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Total No. of Pages: 05

Total No. of Questions: 09

B.TECH (Sem.-3rd)
MACHINE DRAWING

Subject Code: BTAE-306

Paper ID: [A1156]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATE:

- (i) Section –A, is Compulsory.
- (ii) Attempt any four questions from Section-B.
- (iii) Attempt any two questions from Section-C.

Section –A

- Q.1.(a)** What do you mean by the term fullering?
- (b) What is the use of foundation bolts?
- (c) why expansion joints are required in a piping system?
- (d) Define the terms-Major Diameter and Minor diameter for a nut.
- (e) _____ type of threads are used for fastening and _____ type of threads are used for transmitting motion.
- (f) Draw the symbols for the following welded joints along with the illustrations.
 - Square Butt Weld - Fillet Weld
- (g) What is the advantage of using angular Plummer block over simple Plummer Block?
- (h) Name two parts reciprocating parts in an IC engine.
- (i) What is the function of blow off cock valve?
- (j) Differentiate between sunk and saddle key. 10×2

Section –B

- Q.2.** Draw free hand proportionate front view of the assembly of square headed bolt and hex nut along with a washer.
- Q.3.** Draw Plan of triple riveted lap joint (chain type) for connecting two plates of thickness 9 mm. Use appropriate empirical relations and show at least 2 rivet heads along each row of rivets. Use Pan head rivets in the joint.

Q.4. Figure 1 shows the details socket and spigot Joint. Assemble the given parts and draw the front view of assembly.

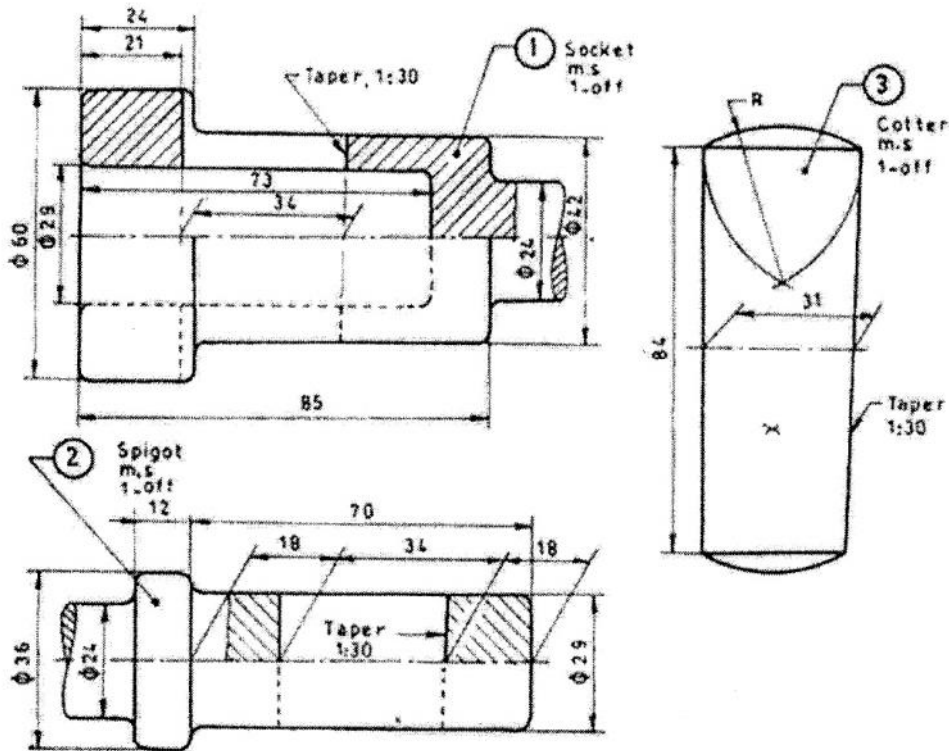


Figure 1

Q.5. Figure 2 shows the details of expansion type pipe joint. Draw full sectional side view of the assembly at section Y-Y.

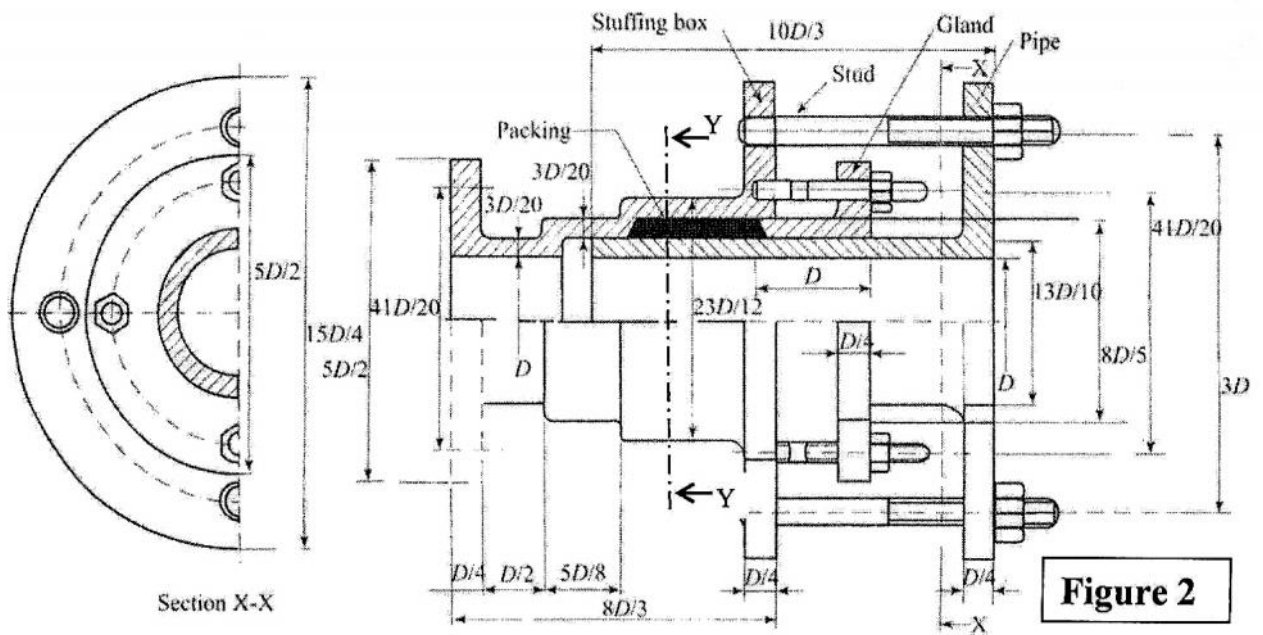


Figure 2

- Q.6.** Figure 3 shows the details of unprotected type flange coupling. Assemble the given parts and draw the side view of the assembly looking in the direction of arrow "A". Assume $D=30$ mm. 4×5

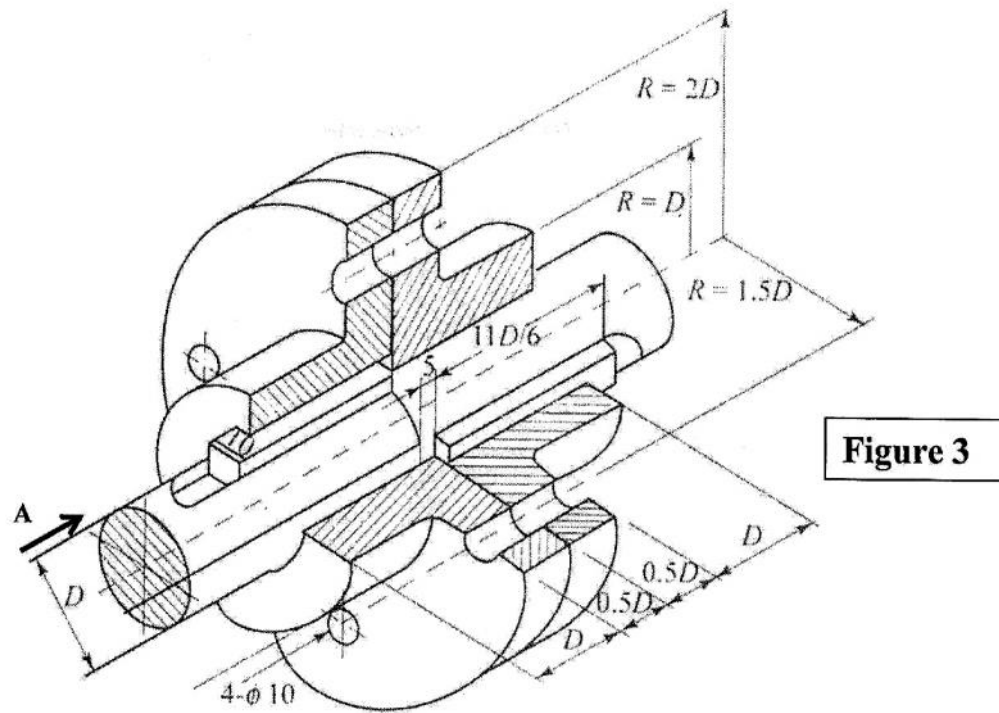


Figure 3

Section -C

- Q.7.** Figure 4 shows the details of bushed bearing. Draw the full sectional front view of assembly looking in the direction of the arrow marked as "F".

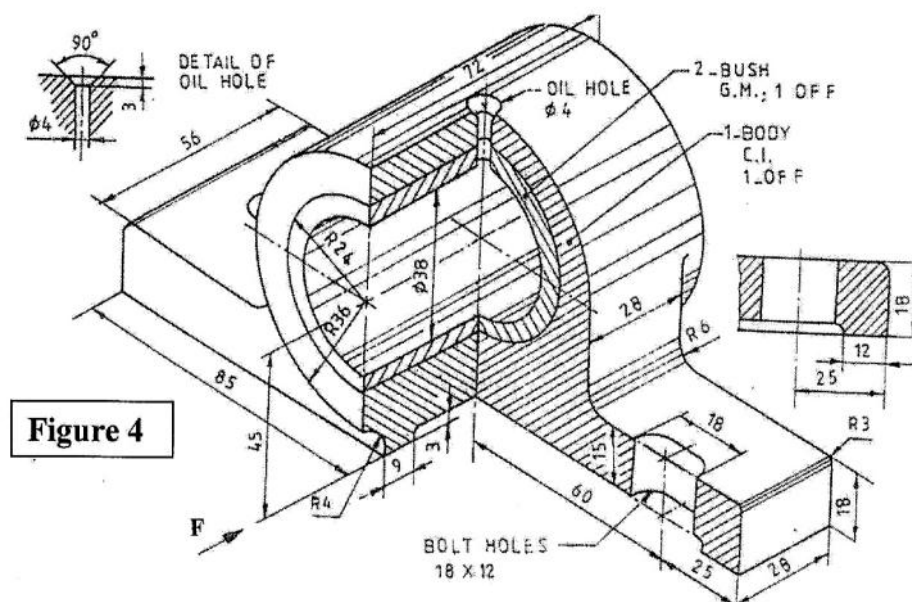


Figure 4

Q.8. Figure 5 shows the details of screw jack. Assemble the given components and draw the full sectional front view of assembly.

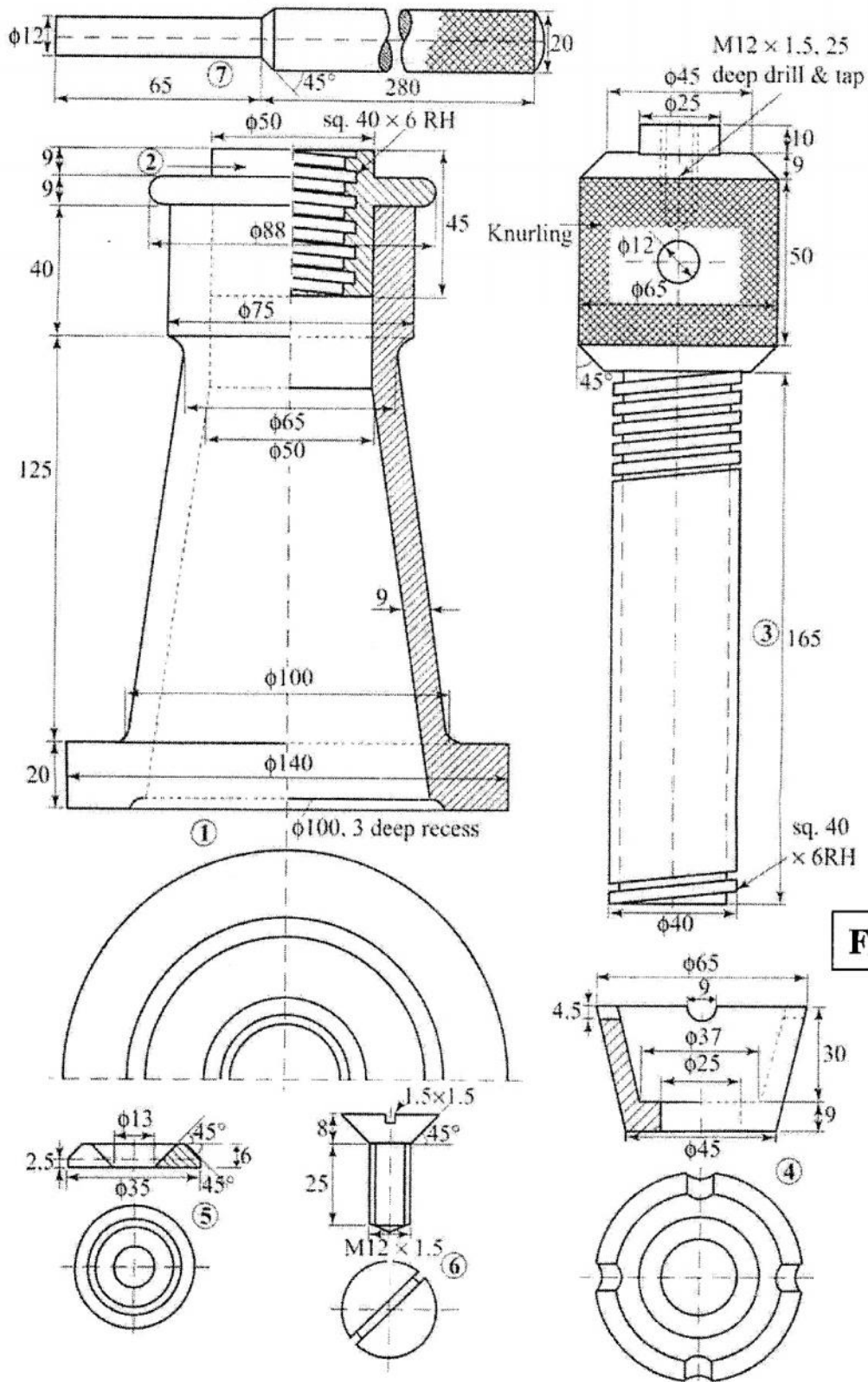


Figure 5

