Roll No. Total No. of Pa	ges : 05
Total No. of Questions : 09	
B.Tech.(Marine Engg.) (2013 Onwards) / (ME) (2011 Onwards) (S	Sem.–3)
MACHINE DRAWING	
Subject Code : BTME-303	
Paper ID : [A1140]	
Time : 3 Hrs. Max. Ma	arks : 60

INSTRUCTION TO CANDIDATES :

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

SECTION-A

1. Write briefly/Fill in the blanks :

- (a) Draw the symbols of third angle projections. Ranker
- (b) What is muff coupling?
- (c) Define pitch.
- (d) The root angles in BIS metric thread and BSW threads are respectively and
- (e) Name various types of bearings.
- (f) Why is cotter tapered in its side(s)? Give reasons.
- (g) Differentiate between a gate valve and glove valve.
- (h) Draw symbol of fillet welding.
- (i) Sketch basic symbols for single and double U butt joint.
- (i) What is blow-off cock and where it is used?

SECTION-B

- 2 Draw plan and sectional elevation of a double riveted butt joint (Single cover and chain riveting). Take diameter of rivet : 20 mm.
- 3 Draw free hand sectional front view of pipe union joint.
- 4 Draw by a conventional method a right handed square thread. Take outside diameter = 64 mm, threaded length = 72 mm and pitch = 12 mm.
- 5 Show by neat sketches the following pipe fittings :
 - (a) Bend
 - (b) Elbow
 - (c) Tee
 - (d) Plug
 - (e) Cross
- 6 Represent two views of hexagonal nut and square nut with proportions and diameter of bolt as 30mm.

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SECTION-C

7 Draw the full sectional Front view and Top view of the screw-jack assembly as shown in fig. 1.

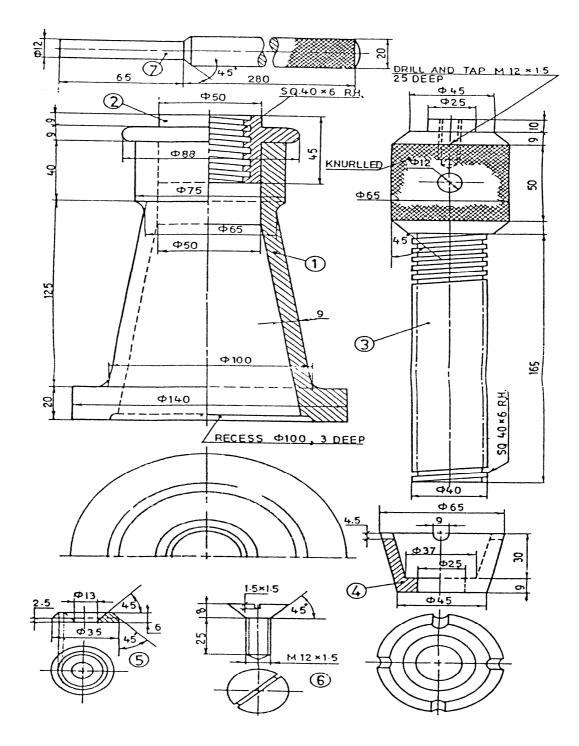


Fig.1

- 8 Fig. 2 shows the exploded assembly of a gib and cotter for square rods. Draw to a scale full size, the following views of the assembly :
 - a) Front view top half in section
 - b) Right hand side view

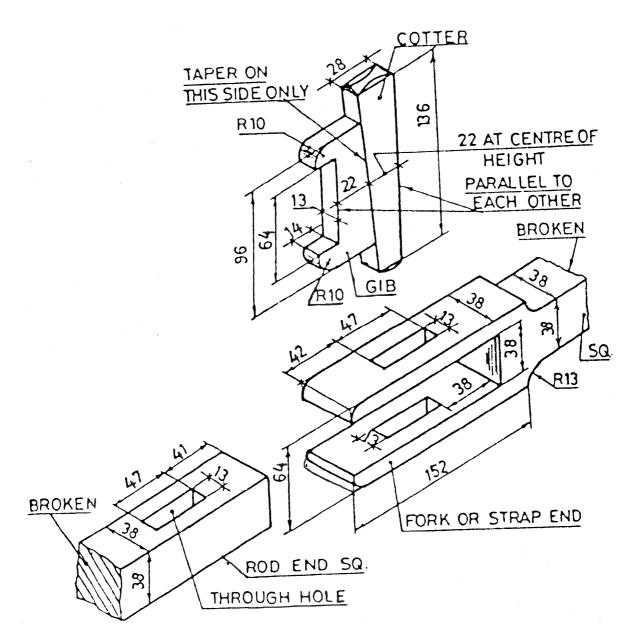


Fig.2

- 9 Fig. 3 shows the detail drawings of a spring loaded safety valve. Assemble the details and draw the following views :
 - a) Front view, full in section,
 - b) Top view

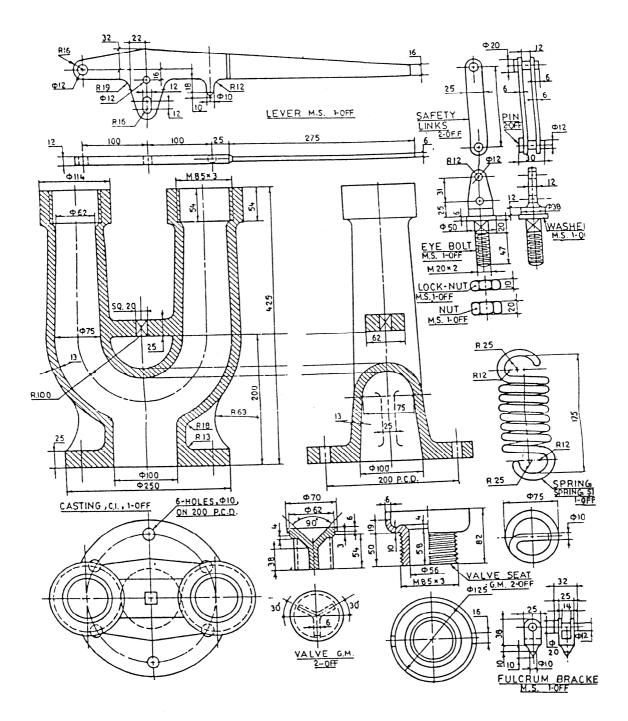


Fig.3