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Code No. : 12027 N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
B.E. (CBCS) II-Semester Main & Backlog Examinations, May/June-2019
Engineering Drawing-II
(CSE, ECE & IT)

Time: 3 hours

Max. Marks: 60

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

Q.No	Stem of the question	M	L	CO	PO
Part-A (10 × 2 = 20 Marks)					
1.	Why do you section a solid?	2	2	1	1
2.	A cone, diameter of the base 30mm and axis 30mm resting on HP on its base. A horizontal section plane cuts cone passing through mid point on the axis. Draw the projections.	2	3	1	1
3.	What are the practical applications of development of surfaces?	2	2	2	1
4.	Draw the lateral development of a pentagonal prism of side 20mm and axis 40mm.	2	3	2	1
5.	List out the solids, where the intersection of surfaces of the solids gives rise to straight lines.	2	1	3	1
6.	List out the application of intersection of surfaces.	2	1	3	1
7.	Draw isometric projection of cube of side 25mm. show on it the isometric axes, isometric lines and isometric planes.	2	1	4	1
8.	Draw isometric view of a circular plate of 25mm diameter, when it is placed with its surface horizontal.	2	2	4	1
9.	Sketch front view and top view of the figure 1.	2	2	5	1
10.	Sketch front view and top view of the figure 2.	2	2	5	1

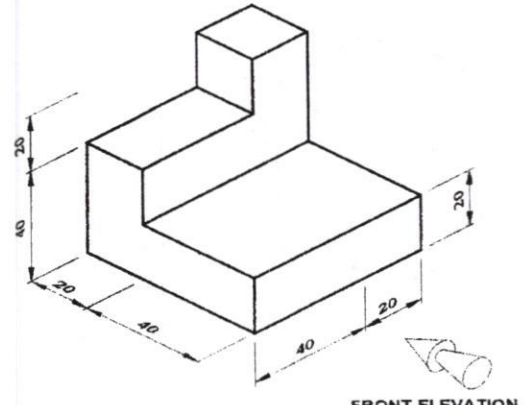


Figure: 1.

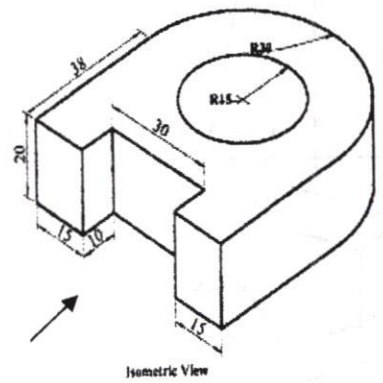


Figure:2.

Part-B (5 × 8 = 40 Marks)

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|-------|---|---|---|---|-----|
| 11.a) | A cube of side 60mm rests on one of its faces on HP with all base edges equally inclined to VP. It is cut by a section plane, inclined to HP and perpendicular to VP so that true shape of the section is a regular hexagon. Draw front view, sectional top view and true shape of the section. | 4 | 2 | 1 | 1,5 |
| b) | A right circular cone of base diameter 60mm and axis 65mm is resting on HP on its base. It is sectioned by a plane perpendicular to VP and parallel to one of the extreme generators and at a distance of 12mm from it. Draw sectional top view and true shape of the section. | 4 | 3 | 1 | 1,5 |
| 12.a) | A cube of side 30mm rests on its base on the HP with a vertical face inclined at 30° to the VP. It is cut by a plane perpendicular to the VP and inclined at 50° to the HP. The plane bisects the axis of the cube. Draw the development of the truncated cube. | 4 | 3 | 2 | 1,5 |
| b) | A right circular cone of base diameter 60 mm and height 70 mm is resting on its base on the ground. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The cutting plane bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone. | 4 | 5 | 2 | 1,5 |
| 13.a) | A vertical square prism, base 50mm side is completely penetrated by a horizontal square prism, base 35mm side so that their axes intersect. The axis of the horizontal prism is parallel to VP, while the faces of two prisms are equally inclined to VP. Draw the projections of the prisms showing lines of intersection. | 6 | 4 | 3 | 1,5 |
| b) | Draw the side view of the combination of above two interpenetrating prisms. | 2 | 4 | 3 | 1,5 |
| 14. | Draw the isometric view for the orthographic views shown in Fig.3 below. | 8 | 4 | 4 | 1,5 |

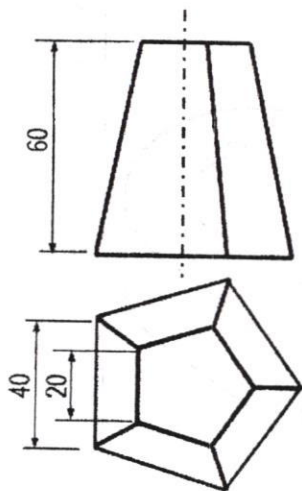


Fig.3

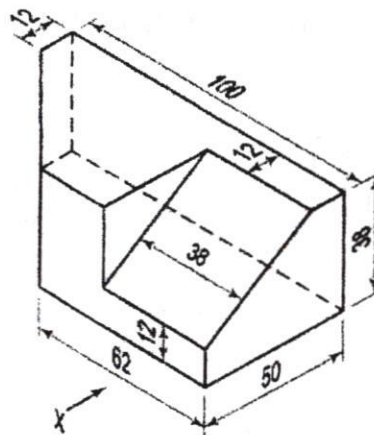


Fig.4

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|-----|--|---|---|---|-----|
| 15. | Draw Front view, Top view, and Right side view for the object shown in Fig.4 above. The front view should be drawn as seen in the direction of the arrow X. Show all dimensions. | 8 | 5 | 3 | 1,5 |
|-----|--|---|---|---|-----|

16.	A square pyramid, base 40 mm and axis 65 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, inclined at 45° to the HP and bisecting the axis. Draw its sectional top view. Also draw the true shape of the section.	8	5	1	1,5
17.	Answer any <i>two</i> of the following:				
a)	Explain the procedure to obtain the line of intersection of two solids by Cutting Plane method with the help of a suitable example.	4	5	3	1,5
b)	A cone of diameter 25mm and axis 60mm is resting on the top of a cylinder of diameter 60mm and axis 50mm centrally. Draw isometric view of the combination of the solids.	4	4	4	1,5
c)	Draw the Front view for the object shown in Fig.5. Indicate all the dimensions.	4	3	5	1,5

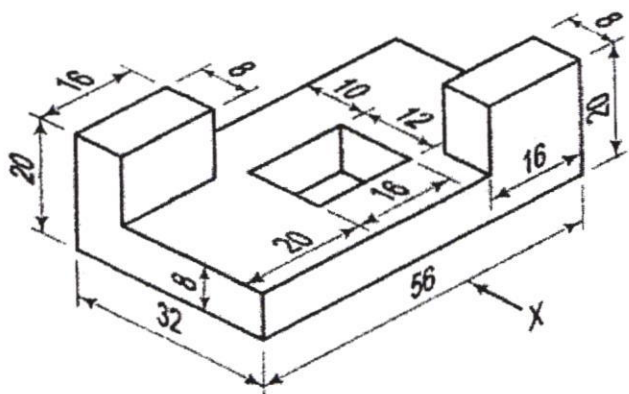


Fig. 5.

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

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	26.3
2	Knowledge on application and analysis (Level-3 & 4)	60.8
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	12.9