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Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi

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Academic year 2022-2023 (Odd Sem)

DEPARTMENT OF MECHANICAL ENGINEERING

CIE-1

Date	22 February 2023	Maximum Marks	**50**
Course Code	**22MECG13**	Duration	**90 Minutes**
Course Title	Computer Aided Engineering Graphics		Sem: 1

Instruction: Answer all questions- Manual drawing only.

Q No.	Questions	M	BT	CO
1a.	Draw the projections of the following points on the same XY line, keeping convenient distance between each projector. Name the quadrants in which they lie. E - 30 mm below HP and 25 mm behind VP. F - 35 mm below HP and 30 mm in front of VP. G - on HP and 30 mm in front of VP. H - on HP and 35 mm behind VP.	10	2	1
1b.	The common point 40 mm below XY line represents not only the front views of three points A, B and C but also the top view of point C. The top view of point B lies on XY line and top view of point A lies 50 mm above it. Draw the projections of the points and add the right-side view of the point A only. Also state the quadrants in which the points lie.	10	2	1
2	A line AB measuring 70 mm has its end A 15 mm in front of VP and 20 mm above HP and the other end B 60 mm in front of VP and 50 mm above HP. Draw the projections of the line and find the inclinations of the line with the both the reference planes of projection.	15	3	2
3	A pentagonal lamina of edges 25 mm is resting on HP with one of its sides such that the surface makes an angle of 60°. with HP. The edge on which it rests is inclined at 45°. to VP. Draw its projections.	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	20	30	-	-	-	20	30	-	-	-

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Academic year 2022-2023 (Odd Sem)

DEPARTMENT OF

MECHANICAL ENGINEERING

CIE -Improvement test

Date	21 March 2023	Maximum Marks	**50**
Course Code	**22MED13**	Duration	**90 Minutes**
Course Title	Computer Aided Engineering Graphics		Sem: 1

Instruction: Answer all questions- Manual drawing only.

Q. No.	Questions	M	BT	CO
1a.	Draw the projections of the following points on the same XY line. a) P is 35mm in front of VP and 30mm below HP. b) Q is 30mm above HP and in VP. c) R is 30mm behind VP and 25mm below HP d) S is 40mm behind VP and 50mm above HP e) T is 30mm in front of VP and 20 mm above HP.	10	2	1
1b.	i. A point 30mm below XY line is the top view of two points E and F. E is 35mm above HP and F is 40mm below HP. Draw the projections of the two points and state their positions with reference planes and the quadrants in which they lie. ii. Point A is 20mm in front of VP, 25mm above HP and 30mm in front of LPP. Draw the projections.	10	2	1
2	The front view a'b' of a straight line is 70mm and makes an angle of 50° to XY line. End A is 15 mm in front of VP and 25mm above HP. The difference between the distances of A and B in front of VP is 50mm. Draw the projections and determine the true length and true inclinations with HP and VP.	15	3	2
3	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 in front of VP and away from it. Draw its front view and top view	15	3	2

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

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
		Marks	20	30	-	-	-	20	30	-	-	-

RASHTREEYA SIKSHANA SAMITHI TRUST

RV COLLEGE OF ENGINEERING®

(AUTONOMOUS INSTITUTE AFFILIATED TO VTU, BELAGAVI)

I Semester B.E. Degree Examination, April/May 2023

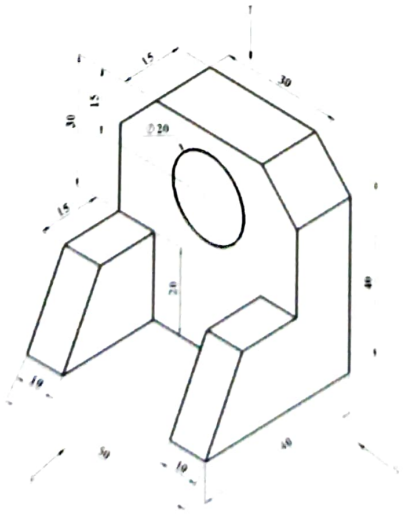
COMPUTER AIDED ENGINEERING GRAPHICS – 22MECD13/23

(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 A is 30mm in front of VP, 20mm above HP and 25mm infront of LPP. Draw the projections.	5
2	A line AB having one of its end 10mm above HP and 15mm infront of VP is inclined at 30° to HP and 45° 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 corners on HP. The lamina makes 45° with HP. Draw its front view and top view.	5
	PART-B (Computer Drafting)	
4	A square prism of base sides 30mm and 60mm axis length rests on HP on one of its base edges which is inclined at 30° to VP. Draw its projections when the axis is inclined at 45° to HP.	15
5	Create a 3D model of the given part as shown in figure 1. Generate its front view, top view, profile view and isometric shaded view.  **Figure 1**	15
6	A pentagonal prism of 30mm base edges and 65mm axis length rests on HP with two of	15

its lateral surfaces are equally inclined 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.

PART-C (Computer Drafting)

7 Create a 3D assembly of Hexagonal headed bolt and nut with washer and generate the following views. Part drawings are shown in Figure 2. **10**

i. Front view
ii. Top view
iii. Right side view
iv. Isometric shaded model view.

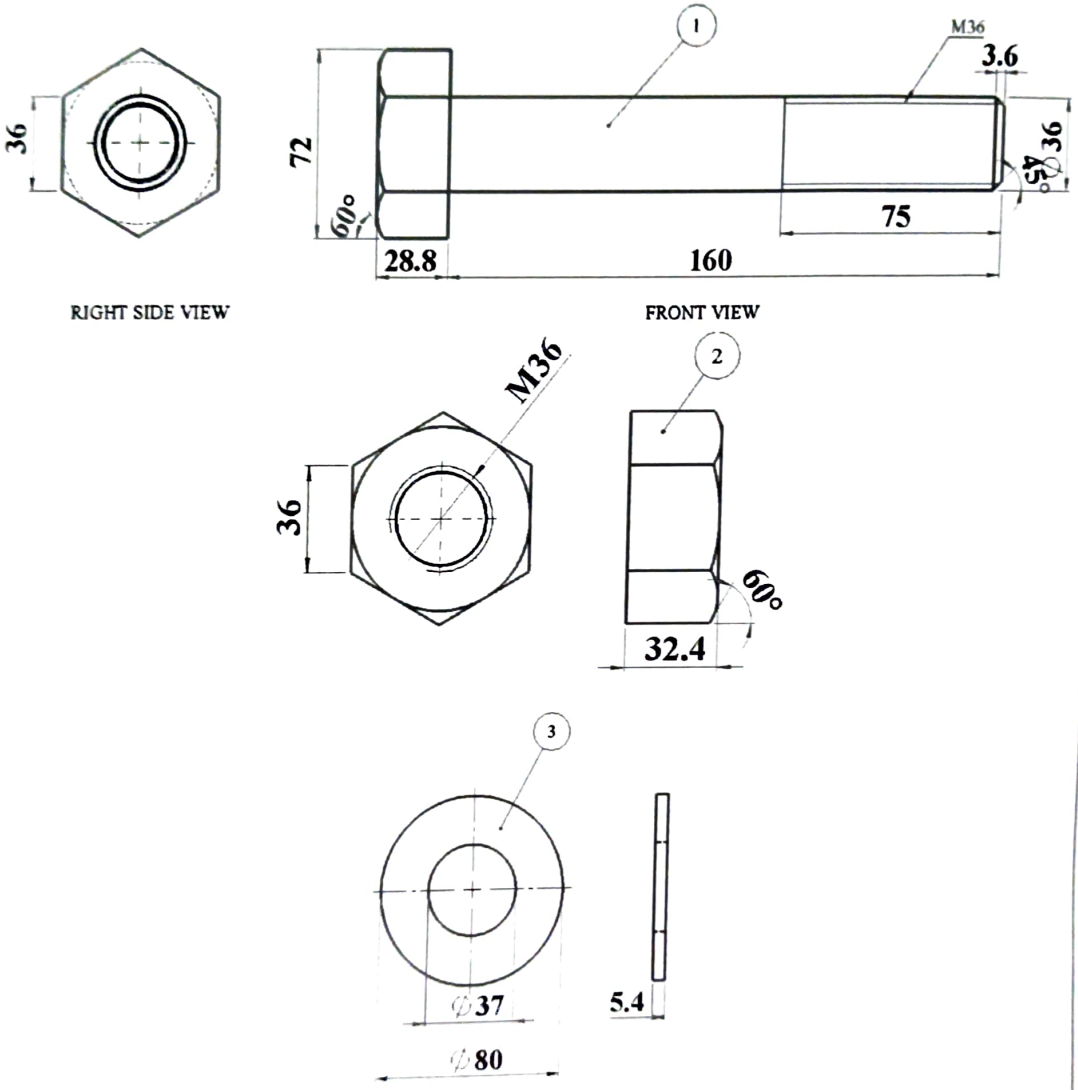


Figure 2

Part No.	Description	Quantity
1	Hexagonal headed bolt	1
2	Hexagonal nut	1
3	Washer	1

OR

8	Draw single room plan of the building as shown in Figure 3. (Scale 1feet = 5mm)	10

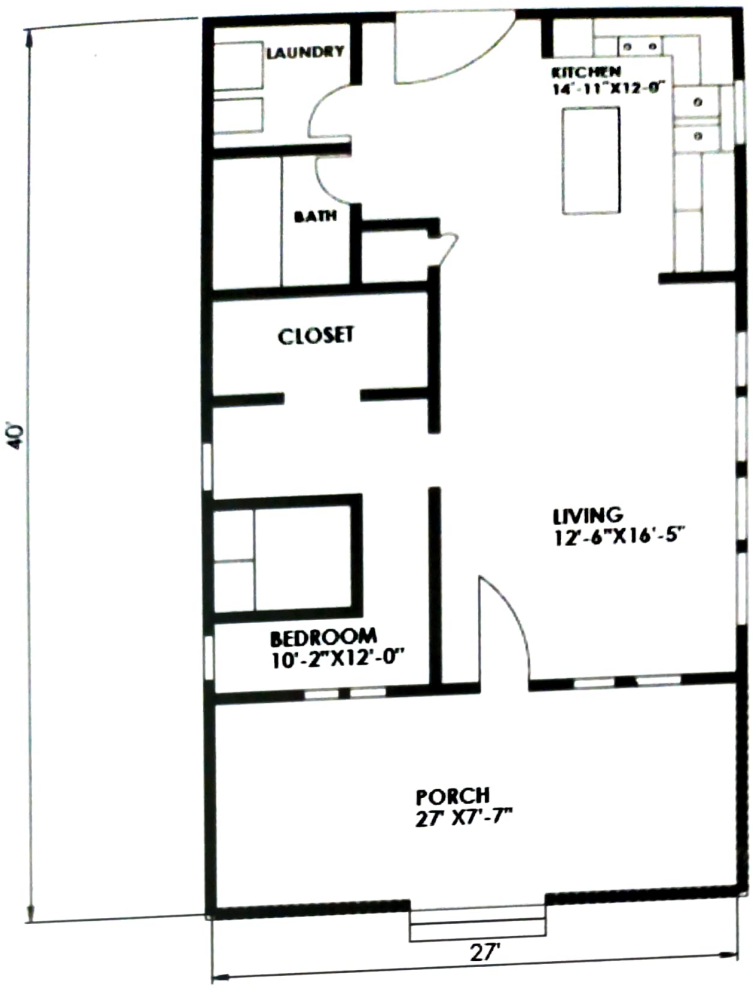


Figure 3

OR

9	Draw single phase wiring circuit diagram as shown in Figure 4	10

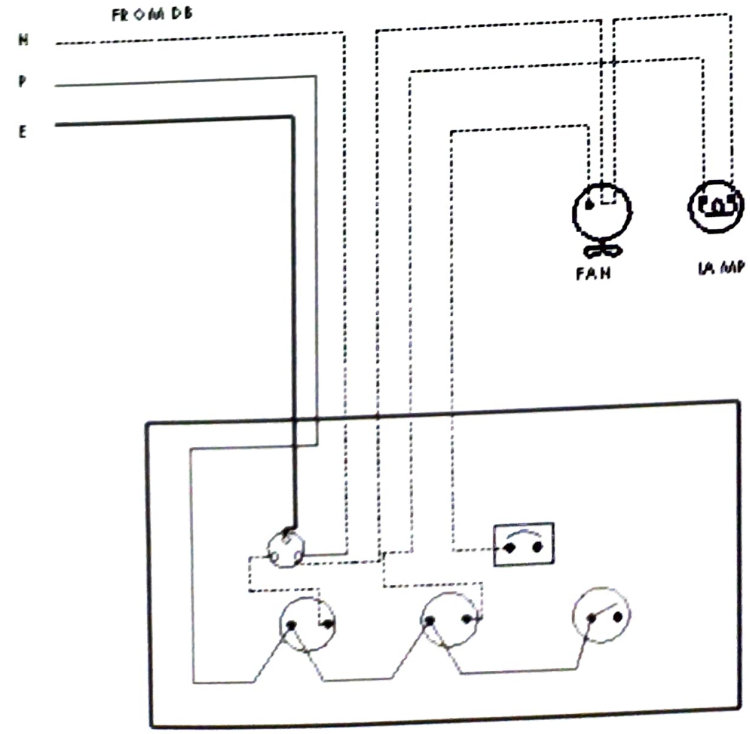


Figure 4

OR

10	Draw electronic circuit diagram of RC Coupled Amplifier as shown in Figure 5	10

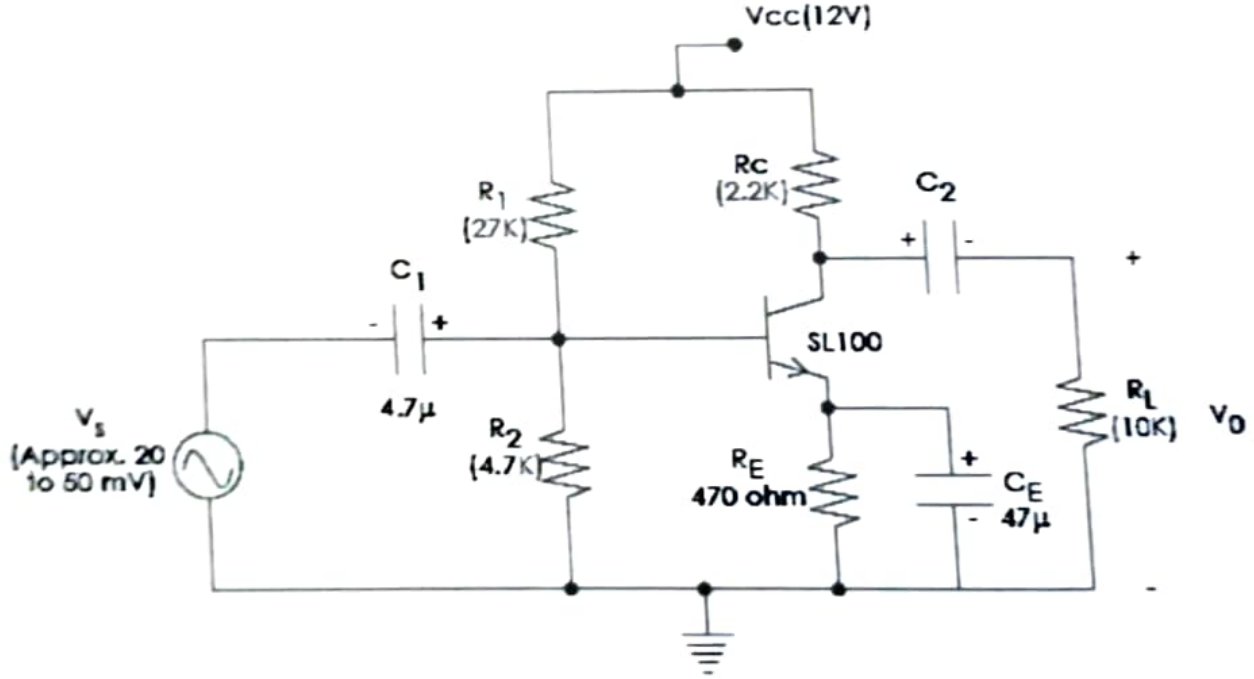


Figure 5