[Total No. of Questions : 8]

F.E. (Semester - I) (Revised in 2007-08) Examination, Nov. / Dec. - 2011

ENGINEERING GRAPHICS

Duration : 4 Hours **Total Marks : 100**

Instructions : *1) Attempt five full questions, with at least one question from each module.*
2) Missing data, if any , may suitably be assumed.
3) All the sub-questions carry equal weightage of 10 marks each.

MODULE - I

Q1) a) The major and minor axis of an ellipse are 70 mm and 45 mm long respectively. Construct half of the ellipse by oblong method and the other half by concentric circle method.

b) A line PQ 120 mm has its end Q 20 mm above HP and 15 mm in front of VP. Draw the projections of the line if its TV and SV measure 95 mm and 110 mm respectively.

Q2) a) A thread is unwound from a cylindrical reel of 40 mm diameter. Draw the locus of the free end of thread for one turn.

b) The FV and TV of a line 80 mm long measure 70 mm and 60 mm respectively. The mid point M of the line is 35 mm above HP 35 mm in front of VP. Draw the projections of the line and locate its traces.

MODULE - II

Q3) a) A Pentagon of 40 mm side is resting on one of its corners in the VP. The surface of the pentagon is inclined at 45° to VP and an edge opposite to that corner makes 30° to HP. Draw its projections.

b) A cone of base diameter 50 mm and axis 70 mm is freely suspended from a point on the rim of its base. Draw FV and TV when the plane containing its axis is perpendicular to HP and makes 35° with the VP.

Q4) a) A square of diagonal 70 mm is resting in HP on one of its corners. In TV the square is seen as a rhombus with a 70 mm major diagonal and a 35 mm minor diagonal. Draw the projections of the square if the diagonal which is parallel to HP in at 45° to VP.

b) Draw the projections of a cylinder having 35 mm base diameter and axis 65 mm long, when it is resting on its circular rim such that its axis is at 30° to HP & TV of the axis is at 45° to VP.

MODULE - III

Q5) a) A cylindrical glass tumbler of diameter 60 mm axis 90 mm is completely filled with water. The tumbler is filled in such a way that the water surface makes an angle of 30° with its axis. Draw FV and FV of the tumbler showing water in it.

b) A pentagonal prism, 20 mm edge of base, height 50 mm stands vertically with one of its rectangular faces parallel to VP and nearer to it. An AIP inclined at 60° to HP passes through one of the extreme corners of the top face of the prism. Develop the lateral surfaces of the lower portion of the prism.

Q6) a) A square prism edge of base 30 mm and axis 50 mm long rests on its longer edge in HP with axis perpendicular to VP. A rectangular face through that edge is inclined at 30° to HP. An AVP inclined at 70° to VP passing through the midpoint of the axis cuts the prism. Draw TV, sectional FV and sectional SV of the prism.

b) A cone, base diameter 80 mm and axis 80 mm rests on its base in HP. A semicircular hole of 25 mm radius is cut through the hole. The hole axis is perpendicular to VP and intersects cone axis 30 mm above the base. Develop the cone showing the hole shape in it.

MODULE - IV

Q7) From the given pictorial drawing draw (Refer fig. 7)

a) Sectional FV

b) Sectional LHSV.

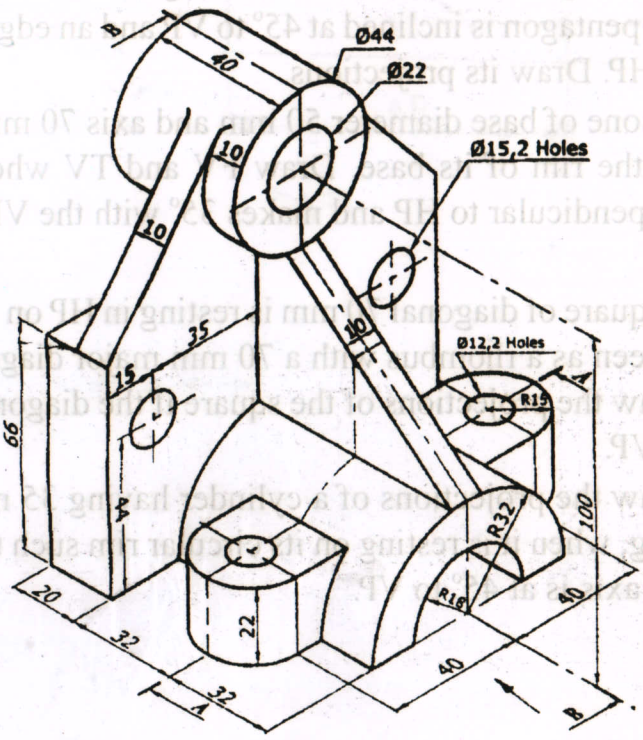

Fig 7

Q8) a) Refer fig 8a. Draw FV and TV from the given pictorial drawing.

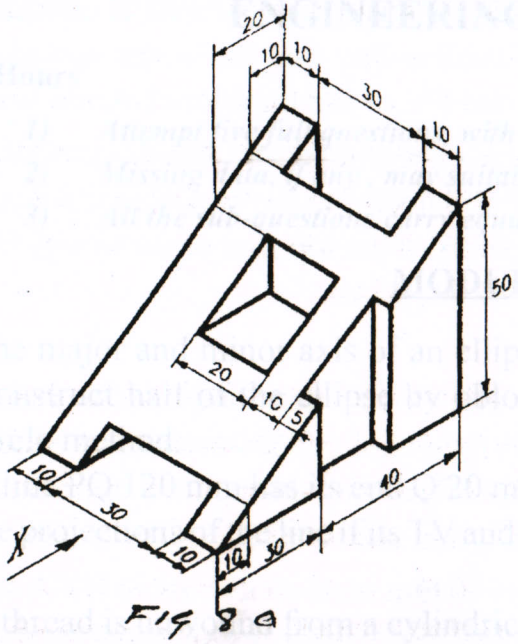

Fig 8a

b) Draw the isometric view of the object from the given FV and LHSV. (Fig. 8b).

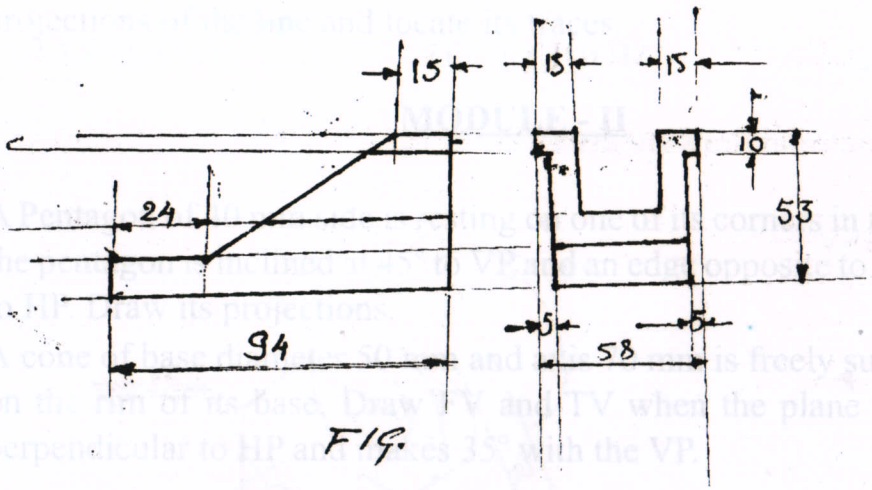

Fig.

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