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B.E/B.TECH (Full-time) Arrear End Semester Degree Examination, Nov/Dec 2013

First semester

Common to All Branches

GE 9111 – ENGINEERING GRAPHICS

(Regulation 2004/2008)

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Instructions :

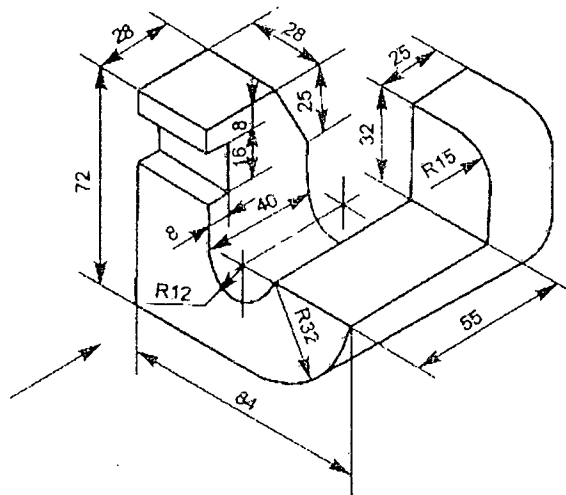
1. Diagrams should be neat and tidy
2. Lettering, Dimensioning and naming of diagrams carry marks
3. Correct usage of H, 2H, HB pencils should be followed while drawing
4. A3 size booklets consisting of 5 sheets would be given

Time: 3 Hours

Answer All Questions (5 x 20 = 100 Marks)

Max. Marks: 100

1. Draw the front view, top view and right side view of the machine component shown in Fig. (Free hand sketching)



2. A) A line AB 70mm long has its end A on HP and its end B on VP. The line makes 30° with HP and 40° with VP. Draw its projections and locate its traces. Also find how far the end A is in front of VP

[OR]

B) A pentagonal lamina ABCDE of side 25 mm has one of its sides on VP, such that the corner opposite to that side is 40mm in front of VP. Draw the projections of the lamina, if the edge resting on VP makes 40° with HP.

3. A) A cone of base diameter 60mm and height 70mm is resting on HP on one of its generators, such that its axis is parallel to VP and inclined to HP. Draw its projections.

[OR]

B) A square pyramid of base side 45mm and height 65mm is resting on HP on its base, with one of its base edges parallel to VP. It is cut by the section plane which is

perpendicular to VP and inclined to HP such that the true shape of the section is a trapezium of parallel sides 30mm and 20mm. Draw its sectional view and the true shape of the section.

4. A) A hexagonal pyramid of base side 25mm and height 65mm is resting on HP on its base with two of its base edges parallel to VP. It is cut by the sectional plane which is perpendicular to HP and 30° inclined to VP. The section plane is passing through 10mm in front of the axis. Draw the development of the pyramid, neglecting the cut portion of the solid.

[OR]

B) A hexagonal prism of base side 20mm and height 65mm is resting on HP with two of its base edges parallel to VP. A cylinder of diameter 40mm and height 70mm is penetrating the prism such that both the axes are bisecting each other at right angles. Draw the projections of the solids with intersection profile.

5. A) A sphere of diameter 35mm is resting on the centre of the top surface of the frustum of a square pyramid of base side 50mm; top side 40mm and height 50mm. Draw the isometric projection of the combination of solids.

[OR]

B) A cube of side 45mm is resting on the ground plane on one of its square faces such that one of its vertical edges is touching the picture plane. The vertical faces containing that vertical edge makes 45° with picture plane. An observer is standing 70mm in front of the picture plane and 50mm above the ground plane. Also the side plane is at a distance of 10mm to the right of the axis. Draw the perspective projection of a cube.