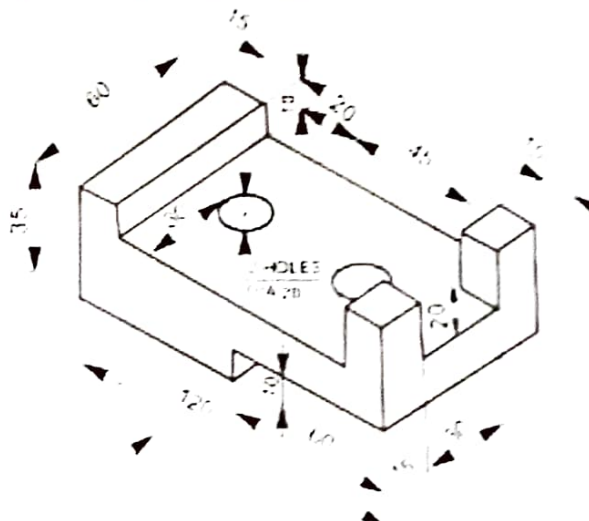
RV College of Engineering, Bengaluru
(Autonomous Institute under VTU, Belagavi)
Department of Mechanical Engineering

Lab test – January 2024 – Computer Aided Engineering Graphics (CAEG) - ME112GL
B. E. I SEMESTER - 'CD' SECTION (Set 2)

Note: 1. Answer All Questions

Time: 2 Hours

Max. Marks 50

#	Questions	Marks
1.	A pentagonal prism, base side 25 mm and axis 60 mm long is resting on a corner of its base such that the two base edges passing through it make equal inclinations with HP. The base is inclined at 60° to HP. The axis appears to be inclined at 40° to VP. Draw the views.	15
2.	Draw the isometric projection of a hexagonal prism of side of base 40 mm and height 40 mm with a right circular cone of base 50 mm diameter and height 40 mm, resting on its top such that the axes are collinear.	15
3.	Obtain the orthographic views of the following machine component. 	20
OR		
4.	A hexagonal pyramid of sides 35 mm and altitude 65 mm is resting on HP on its base with two of the base sides perpendicular to VP. The pyramid is cut by a plane inclined at 30° to HP and perpendicular to VP and intersects the axis 30 mm above the base. Draw the development of the remaining portion of the pyramid.	20

COMPUTER AIDED ENGINEERING GRAPHICS – ME112GL
(COMMON TO ALL BRANCHES)

Time: 03 Hours

Maximum Marks: 50

Instructions to candidates:

1. Answer **ANY TWO** questions from **Part A-Manual drawing**.
2. Answer **ANY TWO** questions from **Part B-Computer drafting**.
3. Answer **ANY ONE** question from **Part C- Computer drafting**.

Q.No.	PART-A (Manual Drawing)	Marks
1	Point D is 20mm in front of VP, 30mm below HP and 25mm in front of LPP. Draw the projections.	5
2	A line AB having one of its end 10mm above HP and 10mm in front of VP is inclined at 45° to HP and 30° to VP. Its top view is 50mm long. Draw the projections of the line and find out its true length.	5
3	The hexagonal lamina of 25mm sides resting on one of its sides on HP. The lamina makes 45° with HP. Draw its front view and top view.	5
	PART-B (Computer Drafting)	
4	A hexagonal pyramid of base sides 25mm and 50mm axis length rests on HP on one of its base corners such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections when the axis is inclined at 30° to HP and 40° to VP.	15
5	The frustum of a square pyramid of sides of top face 20mm, bottom face 40mm and height 60mm rests centrally on top of a hexagonal block of side 60mm and height 20mm. The base edges of the pyramid are parallel to the top edges of the hexagonal block. Draw the isometric projection of combination of solids.	15
6	A hexagonal pyramid of 30mm base edges and 60mm axis length rests on HP with its axis vertical and one of its based edges is inclined at 30° to VP and nearer to it. A section plane perpendicular to VP and inclined at 45° to HP bisects the axis of the prism. Draw the development of lateral surface of retained portion of the solid.	15

PART-C (Computer Drafting)

- 7 Create a 3D assembly of double riveted butt joint with double cover plate chain riveting as shown in Figure 1. Show three rivets in each row.

10

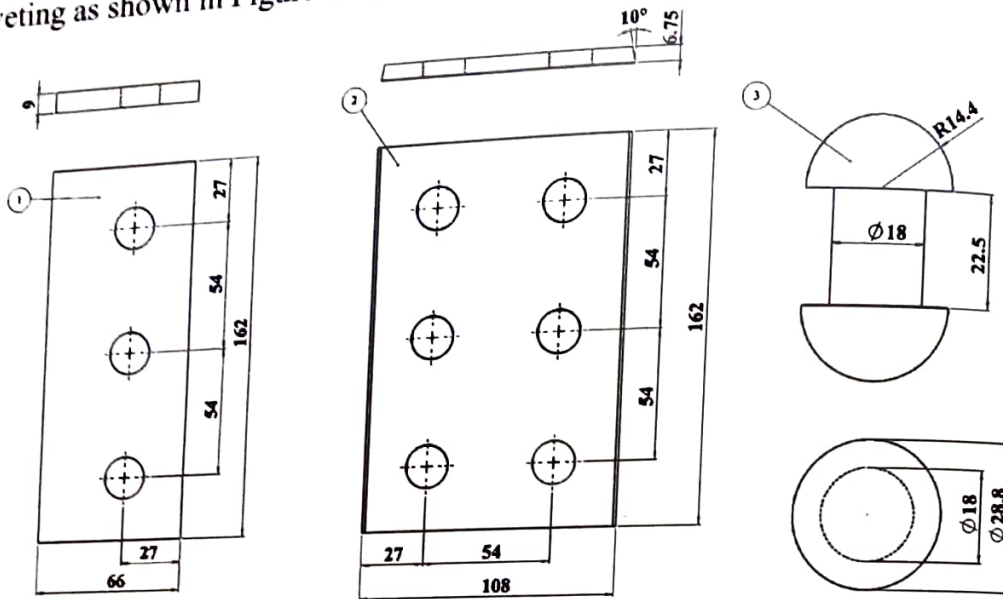


Figure 1

Part No.	Description	Quantity
1	Butt plate	2
2	Cover plate	2
3	Rivet	6

OR

- 8 Draw the second-floor plan of the two-storey building as shown in Figure 2. (Scale 1 feet = 5mm)

10

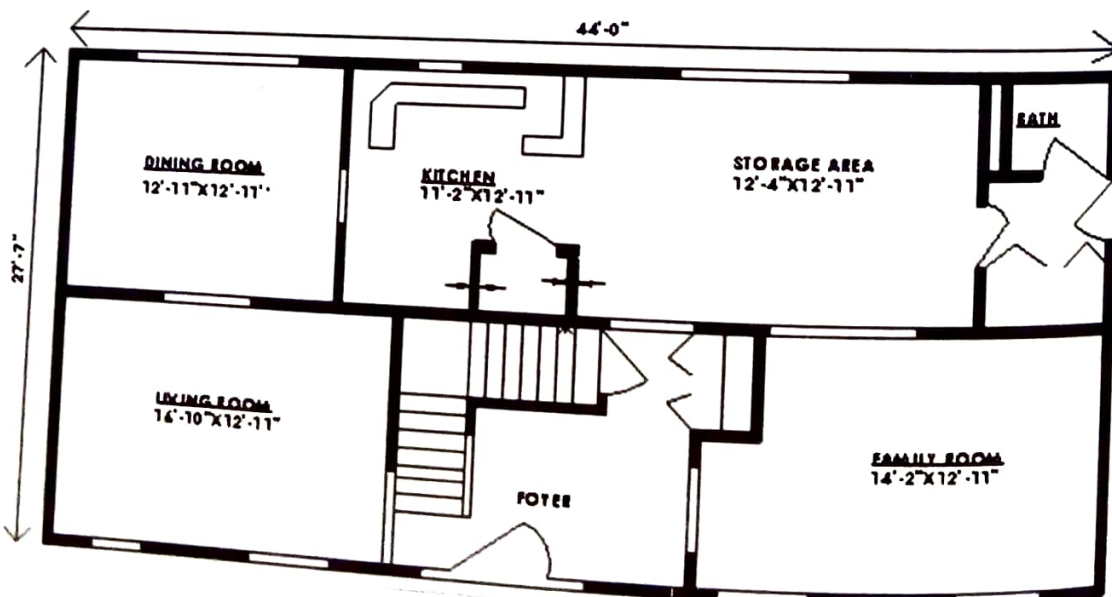


Figure 2

OR

Draw the electrical circuit diagram of Single Phase wiring diagram as shown in Figure 3.

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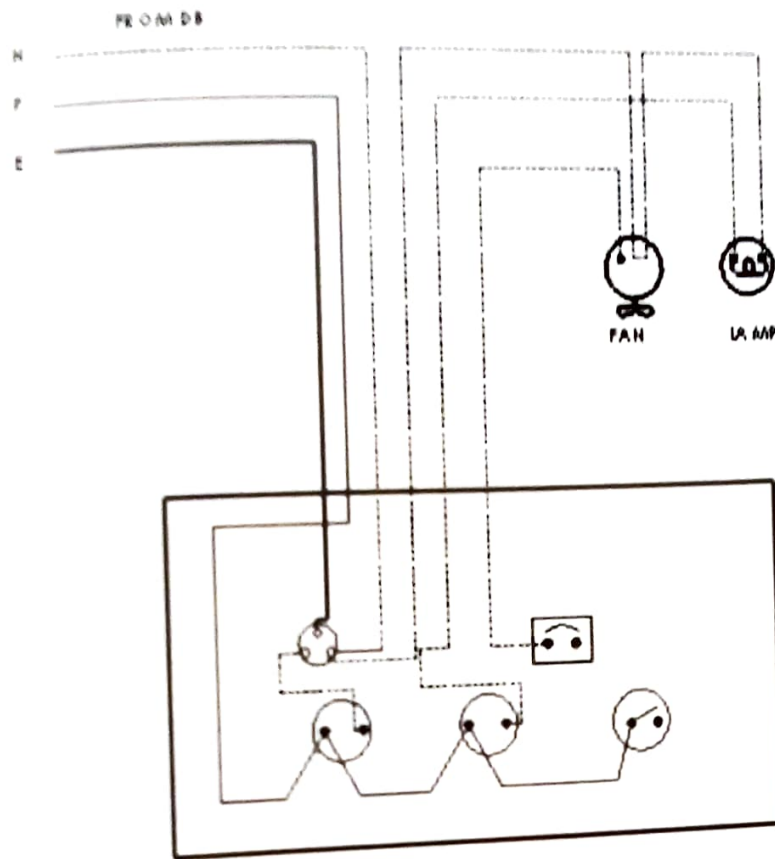


Figure 3

OR

Draw electronic circuit diagram of Inverting Summer and RC Coupled Amplifier as shown in Figure 4a and 4b

10

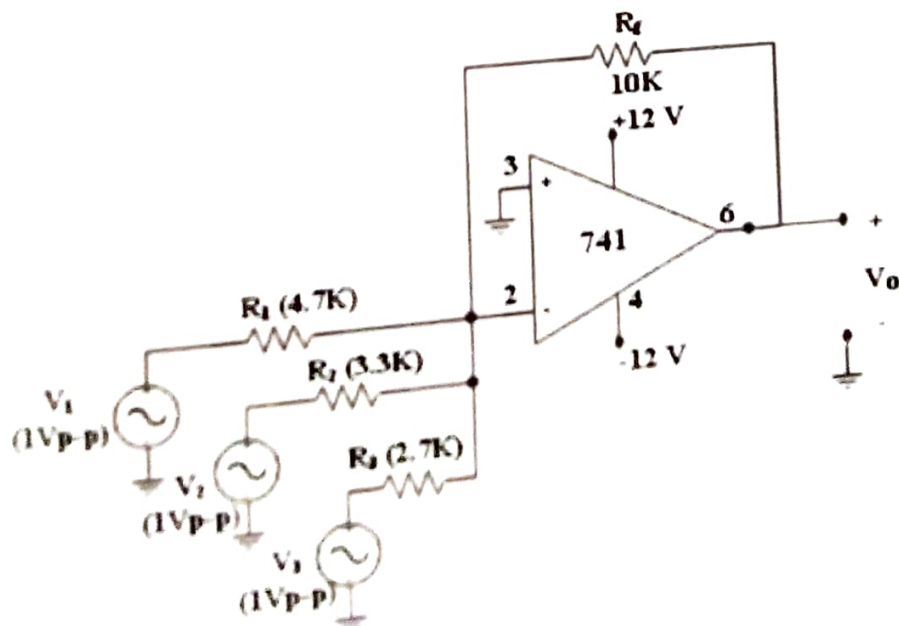


Figure 4a

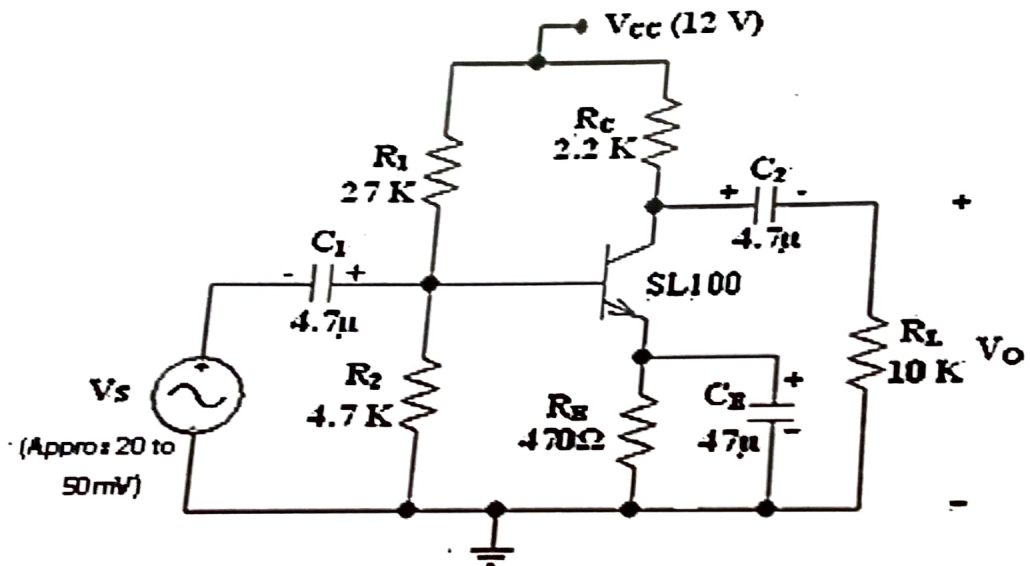


Figure 4b