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

Question Paper Code: 41107

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

First Semester

Civil Engineering

14UME107-ENGINEERING GRAPHICS

(Common to ALL branches)

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) A line PQ has its end P 25 mm above the HP and 20 mm in front of the VP and the other end Q 50 mm above the HP and 45 mm in front of the VP. The length of the top view is 55 mm. Draw the projections and find its true length and its inclinations. (20)

Or

(b) A pentagonal lamina of side 30 *mm* rests on the ground with one of its sides inclined at 30° to VP while the surface of the lamina is inclined at 45º to HP. Draw the projections of the lamina. (20)

2. (a) A cone of diameter 40 mm and axis 70 mm resting on HP one of its generators with the axis is parallel to VP. Draw the projections. (20)

Or

(b) Draw the projections of a cube of side 50mm when it rests on the ground on one of its corners and a face containing that corner is inclined to the ground at 45° to HP and perpendicular to V.P. (20)

3. (a) A hexagonal prism is placed on the HP such that one of the edges of its base is parallel to the VP. The height of the prism is 50 mm and its base edge is 30 mm. A cutting plane inclined at 45° to the HP, passes through one of the corners at the top face of the prism. Draw the lateral development of the prism below the cutting plane. (20)

Or

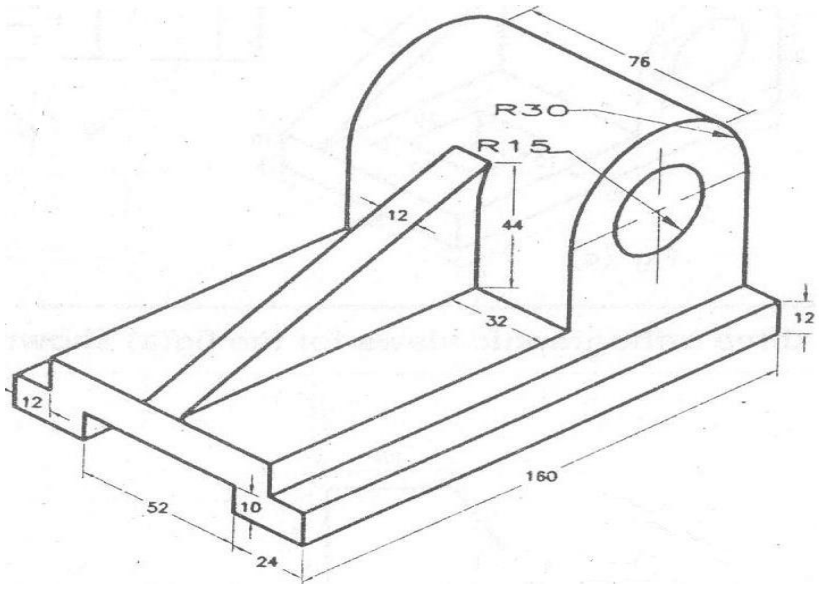
(b) A pentagonal pyramid has a base side of 30 *mm* and axis height of 70 *mm*. It rests with its base on HP such that one of the base edges perpendicular to VP. The pyramid is cut by a plane which bisects the axis and is inclined at 30° to HP. Draw the development of the remaining portion of the pyramid. (20)

4. (a) Draw the isometric view of a frustum of a hexagonal pyramid of base side 25 mm and top side 10 mm and height 50 mm rests on its base on the HP with two of its base edges parallel to the VP. (20)

Or

(b) A cone of 50 mm diameter and height 70 mm stands on HP with its base. It is cut by a cutting plane perpendicular to VP and inclined at 30º to HP, cutting the axis of the cone at a height of 40 mm from the base. Draw the isometric view of the remaining part of the cone. (20)

5. (a) Draw the possible orthographic views for the given isometric drawing shown in figure below. All the dimensions are in mm. (20)



(b) Draw the possible orthographic views for the given isometric drawing shown in figure below. All dimensions are in mm. (20)