7. a) Differentiate between frustum of pyramid and truncated pyramid. 2

   b) Draw the front view, top view and right side view of the object shown in Figure-1. 10

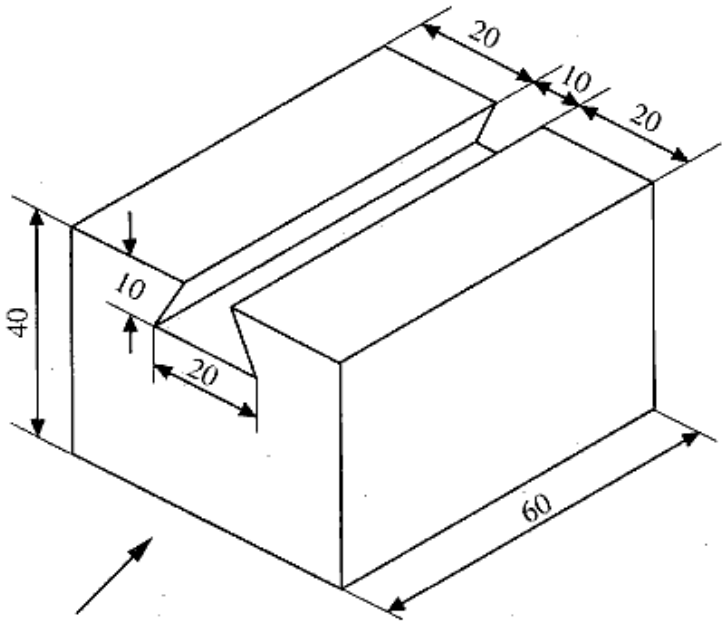

Figure-1

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Roll No .....

ME - 111

B.E. (All Branches) I Year I Semester

Examination, December 2015

Choice Based Credit System (CBCS)

Engineering Graphics

Time : Three Hours

Maximum Marks : 60

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

iii) Assume suitable data or dimensions; if necessary, Clearly mentioned it.

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1. a) What is dimensioning? List the various dimensioning systems. 3

   b) A point P is 20 mm above the HP and 30 mm in front of VP. Draw its projection. 3

   c) A line AB 85 mm long has its end A 60 mm above HP and 65 mm in front of VP. The end B is 25 mm above HP and 20 mm in front of the VP. Draw the projections and find its inclinations with HP and VP. Also marks its traces. 6

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2. a) A square plate ABCD of side 30 mm is resting on HP on one of its corners and the diagonal AC inclined at 45° to HP. The diagonal BD of the plate is inclined at 30° to the VP and parallel to the HP. Draw its projections. 6

   b) A pentagonal pyramid of base side 30 mm and axis length 50 mm is resting on HP on one of its base corner with its axis parallel to VP. Draw its projections when the slant edge containing the resting corner is vertical. 6

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3. a) A cone of base diameter 50 mm and height 70 mm is resting on its base on HP. It is cut by a plane perpendicular to both the HP and VP at a distance of 15 mm to the right of the axis. Draw the development of the lateral surface of the left remaining portion. 6

   b) A hexagonal prism of base side 25 mm and axis 55 mm long is resting on HP on one of its rectangular faces, with its axis perpendicular to VP. It is cut by a plane inclined at 40° to the VP and perpendicular to HP and is bisecting the axis of the prism. Draw its top view, sectional front view and true shape of section. 6

4. a) Draw the isometric view of a circular lamina of diameter 50 mm placed with its surface parallel to HP. 4

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   b) A tripod stand rests on the HP. One of its legs AP is 140 mm long and it makes an angle of 75° with the HP. The other two legs BQ and CR are 150 mm and 160 mm long respectively. The upper ends of all the three legs A, B and C are attached to horizontal circular plate of 60 mm diameter. The attachment is done to the circumference of the circle dividing it equally. In plan three legs appears as radial lines 120° apart with plan of one of the legs appearing perpendicular to the VP. Draw the projections of the complete tripod stand and find the angle of other two legs with the HP. Also find the height of the horizontal circular plate from the HP. 8

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5. a) Explain the Cartesian and Polar Co-ordinate systems of locating a point in the Auto-CAD. 6

   b) State a series of Auto-CAD steps needed to draw an ellipse of given major and minor axes. How would you draw another ellipse parallel to it at a specified distance? 6

6. a) Give the list of software, currently available for 2-D solid modeling. 2

   b) Explain the use of fillet and chamfer tools in Auto-CAD. 4

   c) Draw the projection of a cube of 30 mm edge resting on the HP on one of its corners with solid diagonal vertical. 6

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