C 26945 (Pages 3) Name.....

Reg. No.....

COMBINED FIRST AND SECOND SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, JUNE 2008

EN 2K 106A—ENGINEERING GRAPHICS (A)

Common to AI, CS, EE, EC, IT, and IC

(New Scheme)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*
Assume missing data, if any suitably.

1. (a) A line EF, 75 mm long has its end E, 25 mm. above the HP and 20 mm. in front of the VP. The line is inclined at 50° to the HP and 30° to the VP. Draw the projections of the line and find the traces of the line.

(20 marks)

Or

(b) A bolt of total length 50 mm has a hexagonal head of side 25 mm and thickness 15 mm. The cylindrical portion is of diameter 25 mm and length 35 mm. The bolt is resting on the HP with an edge of the head perpendicular to the VP. Draw its projections when the axis of the bolt is inclined at 45° to the HP.

(20 marks)

2. (a) A cylinder of diameter 40 mm and height 50 mm rests on its base on the HP. It is cut by a plane perpendicular to the VP and inclined at 50° to the HP. The cutting plane meets the axis at a distance of 15 mm from the top. Draw the front view sectional view and the true shape of the section.

(20 marks)

Or

(b) A cone of base diameter 60 mm and height 70 mm rest vertically on its base on the ground. A string is wounded round the curved surfaces of the cone starting from left extreme point on the base and ending at the same points. Find the shortest length of the string required. Also, trace the path of the string in the front and top views.

(20 marks)

3. (a) A hexagonal prism of base side 30 mm and height 50 mm is surmounted by a tetrahedron of side 25 mm such that the axes of the two solids are collinear. At least one base side of the prism is parallel to one edge of the tetrahedron. Draw the isometric projection of the solids.

(20 marks)

Or

Turn over

(b) Draw the dimensioned orthographic views (all three) of the object shown in Fig 1.

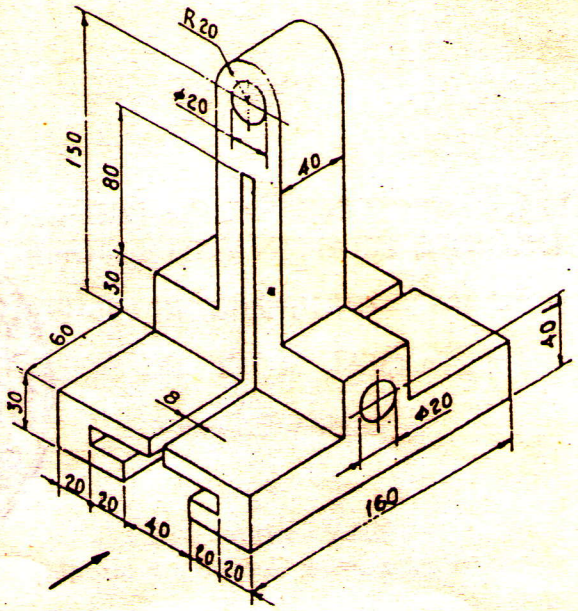

FIG.1.

(20 marks)

4. (a) For the object shown in Fig 2 draw the following views.

(i) Front view.

(ii) Top view.

(iii) Full sectional right side view.

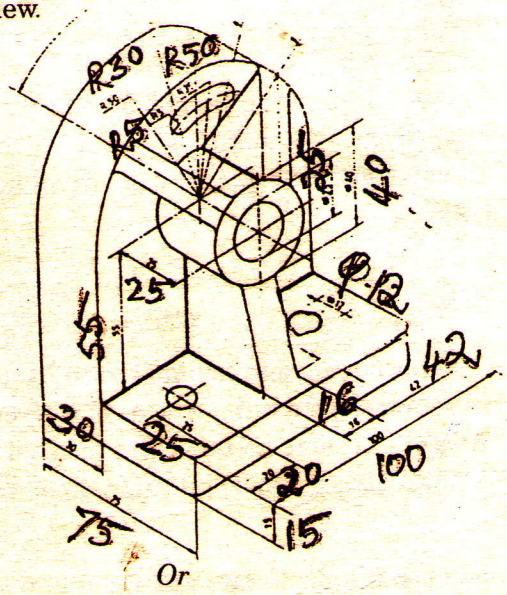

FIG.2.

Or

(40 marks)

(b) For the object shown in Fig 3 draw the following views.

(i) Front view.

(ii) Sectional top view.

(iii) Right side view.

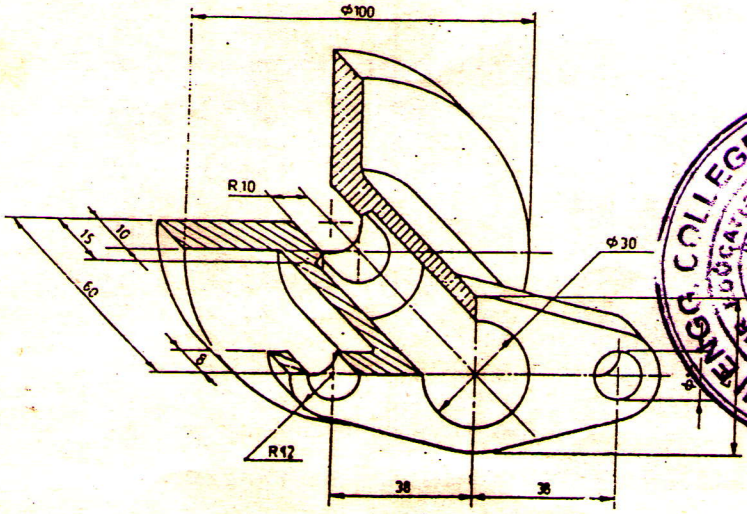

FIG.3.

(40 marks)