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RV COLLEGE OF ENGINEERING®

Autonomous Institution affiliated to VTU

DEPARTMENT OF MECHANICAL ENGINEERING

I Semester B.E. April -2022 Examinations

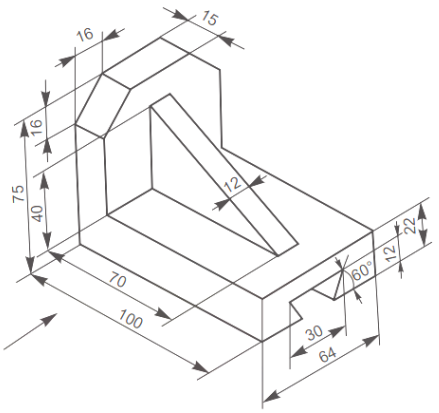
COURSE TITLE: COMPUTER AIDED ENGINEERING GRAPHICS

Model Question Paper (2021 SCHEME)

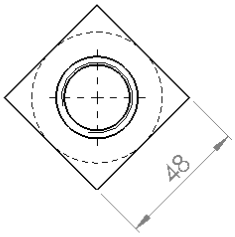
Time: 03 Hours **Maximum Marks: 50**

Instructions to candidates:

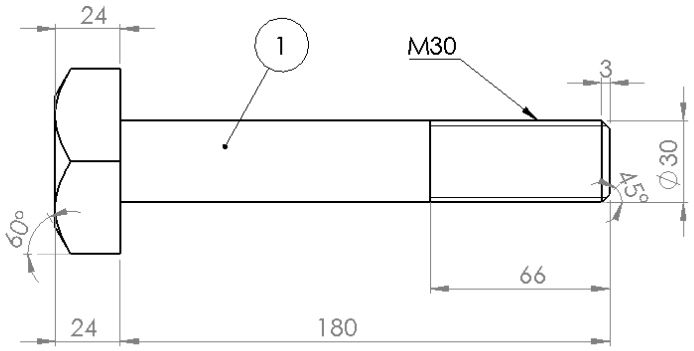
1. Answer **ANY TWO** questions from **Part A- Manual drawing**
2. Answer **ANY TWO** questions from **Part B- Computer drafting**.
3. Answer **ANY ONE** question from **Part C- Computer drafting**

Q.No.	**PART-A (Manual Drawing)**	Marks
1	A point 20 mm below XY line is the top view of three points A, B and C. A is 30 mm below HP, B is 40 mm above HP and C on HP. Draw the projections of the three points and state their positions with reference planes and the quadrants in which they lie.	**5**
2	A line AB 65 mm long has one end 20 mm in front of VP and 15 mm above HP. The line is inclined at 30º to HP and 40º to VP. Draw the front view and the top view of the line.	**5**
3	A hexagonal lamina of 30 mm sides resting on one of its sides on HP. The lamina makes 45º with HP and the side on HP is inclined at 40º to VP. Draw the front view and the top views.	**5**
	PART-B (Computer Drafting)	
4	A pentagonal pyramid of base sides 30 mm and 60 mm 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 45º to HP and 30º to VP.	**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**

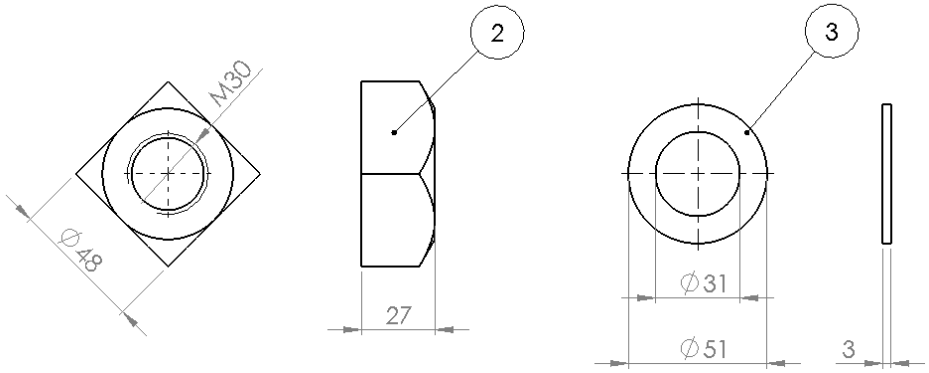
6	A square pyramid of base edge 40 mm and height 60 mm rests on HP with its axis vertical and two of its base edges parallel to VP. A section plane perpendicular to VP and inclined at 45º to HP bisects the axis of the pyramid. Draw the development of lateral surface of retained portion of the solid	**15**
	PART-C (Computer Drafting)	
7	Generate the following views of square headed bolt and nut with washer showing all the parts assembled as shown in figure 2 i. front view ii. top view iii. right side view	**10**



RIGHT SIDE VIEW



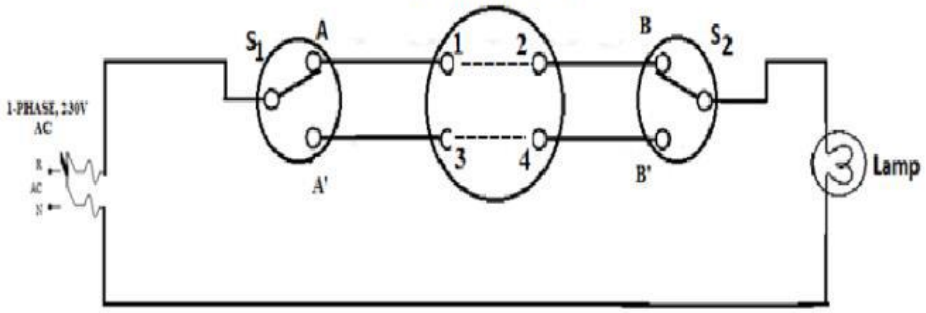
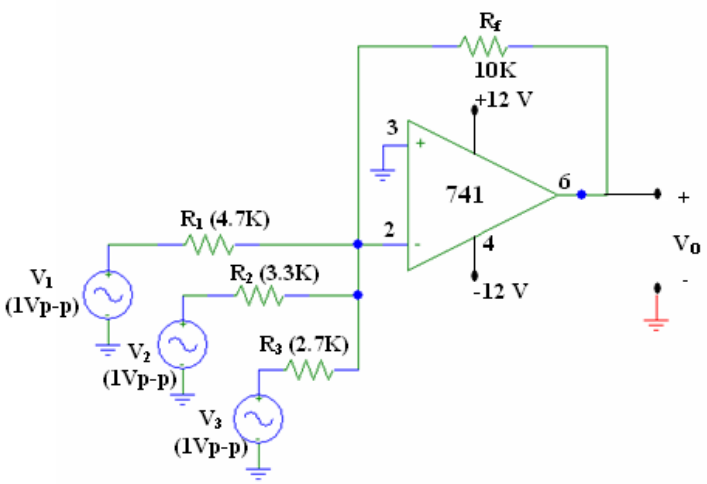
FRONT VIEW



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

Figure 2

OR

8	Draw the plan of the building as shown in figure 3  **Figure 3**	**10**
	OR	
9	Draw three way control circuit diagram as shown in figure 4  **Figure 4**	**10**
	OR	
10	Draw electronic inverting summer as shown in figure 5  **Figure 5**	**10**