

**Roll No.**

**Total No. of Pages : 05**

**Total No. of Questions : 09**

**B.Tech.(AE/ANE)/(IE) (All)/(ME) (Sem.-3)**

# MACHINE DRAWING

**Subject Code : ME-207**

**Paper ID : [A0804]**

**Time : 3 Hrs.**

**Max. Marks : 60**

### INSTRUCTIONS 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 have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**
4. **First angle projection to be used. You may assume any missing dimension.**

## SECTION-A

**Q1. Write briefly :**

- (a) What do you understand by sectioning? How is it represented?
- (b) What is difference between aligned and unidirectional system of dimensioning?
- (c) Draw conventions for :
  - i) Rubber
  - ii) Gun metal
- (d) Explain unilateral and bilateral tolerances with an example.
- (e) What is difference between right hand and left hand threads?
- (f) Discuss various types of fits. Explain in short.
- (g) What are the disadvantages of riveted joints?
- (h) Draw symbols for :
  - i) Spot weld
  - ii) Seam weld.

- (i) What is a tap bolt?
- (j) Why bushes are made from soft materials?

### **SECTION-B**

- Q2. Draw free hand upper half sectioned front elevation of a muff coupling on proportionate scale.
- Q3. Draw profile of buttress threads by taking pitch of 20 mm. Clearly show the calculations and show dimensions on the drawing.
- Q4. Draw free hand sketch of single plate friction clutch.
- Q5. Draw plan and sectional elevation of a double riveted butt joint (single cover and chain riveting). Take diameter of rivet 20 mm and thickness of plate 11 mm.
- Q6. Explain different methods to draw an arc in AUTOCAD.

### SECTION-C

Q7. Assemble the parts of a knuckle joint given in Fig. 1 and draw the following views :

- Elevation lower half in section
- Plan

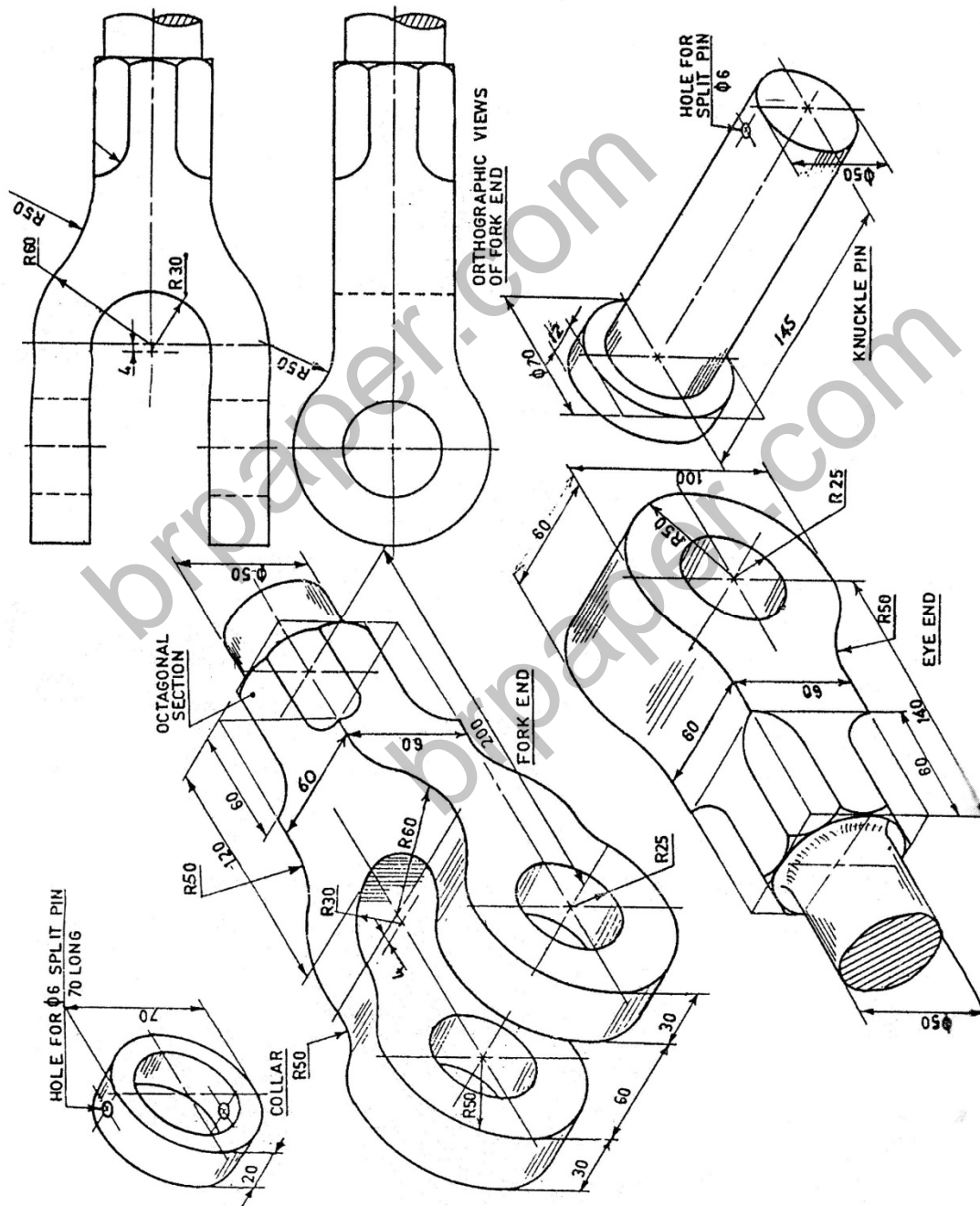


Fig.1 Knuckle joint



Q9. Details of a Swivel Bearing are shown in Fig.3. Draw the following views of the bearing showing all the parts assembled.

- Front view right half in half section.
- Side view

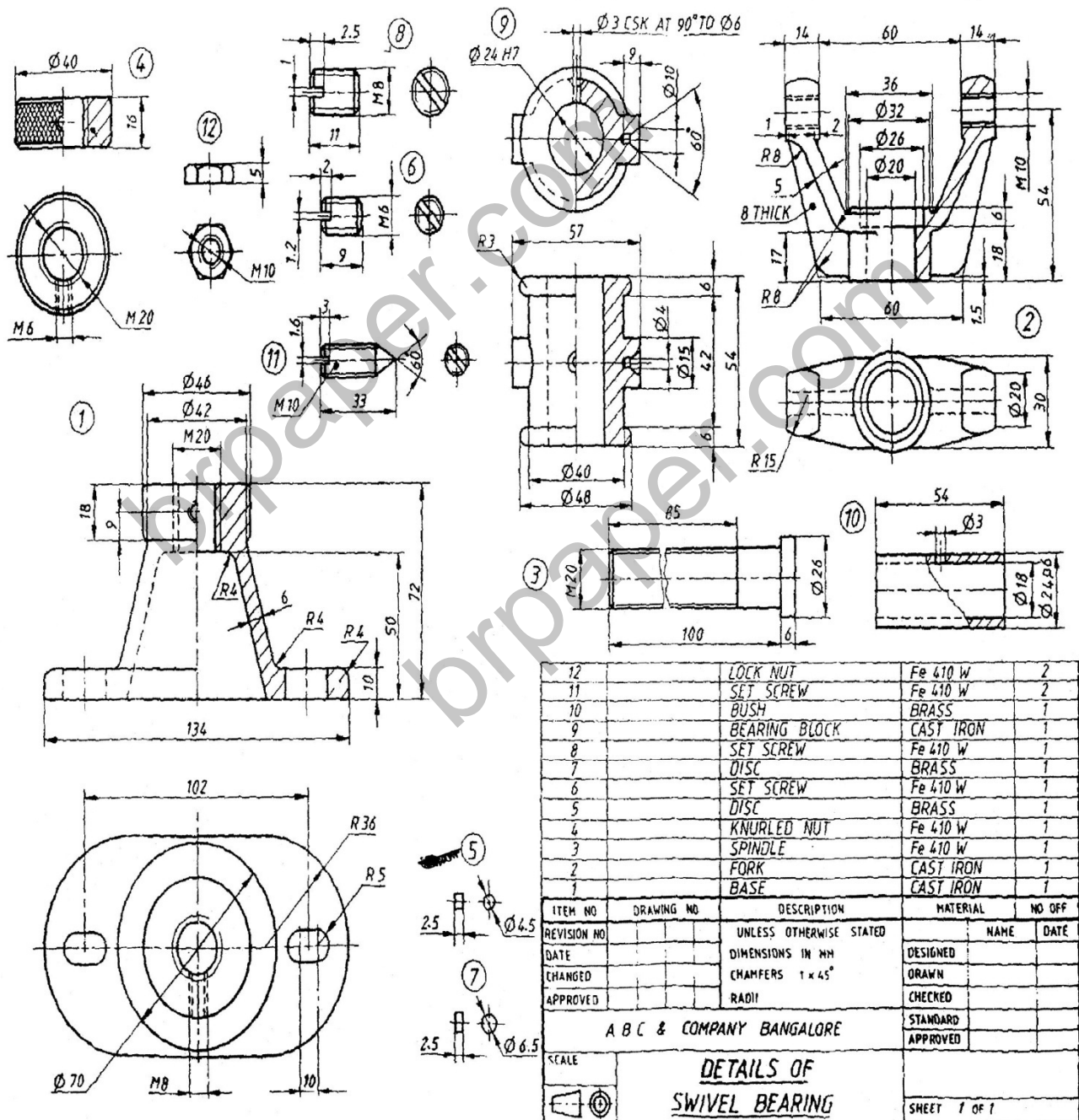


Fig.3 Swivel Bearing