Hall Ticket Number:

Code No. : 1217 N

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD

B.E. I Year II-Semester (New) Examinations, May-2016

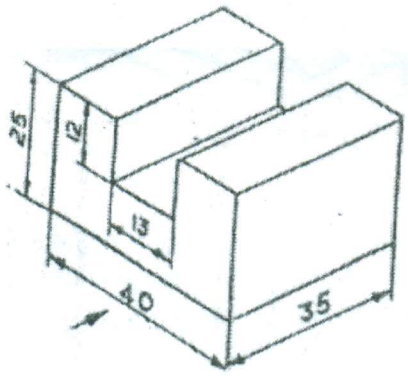
Engineering Graphics - II

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 sphere is resting on H.P., an A.I.P inclined to H.P. cuts the sphere, then the curve in true shape is _____ and the top view is _____. [1]
2. The development of a cone is in the shape of a _____ of a circle. [1]
3. Critical points as applied to the intersection of curves means _____. [1]
4. Name any one method of drawing an Ellipse that represents an Isometric pictorial circle- _____. [1]
5. In orthographic projection, the object is placed with one of its faces _____to the picture plane. [1]
6. Discuss the cases in which a sectional view provides true shape of a section. [2]
7. Sketch the development of a square pyramid of side of base 30mm and height 75mm. [2]
8. Name 2 methods used in drawing lines of intersection. [2]
9. Develop the relationship between Isometric length and True length. [2]
10. Draw the elevation for the picture shown in figure below. [2]



Part-B (5 × 7 = 35 Marks)

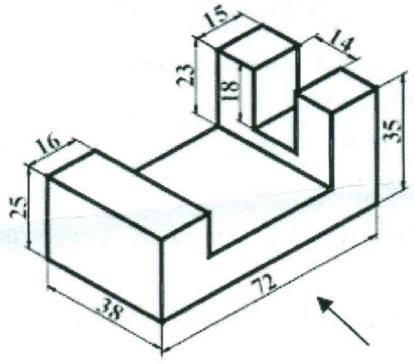
11. A hexagonal prism of side 40mm and height 60mm is resting on H.P on its base with two edges of the base parallel to V.P. It is cut by an A.I.P which is perpendicular to V.P and inclined to H.P by 45° and passing through a point 40mm above the base and on the axis. Draw the elevation, sectional plan, sectional side view and true shape of the section. [7]
12. a) A cone of diameter 50mm and height 60mm is resting on its base on H.P. It is cut by an A.I.P such that it passes through a point on the axis at a distance of 30mm from the apex and makes an angle of 60° with H.P. Draw the development of the lateral surface of the lower part of the cone. [5]
    b) List out the applications of development of surfaces in the day-to-day life. [2]
13. A vertical cylinder of 40mm diameter and 80mm high is intersected by another cylinder of 35mm diameter and 80mm long. The axis of the penetrating cylinder is inclined at 30° to HP, parallel to VP, 8mm in front of the vertical cylinder and appears to bisect it in front view. Draw the projections of interpenetration of the curves. [7]
14. a) Draw the Isometric view of a square prism of base side 40mm and height 60mm when it [3]

Contd... 2

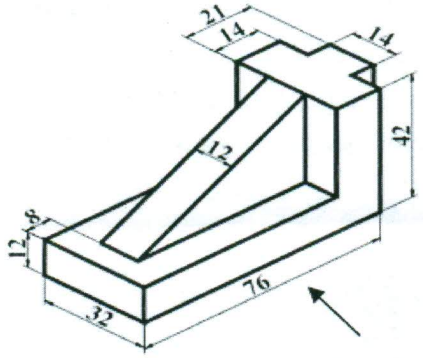
is standing on the H.P. with two sides parallel to the V.P.

b) Construct the isometric projection(use isometric scale) of the frustum of a regular square pyramid, kept in the inverted position, with base edge 30mm, top edge 50mm and height 80mm, resting on the H.P., with its axis vertical. Two of the opposite parallel edges of the square face are perpendicular to the V.P. [4]

15. a) Draw the front view, top view and left side view for the following figure shown below. [3]



b) For the figure shown below develop the three views. [4]



16. a) A cylinder, with a 60 mm base diameter and height 70mm axis, is resting on its base in the H.P. It is cut by an auxiliary inclined plane which makes an angle of 60° with the H.P. and passes through the top end of the axis. Draw its sectional top view and true shape of the section. [4]

b) Draw the development of a cone which is cut parallel to the base at a distance of 15mm from apex, if the base diameter is 40mm and height 65mm. [3]

17. Answer any ***two*** of the following: [7]

a) A vertical cone of base diameter 75mm and axis 100mm long is completely penetrated by a cylinder of 45mm diameter. The axis of the cylinder is parallel to the HP and the VP and intersects the axis of the cone at a point 28mm above the base. Draw the projections of the solids showing curves of intersection.

b) Construct the isometric view of a circle of diameter 40mm using Four-center method.

c) Draw 4 possible top views for the given front view shown below.