Reg. No. : | | | | | | | | | | |

Question Paper Code: 51109

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

First Semester

Computer Science Engineering

15UME108 – ENGINEERING GRAPHICS

(Common to ECE, IT, Agriculture and Bio-medical Engineering)

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) Draw the projection of a straight line *AB*, 60 *mm* long, parallel to and 10 *mm* above the ground plane and inclined at 45^0 to PP. The end *A* is 20 *mm* behind the picture plane. Station point is 35 *mm* in front of the picture plane and 45 *mm* above the ground plane and lies in a central plane passing through the mid-point of *AB*. (20)

Or

(b) A square lamina of 30 *mm* side lies on the ground plane. One of its corners is touching the PP and edge is inclined at 60° to PP. The station point is 30 mm in front of PP, 45 *mm* above GP and lies in a central plane which is at a distance 30 *mm* to the right of the corner touching the PP. Draw the perspective projection of the lamina. (20)

2. (a) A triangular prism with side of base 35 *mm* and axis 50 *mm* long is resting on its base on HP. Draw the projections of the prism when one of its rectangular faces is perpendicular to V.P and the nearest edge parallel to V.P is 10 *mm* from it. (20)

Or

(b) A hexagonal prism with side of base 25 *mm* and axis 60 *mm* long is lying on one of its rectangular faces on HP. Draw the projections of the prism when its axis is parallel to both HP and V.P. (20)

3. (a) A cylinder of base diameter 40 *mm* and height 60 *mm* rests on its base on HP. It is cut by a plane perpendicular to VP and inclined at 30° to HP and meets the axis at a distance 30 *mm* from base. Draw the front view, sectional top view, and the true shape of section. (20)

Or

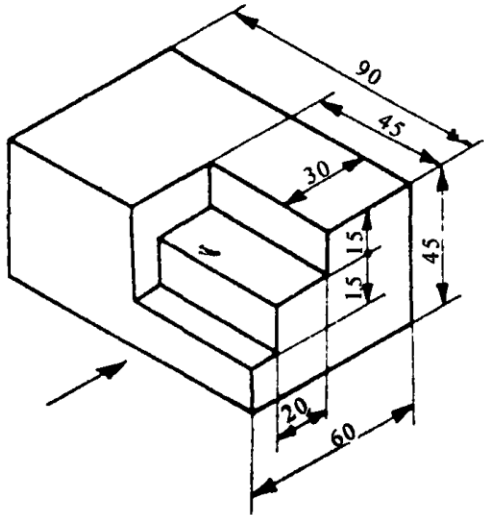
(b) A pentagonal prism of base side 30 *mm* and axis length 60 *mm* is resting on HP on one of its rectangular faces, with its axis perpendicular to VP. It is cut by a plane inclined at 50° to VP and perpendicular to HP and passing through a point 25 mm from rear base of the prism. Draw its top view, sectional front view and true shape of section. (20)

4. (a) Draw the isometric view of a pentagonal prism of base 60 *mm* side, axis 100 *mm* long and resting on its base with a vertical face perpendicular to V.P. (20)

Or

(b) A right circular cone of base diameter 60 *mm* and height 75 *mm* is cut by a plane making an angle of 30^0 with the horizontal. The plane passes through the mid-point of the axis. Draw the isometric view of the truncated solid. (20)

5. (a) Draw the orthographic projection of all three views of the following figure. (20)



Or

(b) Draw the plan view, front view and side view of the following figure. (20)