B.Tech. Degree III Semester Examination, December 2006

SE 306 MACHINE DRAWING

(1999 Admissions onwards)

Time: 3 Hours Maximum Marks: 100

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

I Fix the limits of tolerance and allowance for a 25mm diameter shaft and hole pair designated H8/d9. (20)

OR

II Compute the fundamental deviation and tolerance and obtain limits for a circular hole of 30mm diameter finished to H7 tolerance. (20)

III Draw a double riveted, double cover strap butt joint (chain) to connect two plates having thickness of 16mm. (20)

OR

IV A fillet weld is to be made by joining two MS plates of each 12mm thick at an angle of 90°. The weld size is 8mm. Make full size cross sectional drawing of the joint and dimension it incorporating symbols. (20)

V Draw top half sectional elevation of a screwed flanged joint for joining two pipes of ∅25mm. The following dimensions may be taken.

Outside diameter of the pipe	=	35mm
Minimum outside diameter of the sleeve	=	44mm
Outside diameter of cylindral portion	=	70mm
Distance of the nut across corners	=	90mm
Total length of the union nut	=	50mm

50mm pipe thread is provided on the enlarged portion of one sleeve. Indicate all important dimensions on the drawing. (20)

OR

VI Make a neat sketch of a Hydraulic pipe joint for connecting two pipes of 100mm diameter. (20)

VII Two vertical plates each 25mm thick are bolted by means of a square bolt M12 x 70N. Draw a sectional elevation of the assembly and indicate all dimensions clearly. (20)

OR

VIII Sketch two types of detachable foundation bolts. (20)

IX Figure 1 shows the details of a gib and cotter joint. Draw to a suitable scale, the following views:

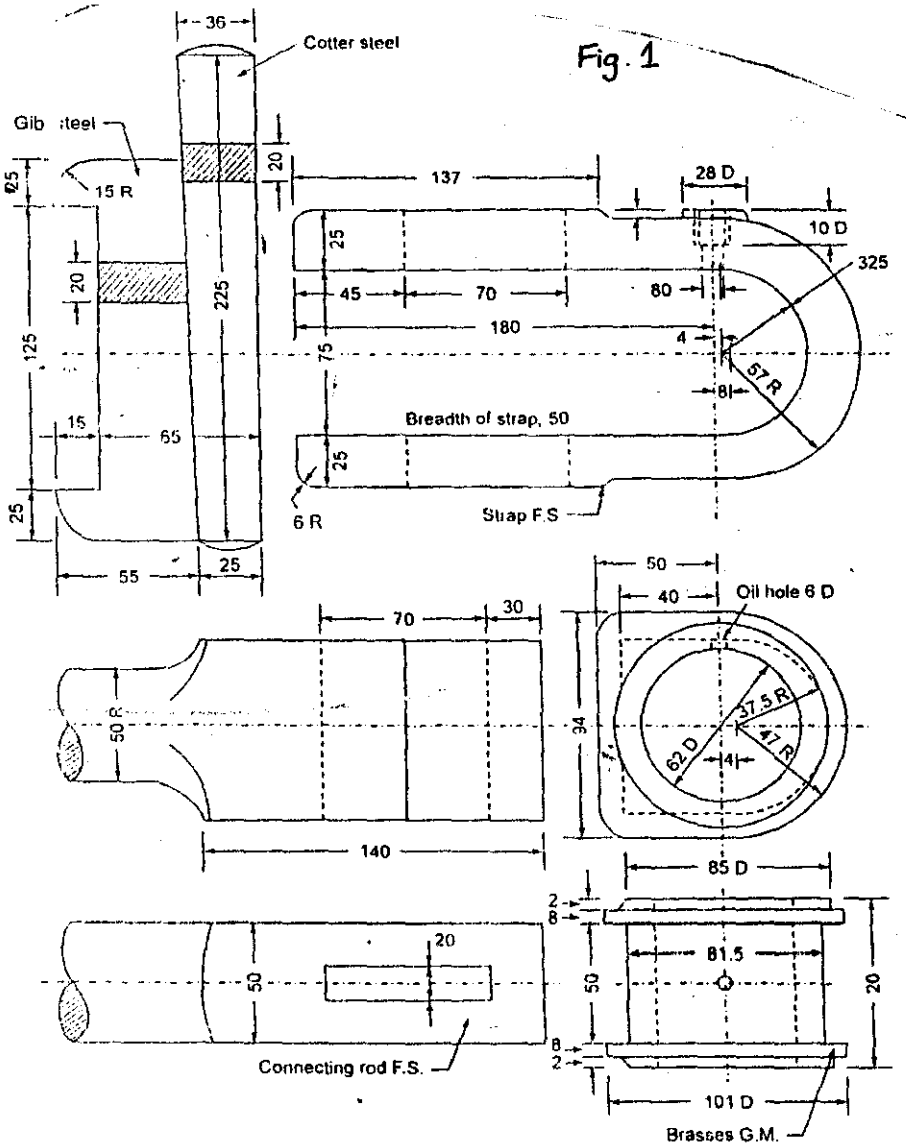
(i) front view upper half in section
(ii) top view full in section
(iii) right hand side view (20)

OR

X Figure 2 shows the details of a knuckle joint. Draw to a suitable scale, front view upper half in section. (20)

(Turn Over)

Fig. 1



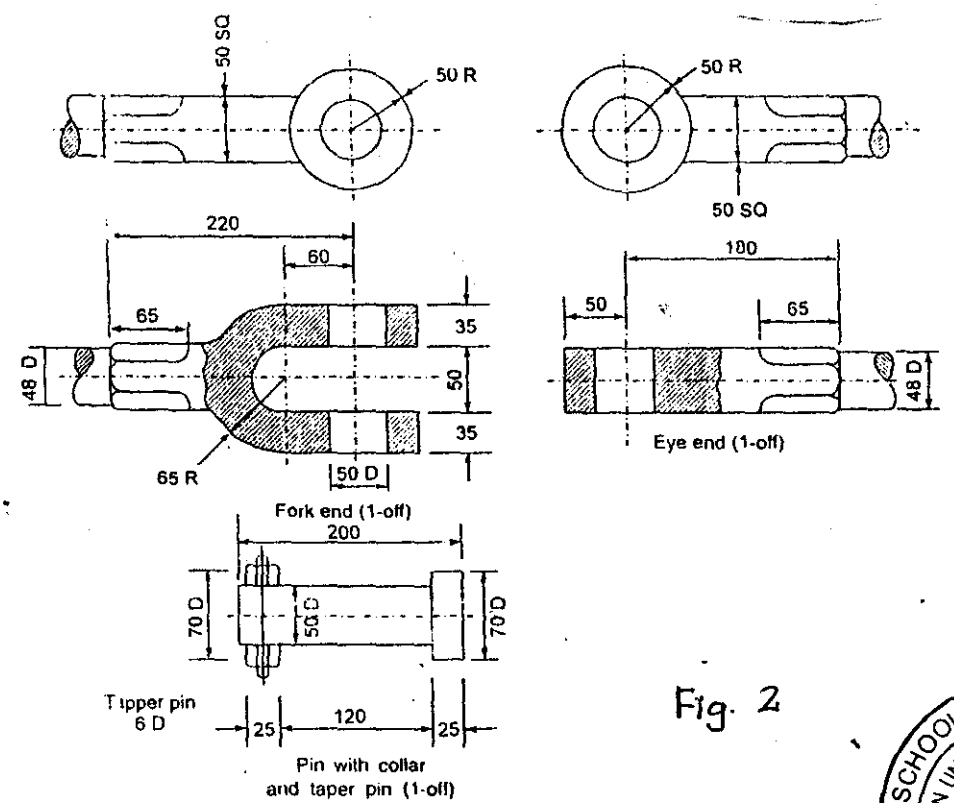


Fig. 2