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B.E. (FULL TIME) DEGREE END SEMESTER EXAMINATIONS,
APRIL/MAY 2014
FIRST SEMESTER - (REGULATIONS 2012)
GE 8152 ENGINEERING GRAPHICS

Time: 3 Hours Max. Marks: 100

Note: i) Drawings should be neat and legible
ii) Standards should be followed for dimensioning and printing

ANSWER ALL QUESTIONS (5x 20 = 100 Marks)

1.a) Draw the following views of the component shown in Fig.1 by free hand sketching.

i) Front view (8 marks)

ii) Top view and (7 marks)

iii) Right side view (5marks)

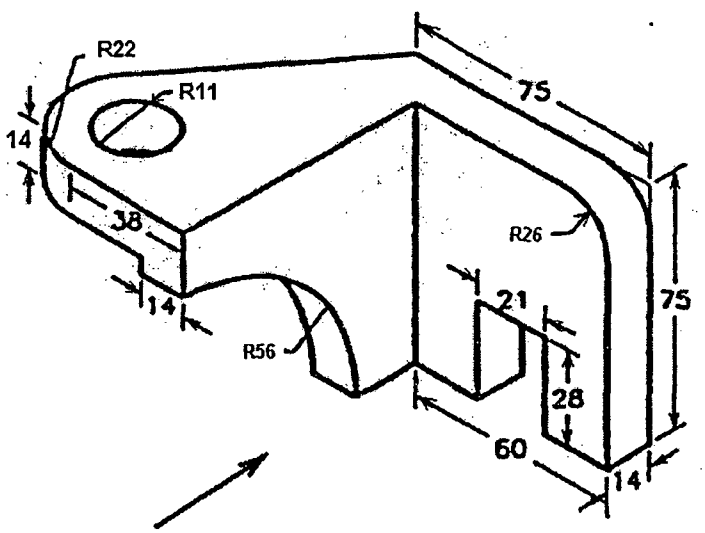

Fig.1

OR

1.b) A string of length 116mm is wound around a circle of diameter 30mm. Draw the path traced by the end of the string when it is unwound from the circle. Also draw the normal and tangent to appoint which is at a distance of 70mm from the centre of the circle.

2.a) The end projectors of a line AB are 22 mm apart. A is 12mm in front of the VP and 12 mm above the HP. The point B is 6mm in front of the VP and 40 mm above the HP. Draw

the projections of the line and determine its true length and inclinations with the HP and VP.

OR

2.b) A pentagon ABCDE with 40mm side, has its side AB in the VP and inclined at 30° to the HP. The corner A is 15mm above the HP and the corner D is 30 mm in front of the VP. Draw the projections of the plane and find its inclination with the VP.

3.a) A hexagonal pyramid, of base edge 35 mm and axis 80 mm long, has an edge of its base parallel to the H.P. The axis is parallel to the V.P and inclined at 45 ° to the HP. Draw its projections when the axis is at a distance of 50 mm from V.P and apex lies on the HP.

OR

3.b) Draw the projections of a cone of base diameter 50mm and axis length 70 mm when it lies on the ground on one of its generators with the axis parallel to 40 mm from the VP.

4.a) A cylinder 50mm in diameter and 60mm long, is resting on its base on the ground. It is cut by a section plane perpendicular to the VP, the VT of which cuts the axis at a point 40 mm from the base and making an angle of 45 ° to the HP. The cutting plane passes through the left side and the top face of the cylinder. Draw its front view, sectional top view and the true shape of the section.

OR

4.b) A square prism of base side 35mm and height 70 mm is resting on its base on the HP such that the sides of the base are equally inclined to the VP.A hole of 38mm diameter is drilled through it such that the axis of the hole is at a height of 35mm from the base, 13mm from the left corner and perpendicular to the prism. Draw the development of the lateral surface of the prism.

5.a) Draw the isometric projection of a hexagonal prism of base side 30 mm and height 70 mm which has a through central vertical hole of diameter 30mm. The prism is so placed that one edge of the base is parallel to V.P.

OR

5.b) Draw the perspective view of a pentagonal prism of base side 20mm and height 65mm, lying on the ground plane on one of its rectangular faces, the axis being inclined at 30 ° to the picture plane, and a corner of the base touching the picture plane. The station point is 65 mm in front of the picture plane and lies in a central plane which bisects the axis. The horizon is at the level of the top edge of the prism.