Hall Ticket Number:

Code No. : 12125 N/O

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. II-Semester Main & Backlog Examinations, August-2023

Engineering Drawing-II

(Common to Civil & Mech.)

Time: **3 hours** Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What is the purpose of sectioning of solids?	2	1	1	1
2.	How the true shape of a section is obtained?	2	1	1	1
3.	What is meant by development of a solid?	2	1	2	1
4.	Differentiate between parallel line and radial line methods.	2	1	2	1
5.	Differentiate between intersection of surfaces and interpretation of solids.	2	1	3	1
6.	Define the term line of intersection.	2	1	3	1
7.	Draw the isometric view of a rectangle of dimensions 30 X 50 mm in top view and front view.	2	2	4	1
8.	Differentiate between isometric scale and true scale.	2	1	4	1
9.	Define **features** in an isometric view.	2	1	5	1
10.	What are Missing views in orthographic projections?	2	2	5	1
	Part-B (5 × 8 = 40 Marks)				
11. a)	State and explain the method of sections.	2	2	1	1
b)	A square pyramid base 50 mm side and axis 60 mm long has its base on the HP and all the edges of the base equally inclined to the VP. It is cut by a section plane perpendicular to the VP and inclined at 30° to the HP and bisecting the axis 20 mm from its base. Draw its sectional top view, sectional side view and true shape of the section.	6	4	1	2
12. a)	Explain the importance of development of surfaces in Engineering.	2	2	2	1
b)	A hexagonal prism of base side 30 mm and height 50 mm is cut by a plane perpendicular to VP and 50° to HP and passing through the axis at a height of 15 mm above the top base. Draw the development of the lower portion of the solid.	6	3	2	2
13. a)	Write a short note on applications of intersection of surfaces.	2	2	3	1
b)	A vertical cylinder of 70mm diameter is penetrated by a cone of 70mm diameter and axis is 100mm long, the two axes bisecting each other at right angles. Draw the front view showing the lines of intersection.	6	4	3	2

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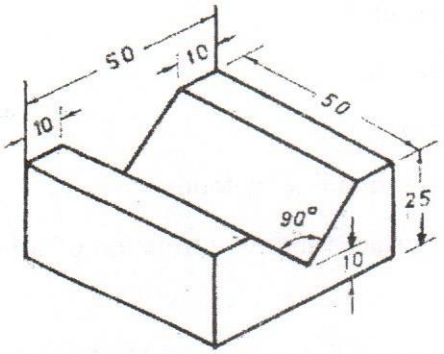
14. a)	Draw the isometric front view of a circle 50mm diameter using four center method.	2	2	4	1
b)	A sphere of 30mm diameter is centrally resting on a frustum of a cone of top and bottom diameters 40mm and 60mm respectively with a height of 70mm.Draw the isometric projection of the combined solids.	6	4	4	2
15. a)	State the rules to be followed while converting isometric views to orthographic projections.	2	2	5	1
b)	Draw the front view, top view and both side views of the V- block shown in the figure below. All dimensions are in mm. 	6	3	5	2
16. a)	A cylinder of base diameter 60mm and height 60mm resting on its base on HP with its axis vertical. It is cut by a section plane parallel to HP and Perpendicular to VP bisecting the axis. Draw the sectional top view.	4	3	1	1
b)	Develop the lateral surface of a pentagonal pyramid of side 40mm and height 70mm.	4	4	2	2
17.	Answer any ***two*** of the following:				
a)	A vertical cylinder of 100mm diameter is penetrated by another cylinder of the 80mm diameter. The axis of the penetrating cylinder is parallel to both the HP and the VP and the axis are intersecting. Draw the projection showing curves of intersection.	4	4	3	2
b)	Draw a isometric view of square prism of base side 40mm and height 60mm with its axis vertical.	4	3	4	2
c)	Differentiate between orthographic and isometric views.	4	2	5	2

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	13%
ii)	Blooms Taxonomy Level – 2	24%
iii)	Blooms Taxonomy Level – 3 & 4	63%

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