

Hall Ticket Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Code No. : 12010

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**B.E. (CBCS) II-Semester Main Examinations, May-2017**

**Engineering Graphics - II**

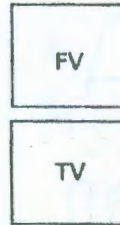
Time: 3 hours

Max. Marks: 70

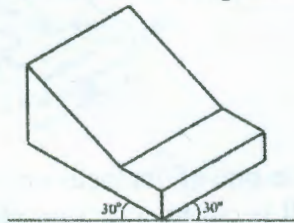
*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2 = 20 Marks)**

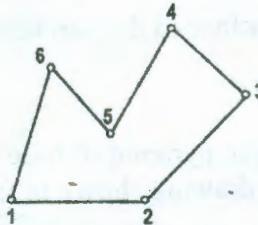
1. Differentiate the representation of axis and cutting plane.
2. What is the orientation of the section plane to get an ellipse in the conic sections?
3. Explain the Line Method for the development of cut surfaces with the help of a line sketch.
4. A cylinder of diameter 50 mm and height 65 mm rests on its base with the axis perpendicular to HP. Draw the development of lateral surface of the cylinder.
5. Draw two possible side views for the FV and TV shown below:



6. Show the relative positions of front view, top view and right side view of an object in first angle projection method.
7. Define key points. State the significance of key points in intersection of surfaces.
8. What is the pair of solids which gives the line of intersection as a straight line?
9. Draw and show isometric planes and non-isometric planes for the drawing shown:



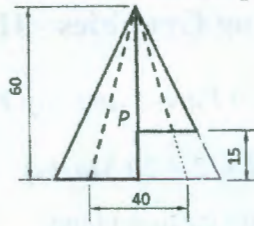
10. Draw the isometric view of the plane shown, using method of boxes and method of heights.



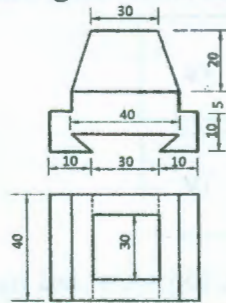
**Part-B (5 × 10 = 50 Marks)**

11. a) A pentagonal prism of edge of the base 30 mm and length of the axis 70 mm rests on one of its rectangular faces on HP with its axis inclined at 30° to VP. It is cut by a vertical section plane inclined at 30° to VP and bisecting the axis. Draw the sectional top view and front view of the prism. [6]  
b) Also draw the true shape of the section for the above case. [4]

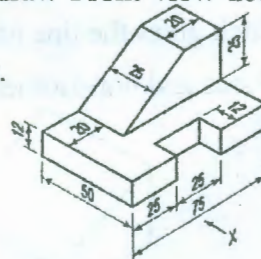
12. a) Explain the method of development of the lateral surface of a pyramid with the help of a neat sketch. [4]  
 b) Draw the development of the lateral surface of the part P of the pyramid, the front view of which is shown in Figure: [6]



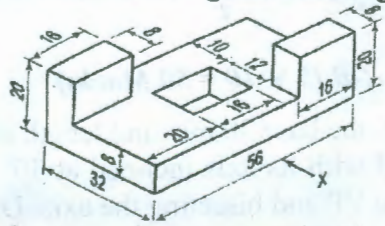
13. a) A cone, 90 mm diameter of base, axis 110 mm long stands on the ground and is completely penetrated by a cylinder 45 mm diameter and the axis of the cylinder is parallel to the H.P. Draw the projections of the two penetrating solids if the axis of the two solids bisect each other and the axis of the penetrating cylinder is 30 mm above the base of the vertical cone. [6]  
 b) Draw the curves showing lines of intersection. [4]  
 14. a) Projections of a part are shown in Figure. Draw the isometric view of the part. [8]



- b) Explain the procedure while drawing a sphere in Isometric projections. [2]  
 15. a) For the isometric view shown in Figure, draw Front view according to the first angle projection. [4]  
 b) Also draw the Top view and Left side view. [6]



16. a) A cube of 50 mm side is resting on one of its faces on the ground so that all the vertical faces are equally inclined to VP. It is cut by a section plane so that the true shape of the section is a hexagon. Draw the sectional FV and TV. [5]  
 b) Draw the development of the lateral surface of the part between the ground and the section plane. [5]  
 17. Answer any **two** of the following:  
 a) Draw the isometric view of a pentagonal pyramid of base 40 mm and axis 60 mm long. [5]  
 b) Draw the FV and TV of the isometric drawing shown in figure: [5]



- c) Draw the development of the frustum of a square pyramid of bottom base 40 mm, top base 20 mm and height 40 mm long. [5]