**Roll No.** | | | | | | | | | | | | **Total No. of Pages : 03**

**Total No. of Questions : 07**

**B.Tech. (ME-2011 Batch) (Sem.–3rd)**

# MACHINE DRAWING

**Subject Code : BTME-303**

**Paper ID : [A1140]**

**Time : 3 Hrs.** **Max. Marks : 60**

**INSTRUCTION TO CANDIDATES :**

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

## SECTION-A

**1. Answer briefly :**

(a) What do you mean by machining symbols and their importance?

(b) Name the meaning of the following symbols :

(i) = (ii) M

(c) What do you mean by Tolerance? Show it with the help of a sketch.

(d) Show the removed section with the help of a suitable sketch.

(e) Show the Aligned system of Dimensioning.

(f) Give the meaning of the following :

$\phi$ 48H7/P6.

(g) What is meant by Diagonal Pitch incase of rivetted joints?

(h) Define Right hand and Left hand Threads. Show it by a sketch.

(i) What are fasteners. List them.

## SECTION-B

**(Free Hand Sketches Only)**

2. Sketch the top view and sectional front view of a single riveted Lap Joint showing the dimensions in terms of 'D'.

3. Sketch the Knuckle Threads showing dimensions in terms of 'P'.

4. What is a Gib head key? Show it with the help of a sketch.

5. Draw the front view of a square headed Bolt along with a hexagonal nut and a washer of suitable dimensions.

## SECTION-C

6. Fig. 1 shows the details of a Foot Step Bearing. Draw full sectional view of the assembly and simple plan. (30)

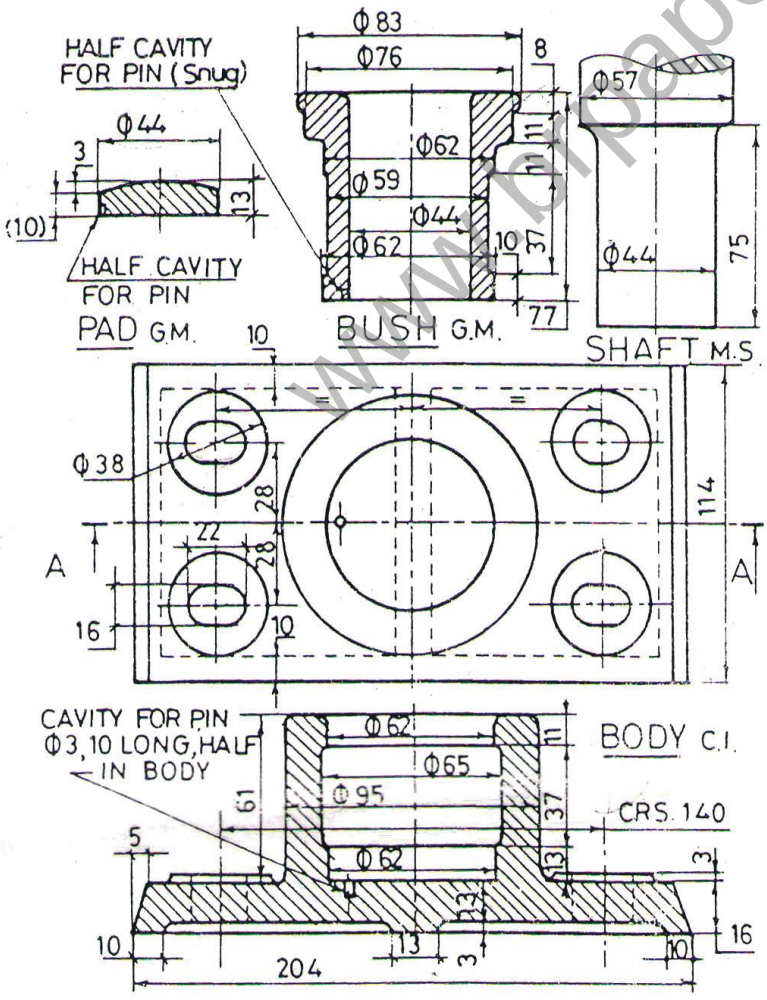


**Fig. 1 Details of a Foot Step Bearing**

7. Fig. 2 shows the details of a Hooke's Joint. Draw the elevation upper half in section of the assembly. Also give the bill of material. (30)

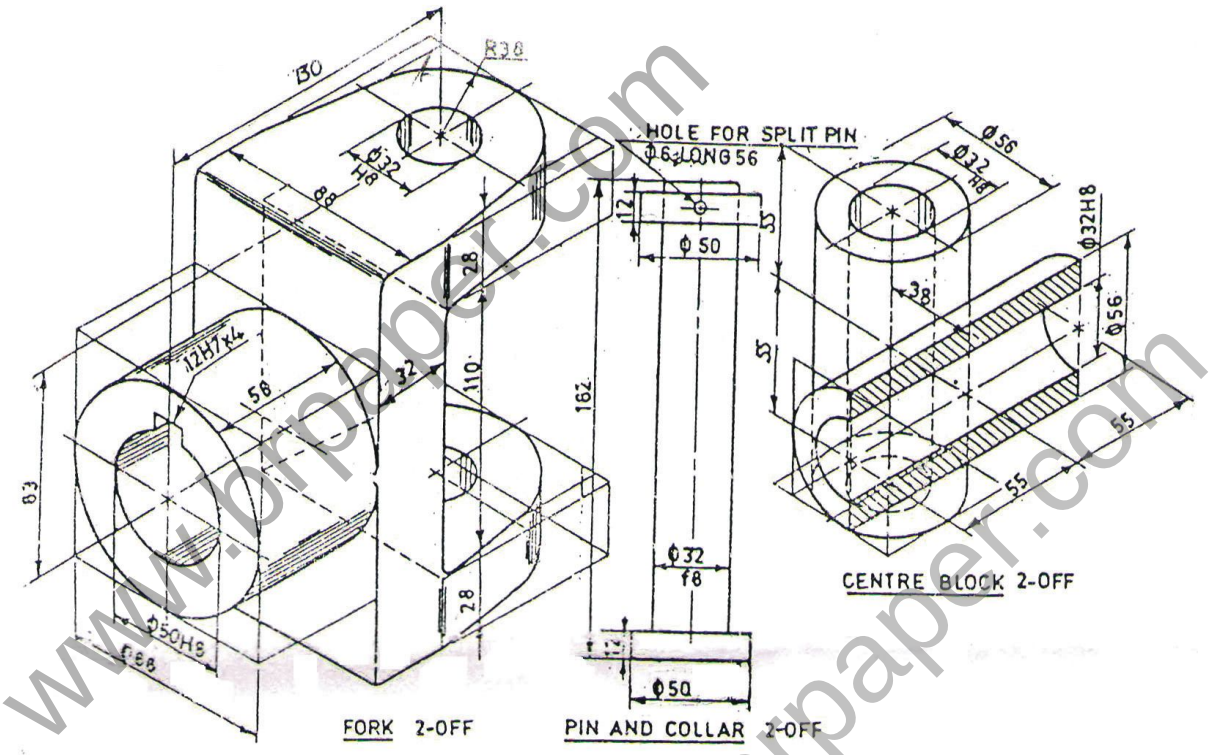


**Fig. 2 Details of a Hooke's Joint or Universal Coupling**