ADDITIONAL CONTROLLER OF EXAMINATIONS ★ AU CHENNAI 600 025

Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. /B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, APR / MAY 2024

Common to all Branches
Semester 1 and 2

GE5151 - ENGINEERING GRAPHICS

(Regulation 2015 / 2019)

Time:3 hrs Max. Marks: 100

The main learning objective of this course is to prepare the students for:

CO1 Draw free hand sketching of basic geometrical shapes and multiple views of objects.
CO2 Draw orthographic projections of lines and planes
CO3 Draw orthographic projections of solids
CO4 Draw development of the surfaces of objects
CO5 Draw isometric and perspective views of simple solids.

BL – Bloom's Taxonomy Levels

(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

PART- A (5x20=100Marks)
(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1a)	Draw a curve traced by the free end of a thread unwound from a circle of Ø 50 mm in such a way that the thread is always tight and tangential to the circle. Name the curve and draw a tangent and normal to the curve at any point on it.	20	CO1	L2
	OR			
1b)	Draw the top view front view and right side view of the component shown in figure 1. Mark the dimensions.	20	CO1	L2
2a)	A line 'RS' having length 90 mm is inclined at 45° to VP. The point 'R' is 20 mm above HP and 25 mm in front of VP and the end 'S' is 55 mm above HP. Draw the projections of the line and find the inclinations.	20	CO2	L5
	OR			
2b)	A circular lamina 50 mm diameter is resting on point 'A' on the HP and 40 mm in front of VP. The point diametrically opposite to point 'A' is 40 mm above HP and 60 mm in front of VP. Draw the projections of the lamina.	20	CO3	L5
3a)	A square pyramid of base edge 40 mm and the height 60 mm is resting on HP on its triangular face such that the square face edge on HP is inclined 40° to VP. Draw its projections	20	CO3	L4
	OR			
3b)	A cone of base diameter 50 mm and axis length 60 is lying on one of its	20	CO3	L4

generators on the HP. Draw the projection of the cone when the center of the base is 40 mm and the apex is 60 mm in front of VP respectively.

4a)	A square prism 40 mm sides and axis length 60 mm rests on its base on the HP such that one of the base edge is inclined at 40^0 to VP. A section plane inclined at 45^0 to HP and perpendicular to VP cuts the prism passing through the axis at a distance of 40 mm from the top. Draw the sectional views and and true shape of the sectioned part.	**20**	CO4	L3
	OR			
4b)	A cylinder with base diameter 50 mm and axis length 60 mm is cut by a section plane perpendicular to VP and inclined at 45^0 to the HP and passes through the axis at a distance of 20 mm from the top base. Draw the development of the lateral surface of the lower portion of the cylinder.	**20**	CO4	L3
5a)	A cylinder of base diameter 50 mm and axis length 50 mm is resting on a square slab with base sides 80 mm and thickness 30 mm with their axis aligned. Draw the isometric view of the combined solid.	**20**	CO5	L5
	OR			
5b)	A square prism side of base 40 mm and height 60 mm rests with its base on the ground such that one of its rectangular faces is parallel to and 10 mm behind the picture plane. The station point is 50 mm in front of picture plane, 80 mm above ground plane 45 mm to the right of centre of the prism. Draw the perspective view.	**20**	CO5	L5

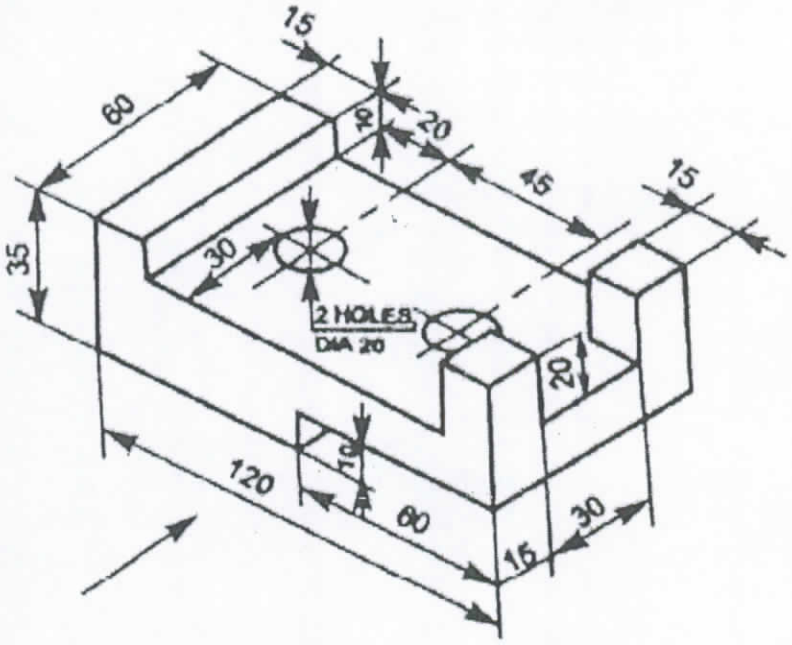

Figure 1

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