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Code No.: 12001 AS-03

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. I Year II-Semester Advanced Supplementary Examinations, June/July-2017

Engineering Graphics-II

Time: 3 hours

Max. Marks: 50

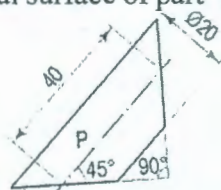
Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (15 Marks)

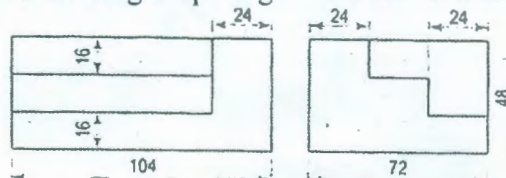
1. A cube is resting on a face in the H.P. with vertical faces equally inclined to the V.P. it is cut by an A.I.P. State the true shape of the sectional view. [1]
2. What is meant by the development of a solid? What is its purpose? [1]
3. Define term line of intersection. [1]
4. What is the purpose of isometric projections? [1]
5. What is the necessity to convert pictorial views into orthographic view? [1]
6. How can the true shape of section is obtained when a solid is cut by an auxiliary inclined plane? [2]
7. Explain briefly different methods of development. [2]
8. List out applications of intersection of surfaces? [2]
9. Differentiate between isometric projections and oblique projections. [2]
10. What are the applications of orthographic projections? [2]

Part-B (5 × 7 = 35 Marks)

11. a) A square prism base 40 mm side axis 80 mm long has its base on the HP and its faces equally inclined to the VP. It is cut by a plane perpendicular to the VP inclined at 60° to the H.P. and passing through a point on the axis, 55mm above the H.P. Draw its front view and sectional top view. [3]
- b) A cylinder with a 50 mm diameter stands on the H.P. on its base. It is cut by an A.I.P. inclined at 30° to the V.P. such that true shape of the section is a rectangle with 75 mm and 30mm side. Draw the projections and true shape of the section. Determine the distance of the section plane from the axis of the cylinder. [4]
12. a) Draw the development of lateral surface of a square pyramid with a 40 mm base side and a 60 mm long axis which is resting on its base in the HP when a side of the base is parallel to the VP. [3]
- b) Draw the development of the lateral surface of part 'p' of the cylinder, the front view of which are shown. [4]

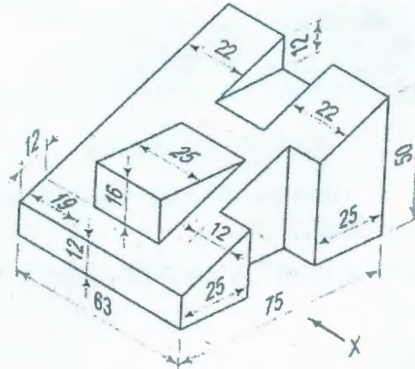


13. a) A vertical cylinder of 80 mm diameter is completely penetrated by another cylinder of 60 mm diameter their axes bisecting each other at right angles. Draw the projections of the two penetrating solids. [4]
- b) Draw the curves showing lines of intersection. [3]
14. a) Projection of casting of following shape is given. Draw its isometric view [4]

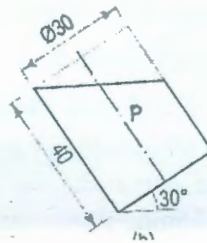


- b) Draw an isometric view of the frustrum of a cone with a 60 mm base diameter, 40 mm top diameter and 70mm long axis resting on its base on the H.P. [3]

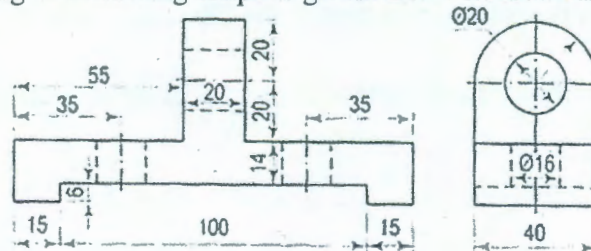
15. a) For the isometric view shown in figure below, draw front view according to first angle projection. [3]
 b) Also draw top view and left side view of the casting. [4]



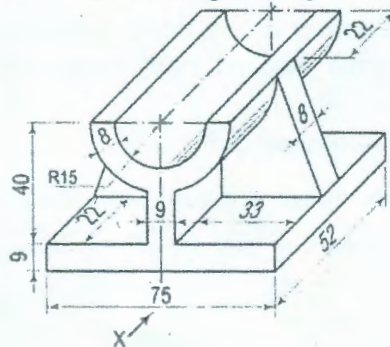
16. a) A cone, with a 50 mm base diameter and 70 mm long axis, is resting on its base on the H.P. [4]
 It is cut by an A.I.P. parallel to one of its extreme generators and passing through a point on the axis 20 mm below the axis. Draw its sectional top view and obtain true shape of the section.
 b) Draw the development of the lateral surface of part p of each of the cylinders, the front views of which are shown. [3]



17. Answer any *two* of following: [7]
 a) A cone with an 80mm base diameter and a 100 mm long axis, is resting on its base on the H.P. [7]
 It is completely penetrated by cylinder of the 40 mm base diameter. The axis of the solids intersects each other at right angles, 30mm above the base of the cone. Draw the projections of the combinations.
 b) Projection of casting of following shape is given. Draw its isometric view.



- c) Draw front view and side view of following casting



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