Code No. BTS 006 (A)

B.TECH. DEGREE III SEMESTER EXAMINATION IN
SAFETY AND FIRE ENGINEERING
JANUARY 2001

SE 306 MACHINE DRAWING

Time: 3 Hours Maximum Marks: 100

(Any missing data may suitably be assumed)
(All dimensions are in mm.)

I. Draw the front view, top view and right side view of the machine element shown in Fig.1 (25)

OR

II. Draw three views of a forged crank shaft for a single cylinder I.C. engine. The stroke of the piston is 100 mm. (25)

III. Draw any three types of locking arrangements for a hexagonal bolt and nut. (20)

OR

IV. Compute the limiting dimensions of the shaft and hole of a fit designated by H8 & 9. The nominal diameter is 100 mm. Tolerance for grade 8 is 0.054 mm and that for grade 9 is 0.087 mm. The maximum clearance of the fit is 0.261 mm. Represent the shaft and hole by zone diagrams. (20)

V. Draw the elevation plan and side view (looking from the left) of the bracket shown In fig.2. (55)

OR

VI. Draw the full sectional elevation, plan and side view of the knuckle joint, in the Assembled form, shown in Fig.3 which gives the views of its components. (55)

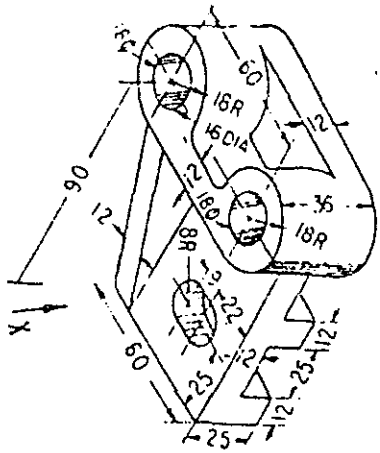

Fig. 1

(Turn over)

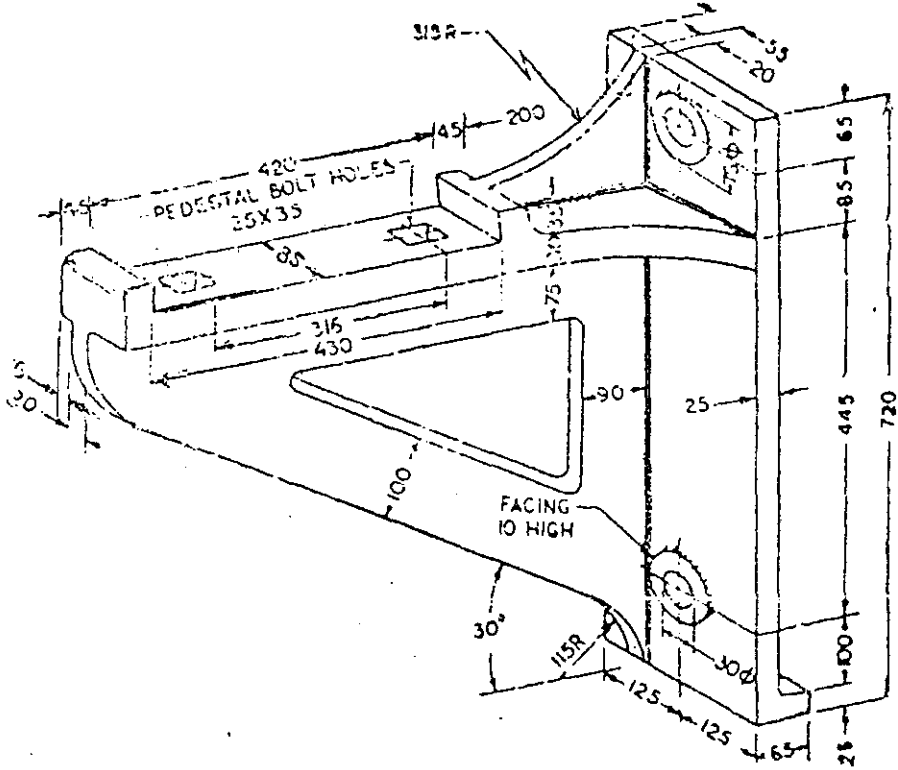

Fig. 2 *Wall bracket.*