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Code No. : 12010 O2

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD

B.E. I Year II-Semester Backlog Examinations, May-2017

Engineering Graphics - II

Time: 3 hours

Max. Marks: 50

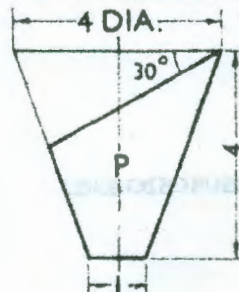
Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (15 Marks)

1. The value of R.F. of isometric scale is _____ [1]
2. If a Square Pyramid resting on its base on the HP is cut by a horizontal section plane bisecting the axis, the true shape of the section is _____ [1]
3. The development of curved surface of cylinder will be _____ [1]
4. A common household funnel is the intersection of _____ and _____ [1]
5. The real angle made by the isometric axis with each other is _____ [1]
6. Draw the isometric view of a cylinder of base diameter 50 mm and axis 60 mm lying on one of its generators on the H.P. [2]
7. A cone of base diameter 50 mm and axis 60 mm is resting on its base on the H.P. It is cut by a section plane perpendicular to V.P. bisecting the axis and parallel to the H.P. Draw its sectional top view. [2]
8. Draw the convention for the first angle projection in the title block. [2]
9. What is difference between isometric projection and isometric view? [2]
10. What is the line of intersection when two cylinders of same diameter intersect with each other at right angles? [2]

Part-B (5 × 7 = 35 Marks)

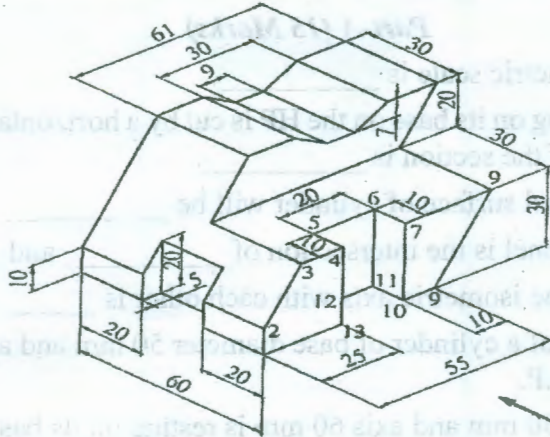
11. a) Define auxiliary inclined plane and auxiliary vertical plane. Explain how would you obtain true shape of the section when a solid is cut by an AVP and when it is cut by AIP. [3]
b) A pentagonal prism, side of base 50 mm and length 100 mm has a rectangular face on the HP and the axis parallel to VP. It is cut by a vertical section plane, the HT of which makes an angle of 30° with xy and bisects the axis. Draw the sectional front view, top view and true shape of the section. [4]
12. a) Describe some practical applications of development of surfaces. [3]
b) Draw the development of lateral surface of the part P of the front view of the cone which is shown in the following figure. Units are in centimetres. [4]



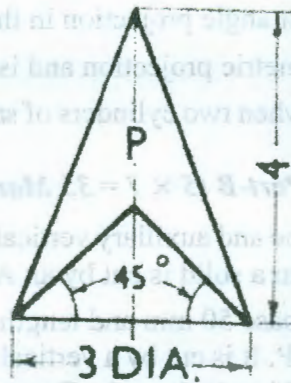
13. a) A vertical cone, base 100 mm diameter and height 125 mm is penetrated by another cone, 50 mm diameter and axis 100 mm long. The axis of the penetrating cone is parallel to HP and VP 40mm above the base and 10 mm from the axis of vertical cone. It comes out equally on both sides of the cone. Draw the projections of the two penetrating solids. [4]
b) Draw the curves showing the lines of intersection. [3]

Contd... 2

14. a) Define isometric axes and isometric planes. [3]
 b) A cone of base diameter 30 mm and axis 50 mm rests centrally over a square prism of base side 50 mm and axis 30 mm. Draw the isometric projection of the arrangement. [4]
15. a) Differentiate between orthographic and isometric projections. [3]
 b) Draw the front, top and left side views for the object shown in the figure. [4]



16. a) Draw the development of lateral surface of the part P of the front view of the cone which is shown in the following figure. All dimensions are in centimetres. [3]



- b) A cone of base 70 mm diameter, axis 75 mm long and resting on its base on the HP is cut by an AVP making 60° with VP and 12 mm away from the axis of the cone. Draw the sectional FV and true shape of the section. [4]
17. Write short notes on any *two* of the following. [7]
 a) Cylinder penetrating the cone.
 b) Isometric projection of Sphere.
 c) Third angle projection.

