B. Tech Degree IV Semester Examination, May 2006

ME 405 MACHINE DRAWING II

(Prior to 2002 Admissions)

Time : 4 Hours Maximum Marks : 100

I. (a) Draw three views of a hexagonal nut for M 30 bolt. Insert all dimensions of the nut in terms of the bolt diameter. (15)

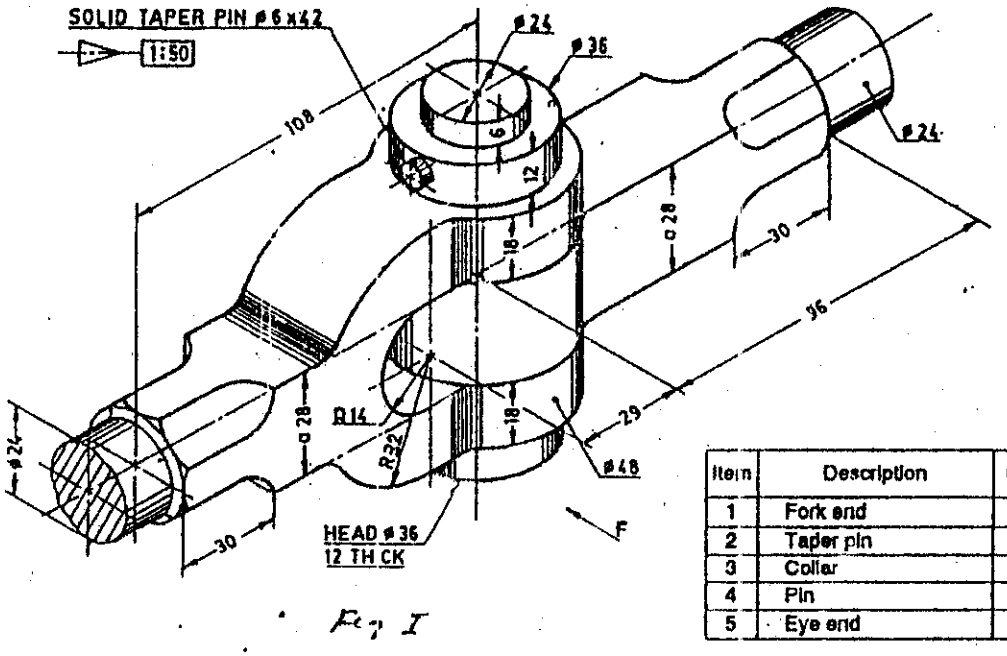
(b) Sketch the following locking arrangements. (15)

(i) nut with a locking nut
(ii) nut with a split pin
(iii) castle nut with a split pin.

OR

II. An isometric view of a knuckle joint is shown in the figure. Draw the following views.

(i) Elevation top half in section
(ii) End view, looking from left side. (30)



ITEM LIST

Item	Description	Qty.	Material
1	Fork end	1	M. S.
2	Taper pin	1	M. S.
3	Collar	1	M. S.
4	Pin	1	M. S.
5	Eye end	1	M. S.

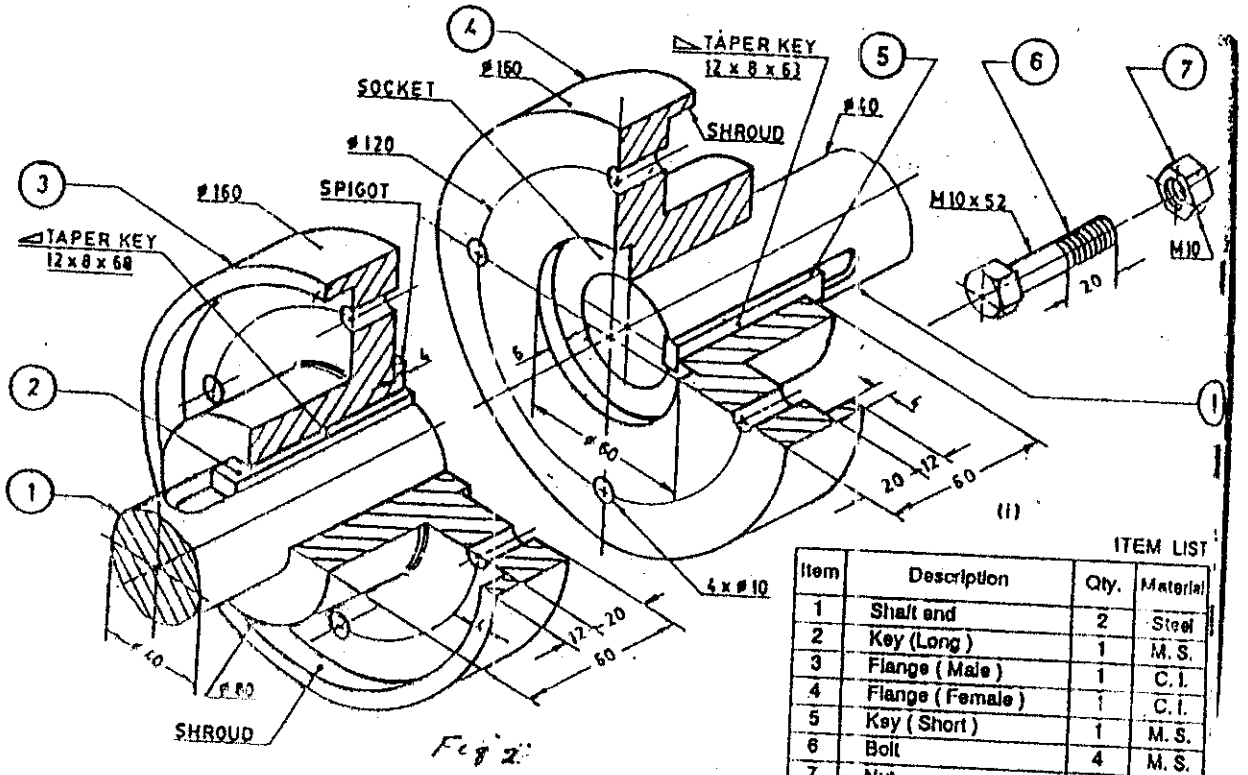
Fig. I

KNUCKLE JOINT
(PIN JOINT)

III. (a) An isometric view of a flanged coupling (protected type) is shown in the figure. Draw.

(i) The top half sectional elevation
(ii) End view (30)

(Turn Over)



ITEM LIST

Item	Description	Qty.	Material
1	Shaft end	2	Steel
2	Key (Long)	1	M.S.
3	Flange (Male)	1	C.I.
4	Flange (Female)	1	C.I.
5	Key (Short)	1	M.S.
6	Bolt	4	M.S.
7	Nut	4	M.S.

FLANGED COUPLING
(PROTECTED TYPE)

OR

IV. (a) Draw top half sectional elevation of a coupler joint for joining two pipes of diameter 25mm. The following dimensions may be taken.

Outside diameter of pipe = 35mm
Length of the Coupler = 50mm (20)

(b) Sketch the following keys and mark proportional dimensions.

(i) Tapered sunk key
(ii) Saddle key
(iii) Feather key
(iv) Pin key. (10)

V. Details of an i.c engine connecting rod (Type 2) are shown in the figure. Draw to 2:1 scale the assembled elevation, top half in section, showing all dimensions as per B.I.S. (40)

(Contd.....3)