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Code No. : 12123 AS N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. II-Semester Advanced Supplementary Examinations, September-2023

Engineering Drawing-II

(Common to Civil & Mech.)

Time: 3 hours

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

Max. Marks: 60

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1. ✓	What is the purpose of the section of solids?				
2. ✓	State how the section of a solid is represented?	2	1	1	1
3. ✓	State different methods of development of surfaces along with sketches.	2	1	1	1
4. ✓	Draw the development of a square prism of 20mm side and 40mm height.	2	1	2	1
5. ✓	State two applications of intersections of surfaces.	2	2	2	1
6. ✓	When two cylinders of the same diameter intersect with the axes perpendicular, the intersection curves will be of----- shape. Show by a sketch.	2	1	3	1
7. ✓	Differentiate between isometric view and isometric projection.	2	1	3	1
8. ✓	Draw the isometric view of a semi-circle of 50mm diameter in the top view using four centre method.	2	2	4	1
9. ✓	In third angle projection, state how the multi-views of an object were drawn.	2	2	4	1
10. ✓	Sketch the front view and top view of the solid in Fig. 1 with the free hand.	2	1	5	1
	Part-B (5×8 = 40 Marks)	2	1	5	1
11. a)	Name the section planes used for sections of solids with a sketch.	2	2	1	1
b)	A square pyramid, base 40mm side and axis 65mm long, has its base on the H.P. and all the edges of the base equally inclined to the V.P. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP, and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section.	6	4	1	2
12. a)	A semi-circle of 100 mm diameter is the development of a cone. Determine the dimensions of the cone.	2	2	2	1
b)	Draw the projections of the cone resting on the ground on its base and show on them the shortest path by which a point P, starting from a point on the circumference of the base and moving around the cone, will return to the same point. The base of the cone is 60mm in diameter, the axis is 75mm long.	6	4	2	2
13. a)	Define key point w.r.t. intersections of solids.	2	1	3	1
b)	A vertical cylinder of 80mm diameter is penetrated by another cylinder of the same size. The axis of the penetrating cylinder is parallel to both the HP and the VP and is 10mm away from the axis of the vertical cylinder. Draw the projection showing curves of intersection.	6	4	3	2
14. a)	Define the Isometric axis and isometric line.	2	2	4	1

Contd... 2

b)	Draw the Isometric view of a Sphere of 50mm diameter resting centrally on a cylinder having 50mm diameter and height of 30mm.	6	4	4	2
15. a)	State the important assumptions used during the conversion of isometric views to orthographic views.	2	2	5	1
b)	Draw the Front view, top view and right-hand side view of Fig. 2	6	4	5	2
16. a)	A frustum of a square pyramid having a front square of 20mm side and back square of 40mm at a length of 60mm has its axis perpendicular to the V.P. The side of the square is inclined at 45° with H.P. It is cut by a section plane making 40° with V.P. and passing through a point on axis 30mm from the surface of the large square side. Draw the projections of the frustum.	4	4	1	2
b)	Draw the development of the lateral surface of a cone(right side part) with a base diameter of 60mm and axis height of 50mm, cut by a sectional plane inclined at 55° with the H.P. passing through the cone's left corner.	4	4	2	2
17.	Answer any <i>two</i> of the following:				
a)	A vertical cone, the diameter of the base of 75mm and an axis of 90mm long, is penetrated by a cylinder of 50mm diameter, the axis of which is parallel to 10mm away from the cone. Draw the projections showing curves of intersections when the plane containing the two axes is parallel to the V.P.	4	4	3	2
b)	Draw the isometric view of a frustum of a cone having a base diameter of 60mm and top diameter of 40mm. The height of the axis is 70mm.	4	4	4	2
c)	Draw the Front view, top view and right-hand side view of Fig. 3	4	3	5	2

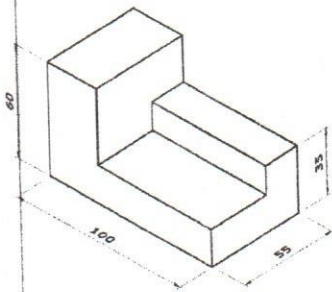


Fig.1

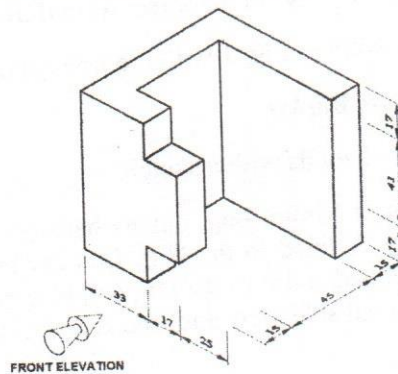


Fig.2

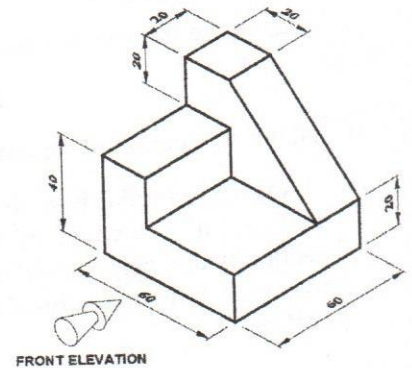


Fig.3

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

i)	Blooms Taxonomy Level - 1	21%
ii)	Blooms Taxonomy Level - 2	18%
iii)	Blooms Taxonomy Level - 3 & 4	61%
