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Total No. of Pages : 03

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.-3)

MACHINE DRAWING

Subject Code : BTAE-306

Paper ID : [A1156]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

- (a) What is the difference between lap and butt joint ?
- (b) What do you mean by Permanent Fastening ?
- (c) Draw the symbol of the first angle projection system.
- (d) What are Principal Planes ?
- (e) What are Temporary Fasteners?
- (f) Give an example of a unilateral tolerance.
- (g) What does 'OSNAP' stand for in Auto CAD ?
- (h) Give an example of the indication of surface roughness.
- (i) Give any two general rules of dimensioning.
- (j) What is the purpose of blow off cock in a boiler ?

SECTION-B

2. Draw by conventional method a right handed square thread. Take outside diameter = 64 mm, threaded length = 72 mm and pitch = 12 mm.
3. Explain the caulking and fullering operations with the help of neat sketches.
4. Draw the three views of a hexagonal nut for a bolt of 24 mm diameter.

5. Draw the freehand sketch of single plate friction clutch.
6. Describe the step-by-step procedure of giving dimensions in AutoCAD with the help of a few examples.

SECTION-C

7. Figure-1 shows the details of a universal coupling. Assemble the parts and draw the front view with upper half in section.
8. Figure-2 shows the details of a knuckle joint. Assemble the parts and draw top view and fully sectioned front view.
9. Figure-3 shows the details of a screw jack. Assemble the parts and draw the front view with left half in section.

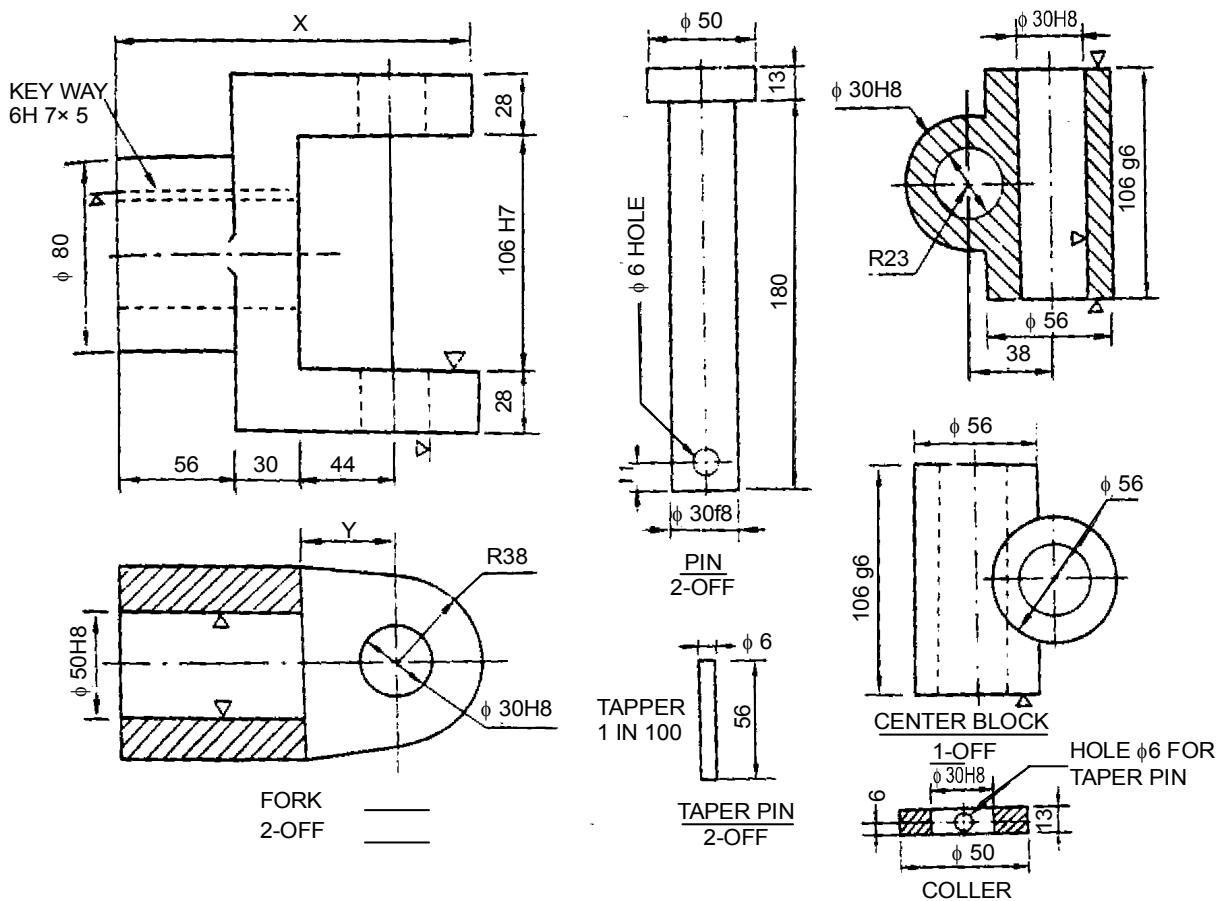


Fig. 1

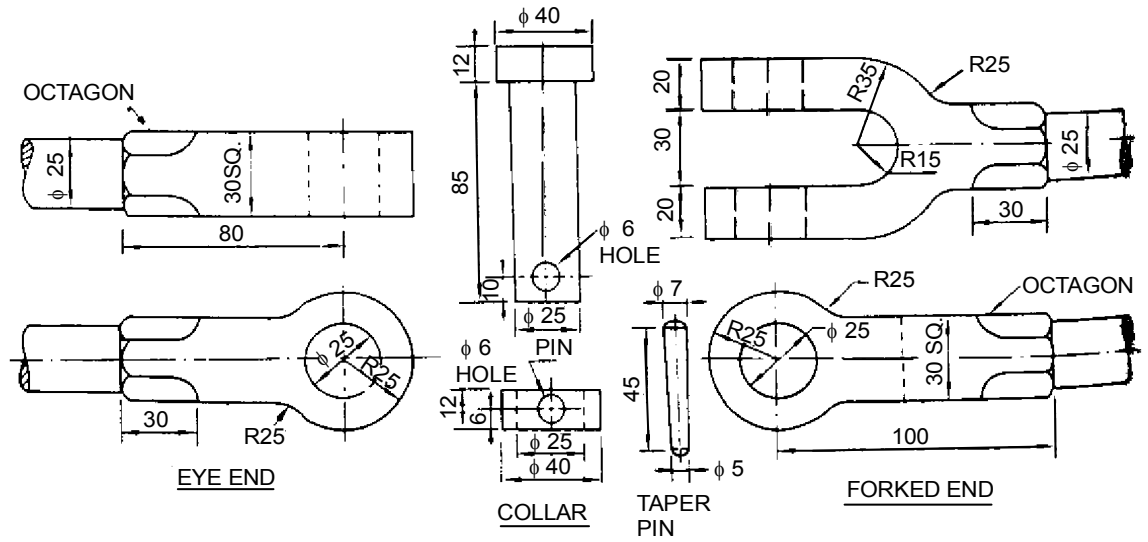


Fig. 2

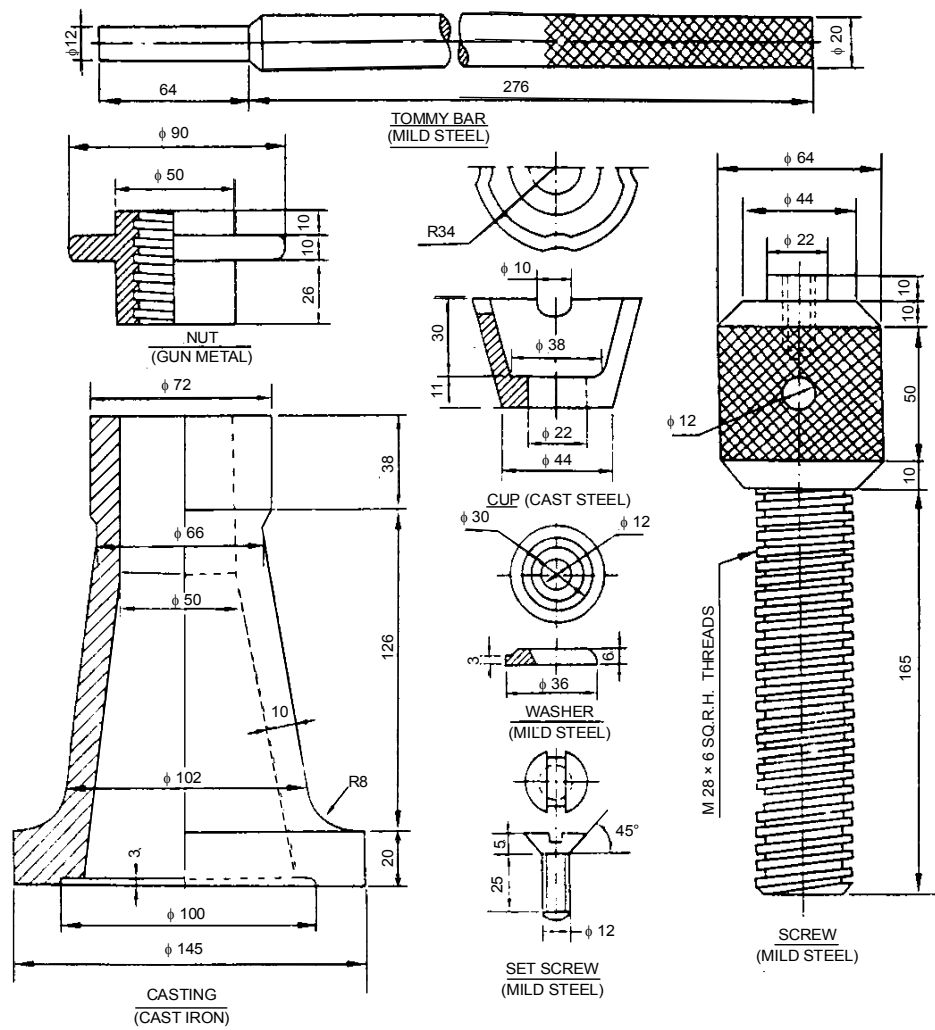


Fig. 3