VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A+-- Grade
B.E. II-Semester Backlog Examinations, August-2023
Engineering Graphics-II
(Common to Civil, CSE, AIML & 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.	Define the typical sectional plane.	2	1	1	2
2.	When the sectional view and sectional front view were coincides?	2	1	1	1
3.	Differentiate between the methods of development for prisms and pyramids.	2	2	2	1
4.	Draw the development of surface of tetra hydron of side 35mm.	2	2	2	1
5.	What do you understand the intersection of cylinder to cylinder	2	1	3	1
6.	When two polyhydra of the solids are intersecting, nature of the intersection is?	2	1	3	1
7.	Differentiates the isometric scale from the isometric view	2	1	4	1
8.	Draw the isometric view of square prism of side 30mm and height 60mm	2	2	4	2
9.	What are the applications of the sectional view of a solid?	2	1	5	1
10.	Draw the development of surface of regular prism of side 50mm	2	2	5	2

Part-B (5 × 8 = 40 Marks)

11. a)	Draw the sectional view of a pentagonal prism of side 30mm height 65mm, if it is cut by sectional plane making ana angle of 45°, bisecting the axis of the solid	4	3	1	2
b)	A square prism of base side 35mm and axis 70mm is resting on its base on the HP with all the sides of the base equally inclined to VP. The solid is cut by a section plane which is parallel to the HP and perpendicular to the VP and bisecting the axis. Draw the sectional front view and top view.	4	3	1	2
12. a)	A cylinder of base diameter 50mm and axis 70mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to the VP, inclined at 30° to the HP, passing through the top of an extreme generator and cuts all other generators. Draw the development of its lateral surface.	5	4	2	2
b)	A cone of base diameter 50mm and axis 50mm is resting on its base on the HP. A section plane perpendicular to VP and inclined at 45° HP, bisects the axis of the cone. Draw the development of its lateral surface.	3	4	2	2

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13.	a)	A cone of the base diameter 50mm and axis 60mm is resting on its base in the HP. It is penetrated by a cylinder of diameter 40mm and axis 100mm, such that their axes are parallel to each other and 5mm apart. The plane containing both the axes is parallel to the VP. Draw the projections showing the curves of intersection.	4	4	3	2
	b)	A cylinder of base diameter 70mm and axis 80mm is resting on its base on the HP. It is penetrated by another cylinder same diameter axis 90mm, such that their axes bisect and intersect each other at right angles. Draw the projections of the combination and show the curves of intersection.	4	4	3	2
14.	a)	Draw the isometric view of frustum of a square pyramid of base 40mm and frustum height 60mm, at the frustum level side is 25mm.	4	3	4	2
	b)	A square pyramid of base side 25mm and axis 40mm rests centrally over a cylindrical block of base diameter 50mm and thickness 20mm. Draw the isometric view of the arrangement.	4	3	4	2
15.	a)	Draw the front view and top view of the solid shown in fig 1. All dimensions are in mm	4	2	5	2
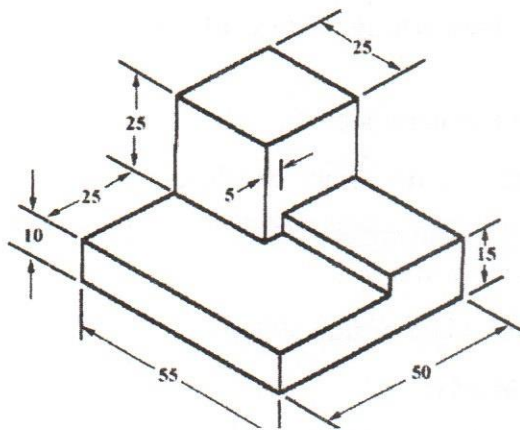
Fig 1.

	b)	Draw the front view and side view of the solid shown in fig 2. All dimensions are in mm	4	2	5	2

Fig 2.

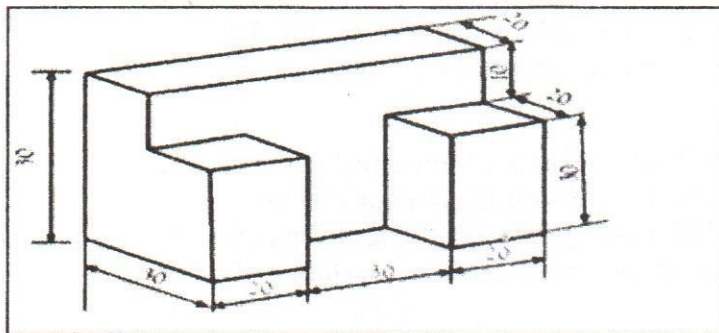|			M	L	CO	PO
16.	a)	A cone of base diameter 50mm and axis 60mm is resting on its base on the HP. It is cut by an AIP inclined at 45° to the HP and passing through a point on the axis 20mm above the base. Draw its sectional top view and obtain the true shape.	4	3	1	1
	b)	A pentagonal pyramid of base 40mm and axis 60mm is resting on its base on the HP with an edge of the base perpendicular to the VP. It is cut by an auxiliary inclined plane whose VT is inclined at 60° to the HP bisecting the axis. Draw the development of its lateral surface.	4	3	2	2
17.		Answer any *two* of the following:				
	a)	A cone of base diameter 70mm and axis 80mm is resting on its base on the HP. It is completely penetrated by cylinder of diameter 45mm, axis are perpendicular bisectors Draw the projections of the combination and show the curves of intersection.	4	3	3	1
	b)	A sphere of diameter 40mm is centrally placed on the top of a square block of side 40mm and thickness 30mm. Draw the isometric view of the arrangement.	4	4	4	1
	c)	Draw the three fundamental views of the solid shown in fig 3.	4	2	5	2

Fig 3

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

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	33%
iii)	Blooms Taxonomy Level – 3 & 4	47%

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