Reg. No. :

Question Paper Code: 51108

B.E. / B.Tech. DEGREE EXAMINATION, DECEMBER 2015

First Semester

Civil Engineering

15UME108 – ENGINEERING GRAPHICS

(Common to Computer Science and Engineering and
Electronics and Communication Engineering)

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) A line *EF*, 85 *mm* long has its end *E*, 25 *mm* above the HP and 20 *mm* in front of the VP. The top and front views of the line have lengths of 55 *mm* and 70 *mm* respectively. Draw the projections of the line and find its true inclinations with the VP and the HP.   (20)

Or

   (b) A rectangular plate 70 x 40 *mm* has one of its shorter edges in the VP inclined at 40° to the HP. Draw its top view if its front view is a square of side 40 *mm*.   (20)

2. (a) Draw the projections of a hexagonal prism of base 30 *mm* and height 60 *mm* rests on one of its rectangular faces lie on the HP, such that its axis is inclined at 45° to the VP.   (20)

Or

   (b) A pentagonal pyramid of base edge 25 *mm* and axis length 60 *mm* rests on the base side on HP such that the highest base corner is 20 *mm* above HP. Its axis is parallel to the VP. Draw its top and front views.   (20)
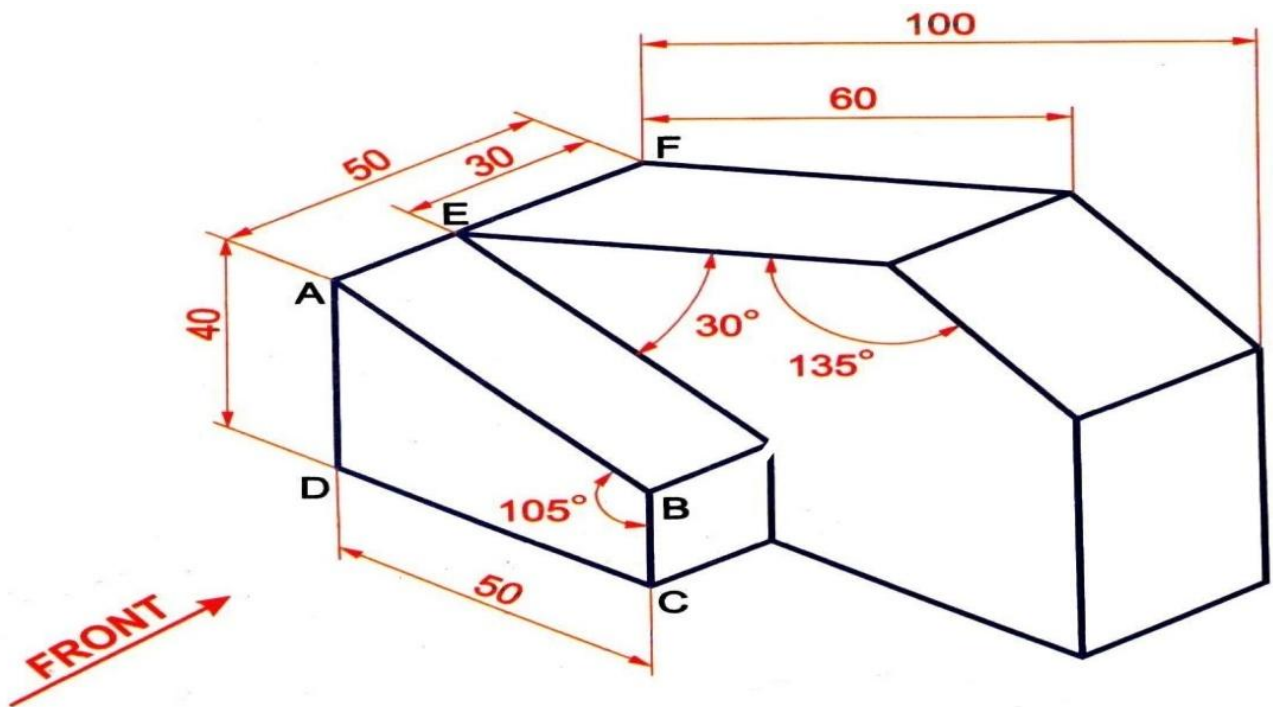
3. (a) A right circular cone of base diameter 50 *mm* and axis length 60 *mm* rests on its base on the HP. It is cut by a plane perpendicular to the HP and inclined at 60° to the VP. The shortest distance between the cutting plane and the top view of the axis is 8 *mm*. Draw the top view, sectional front view and the true shape of the section. (20)

Or

(b) A cylinder of diameter 40 *mm* and height 50 *mm* is resting vertically on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a point 30 *mm* from the base. Draw the development of the lateral surface of the lower portion of the truncated cylinder. (20)

4. (a) Draw the isometric view of a cylinder of diameter 46 *mm* and height 60 *mm* when it is resting on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at 45° to the HP. The plane passes through a point on the axis located at 15 *mm* from the top. (20)

Or

(b) Draw the isometric view of a hexagonal prism of base side 15 *mm* and height 35 *mm* when it rests on one of its ends on the HP with two of its base sides parallel to the VP. (20)

5. (a) Draw the plan, elevation and right side view of the following object. (20)

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Or

(b) Draw the plan, elevation and right side view of the following object. (20)

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