

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 05

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.–3)

MACHINE DRAWING

Subject Code : BTAE-306

Paper ID : [A1156]

Time : 4 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**1. Write briefly :**

- a) What is difference between lap joint and butt riveted joint.
 - b) What do you understand by :
 - i) length of weld
 - ii) size of weld
 - c) What is difference between allowance and tolerance?
 - d) With suitable sketch, explain the method of dimensioning of :
 - i) Arc
 - ii) Angle
 - e) If two shafts to be flange coupled are not in exact alignment, which type of flange coupling would you suggest and why?
 - f) Why bushes are made from soft material?
 - g) What is a revolved section? Explain with the help of a drawing.
-

- h) What is the function of feed check valve?
- i) What is function of clearance in cotter joint?
- j) What is the function of a safety valve?

SECTION-B

- 2. Explain various types of weld joints with the help of drawings.
- 3. Draw free hand sketch of protected type flange coupling.
- 4. Draw profile of Acme threads by taking pitch of 20 mm. Clearly show the calculations and show dimensions on the drawing.
- 5. Draw any five types of nuts and write their names.
- 6. Discuss the following commands of auto CAD :
 - i) Array
 - ii) Offset
 - iii) Trim

SECTION-C

7. Assemble the parts of screw jack given in Fig. 1 and draw the following views :
 - i) Elevation (Left Half in Section)
 - ii) Top view

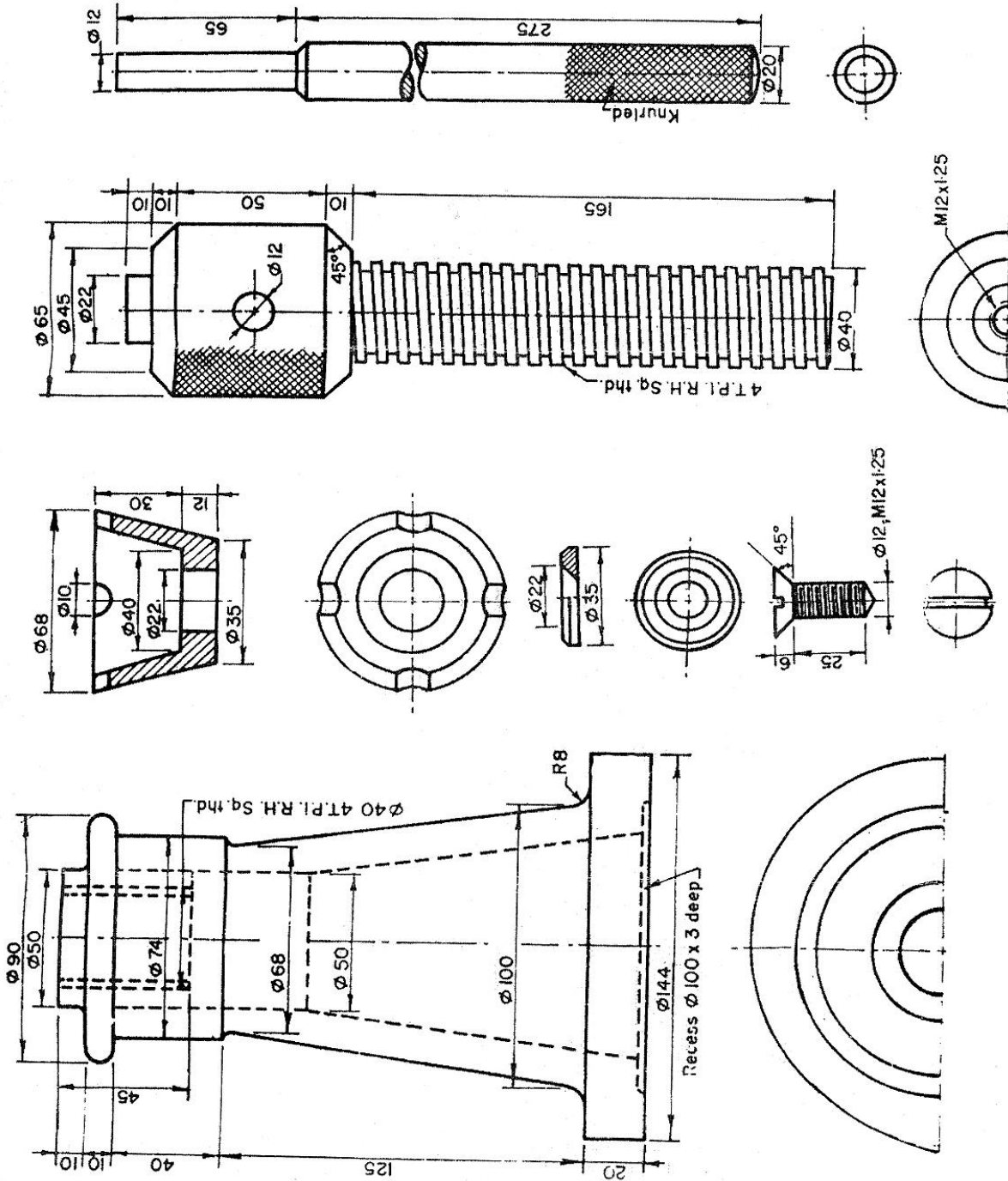


Fig. 1

8. Assemble the parts of a Connecting rod given in Fig.2 and draw the following views :
- Elevation
 - Top view (full section)

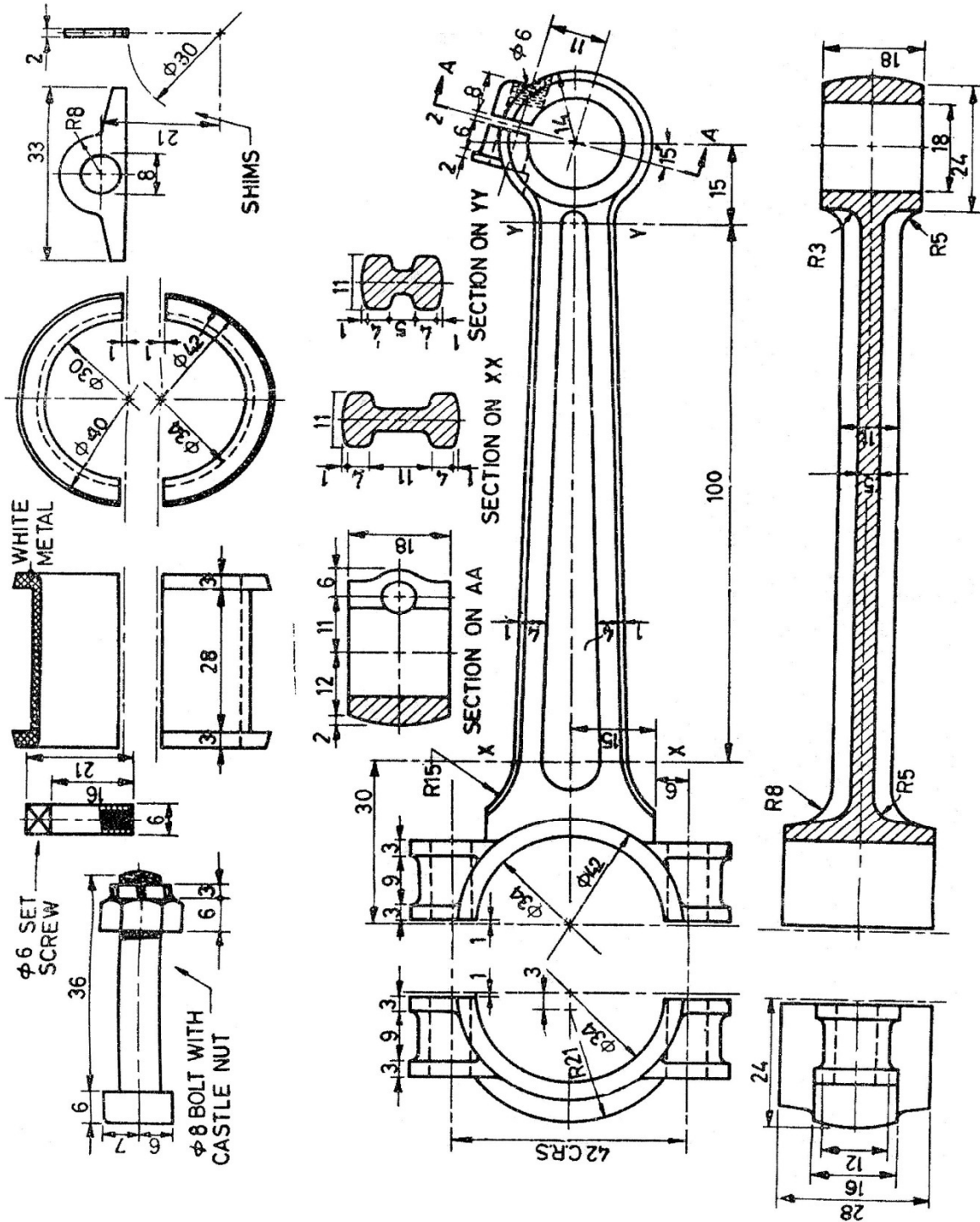


Fig. 2 Petrol Engine Connecting Rod

9. Fig. 3 represents the parts of a blow off cock. Assemble the parts and draw the following views :

- i) Full section elevation
- ii) Top view

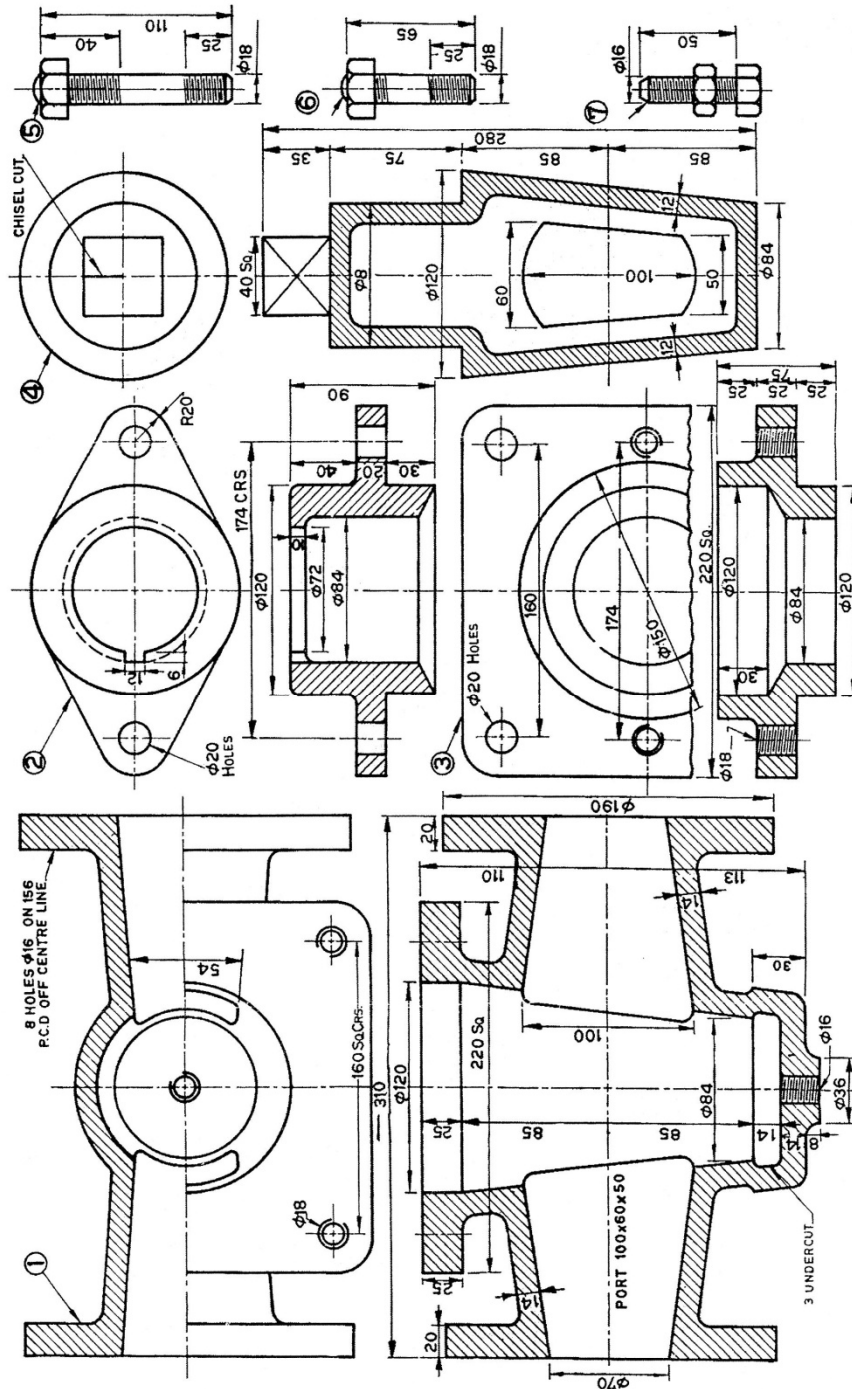


Fig.3