

Roll No: .....

Total No. of Questions : 09]

[Total No. of Pages :04

## Paper ID [A0804]

(Please fill this Paper ID in OMR Sheet)

**B. Tech. (Sem. - 3<sup>rd</sup>)**

**MACHINE DRAWING (ME - 207)**

**Time : 04 Hours**

**Maximum Marks : 60**

**Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

### Section - A

**Q1)** **(10 × 2 = 20)**

- a) What is the difference between allowance and tolerance?
- b) What is the purpose of caulking and fullering of rivet joints?
- c) Sketch the conventional method of representing pipe threads (internal and external).
- d) What is the function of clearances in a cotttered joint?
- e) Sketch the basic symbols for Single and Double-U Butt welds.
- f) Why are split muff couplings used in preference to solid muff?
- g) What is the specific use of an expansion pipe joint?
- h) Why brasses are used in connecting rod ends and why are these made of soft metals?
- i) What is blow-off cock and where it is used?
- j) What is the advantage of providing bush in a bearing? What is the material of bush?

## Section - B

(4 × 5 = 20)

- Q2) Draw plan and sectional elevation of a double riveted butt joint (Single cover and chain riveting). Take diameter of rivet = 20 mm.
- Q3) Draw free hand upper half sectional-front elevation of a protected type flange coupling on proportionate scale.
- Q4) Draw free hand sectional front elevation and plan of a knuckle joint on proportionate scale.
- Q5) Sketch any two views of the following locking devices:  
(a) Slotted nut and  
(b) Swan nut.
- Q6) Discuss the various commands available in Auto-CAD to draw a circle.

## Section - C

(2 × 10 = 20)

- Q7) Draw the full sectional Front view and Top view of the screw-jack assembly as shown in Figure-1. Also make Bill of Materials.
- Q8) Figure-2 shows the details of a connecting rod for Petrol engine. Assemble all the parts and draw the following views of the connecting rod:  
(a) Elevation, and  
(b) Plan-full in section. Use any convenient scale.
- Q9) Figure-3 shows the details of a Feed check valve. Assemble all the parts and draw the Elevation-right half in section of the assembly to half scale.

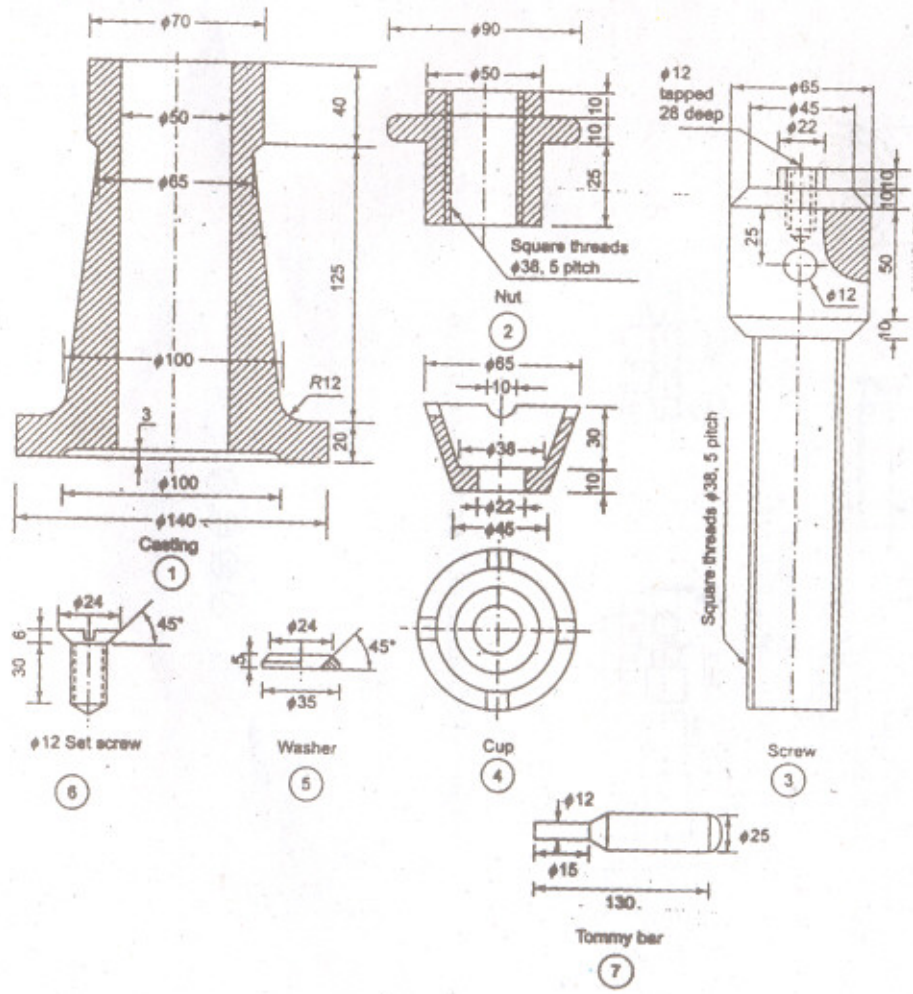


Figure-1: Details of a Screw-jack

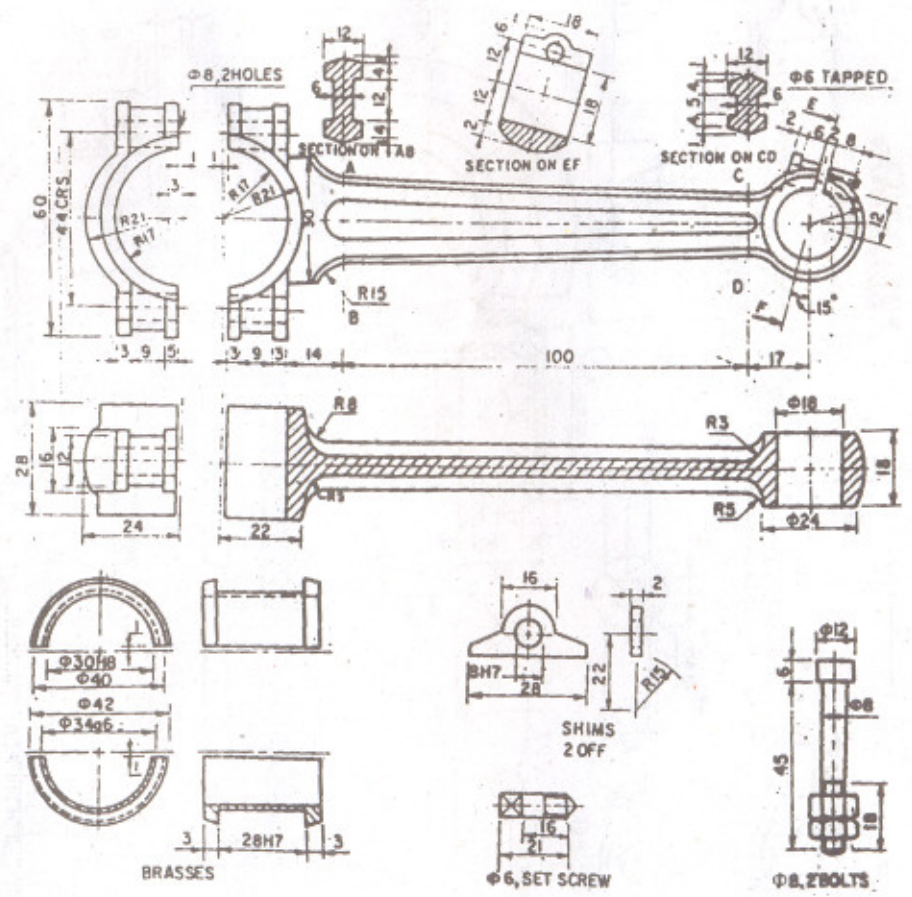


Figure-2: Details of Connecting Rod

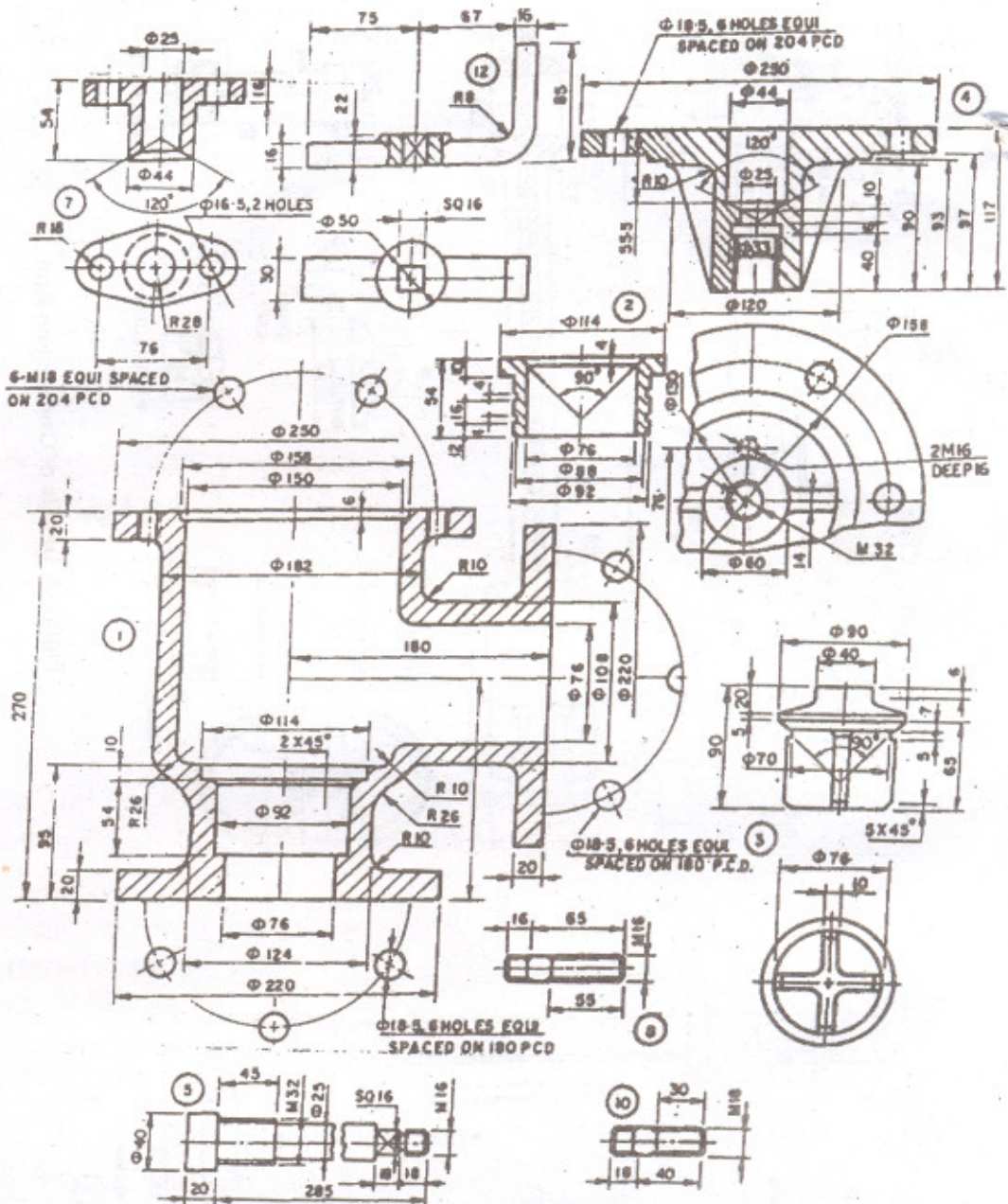


Figure-3: Details of Feed check valve