

C 57519

(Pages : 2)

Name.....

Reg. No.....

**COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING)
DEGREE EXAMINATION, JUNE 2009**

EN 04 106 (A)—ENGINEERING GRAPHICS

(2004 admissions)

[AI, CS, EE, EC, IT, IC, PT, BM, BT]

Time : Three Hours

Maximum : 100 Marks

*Answer all questions.
All questions carry equal marks.*

MODULE I

- (A) A line MN has its end M, 10 mm in front of the VP and 15 mm above the HP. The other end N is 50 mm in front of the VP. The front view has a length of 70 mm. The distance between the end projectors is 60 mm. Draw the projection of the line and find its true length and true inclinations. (20 marks)

Or

- (B) The distance between the projections of a line CD is 70 mm. Its ends C and D are in front of the VP at 60 mm and 30 mm respectively from the VP. The Horizontal trace (HT) of the line is 15 mm in front of the VP. The line is inclined at 35° to the HP. Draw the projections of the line and find its true inclination with VP. Also locate its vertical trace. (20 marks)

MODULE II

- (A) A regular pentagonal lamina of 50 mm side has one edge on H.P. If the lamina is inclined at 30° to HP and perpendicular to VP draw the projection by auxillary plane method. (20 marks)

Or

- (B) A cone of diameter base 50 mm and 60 mm height has one of its generator on HP. Draw the projection. If in the top view the axis of the cone is seen as 45° inclined to the reference line and the apex is nearer to VP add an elevation. (20 marks)

MODULE III

- (A) A square pyramid of base side 35 mm and axis length 55 is resting on HP on its base with one side of base inclined at 30° to VP. It is cut by a plane inclined at 45° to HP and perpendicular to VP and passes through the axis at a distance of 25 mm from the apex. Draw all the view and determine the true shape of the section. (20 marks)

Or

- (B) A hexagonal prism of base side 30 mm and height 50 mm rests vertically on its base on the ground with two of its base sides parallel to the VP. It is cut by a plane inclined at 30° to the HP and perpendicular to the VP and meeting the axis at a point 10 mm below the vertex. Draw the development. (20 marks)

Turn over

MODULE IV

- (A) A hemi-spherical vessel of diameter 90 mm is placed centrally over a cylinder of diameter 60 mm and height 75 mm which in turn is kept centrally over a square prism of base side 80 mm and height 20 mm. Draw the isometric projection of the combination solids.

(20 marks)

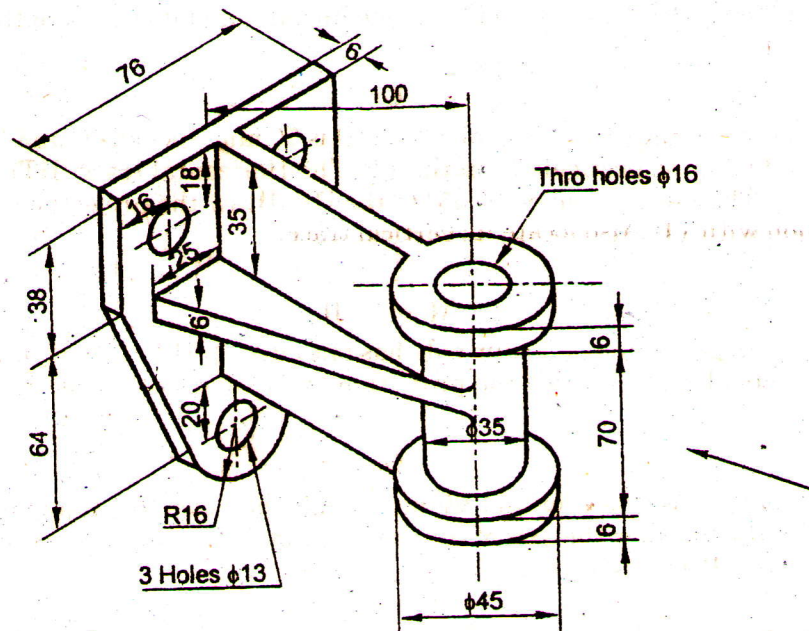
Or

- (B) A frustum of a hexagonal pyramid of base edges 25 mm and top edges 15 mm and height 40 mm rests on its base on the ground with a base edge inclined at 45° to PP and a corner touching PP. The axis of the frustum is 20 mm to the right of the SP. The SP is 65 mm in front of PP and 60 mm above ground line. Draw the perspective view of the frustum.

(20 marks)

MODULE V

- (A) Draw the front view, top view and side view of the object shown :



(20 marks)

Or

- (B) (i) Draw the design profile of external and internal ISO metric threads of a nominal diameter of 25 mm with a pitch equal to 3 mm.
- (ii) Draw various types of set screws of 15 mm size (diameter).

(10 marks)

(10 marks)