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Third Semester B.E. Degree Examination, December 2017

(MINING ENGINEERING)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

Note:

1. Answer any **Two** questions from **part A** and **One** from **Part B**.
2. Use **FIRST ANGLE** projection only.
3. Missing data if any may be suitably assumed.
4. All the calculations should be on answer sheet supplied.
5. All the dimensions are in mm.
6. Drawing instruments may or may not be used for sketching
7. **Part B Assembled view should be made in 3D and other 2 views in 2D.**

PART - A

(1X15=15marks)

1. Draw the front, top and side views of the machine element shown in figure 1.

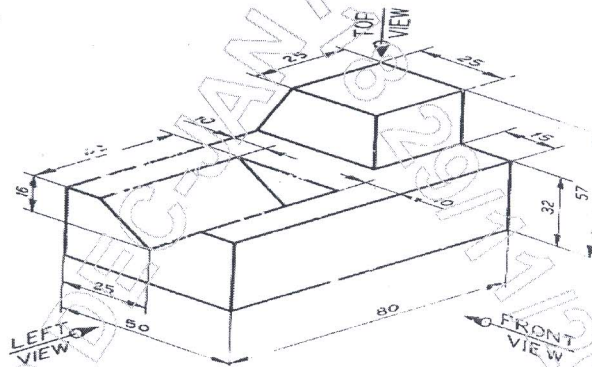


Figure 1

2. Draw the views of ISO threaded square bolt 100mm long ,20mm diameter and a thread length of 50mm and square nut assembly in the horizontal axis position. Indicate the actual dimensions.

PART - B

(1x15=15marks)

1. Draw to 1:1 scale the top and sectional front views of a single riveted lap joint. The thickness of the plate is equal to 9mm. Show at least three rivets. indicate all dimensions. use snap head rivets.
2. Draw sectional front view and side view of flange coupling unprotected type to connect two rods of diameter 30mm. indicate all dimensions.

PART - C

(1x50=50marks)

- The details of machine vice are shown in figure 2. Assemble the parts and draw the following views of assembly
 - Front view in half section
 - Top view
- The details of petrol engine piston is shown in figure 3. Assemble the parts and draw the following views of assembly
 - Front view in half section
 - Top view

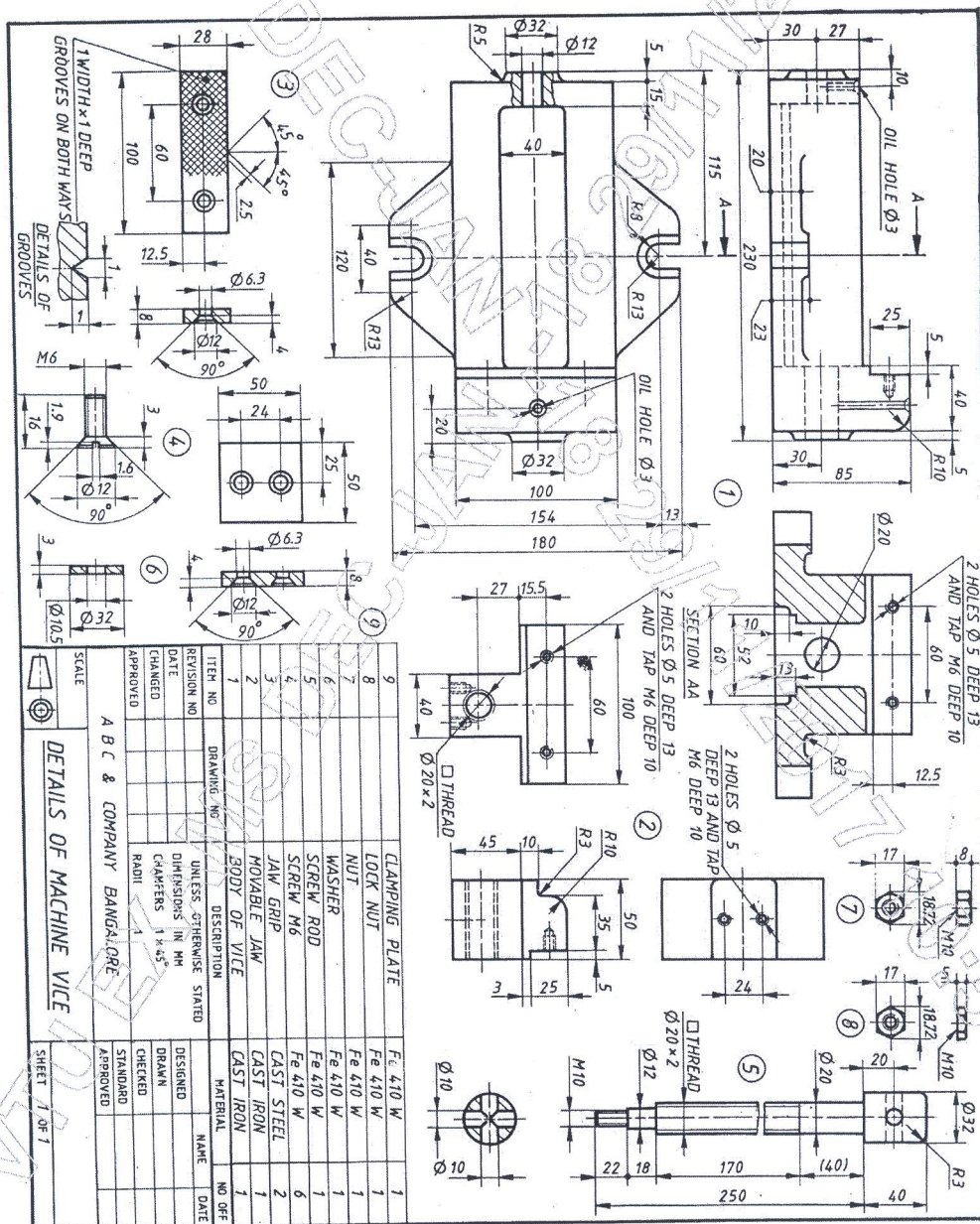


Figure 2

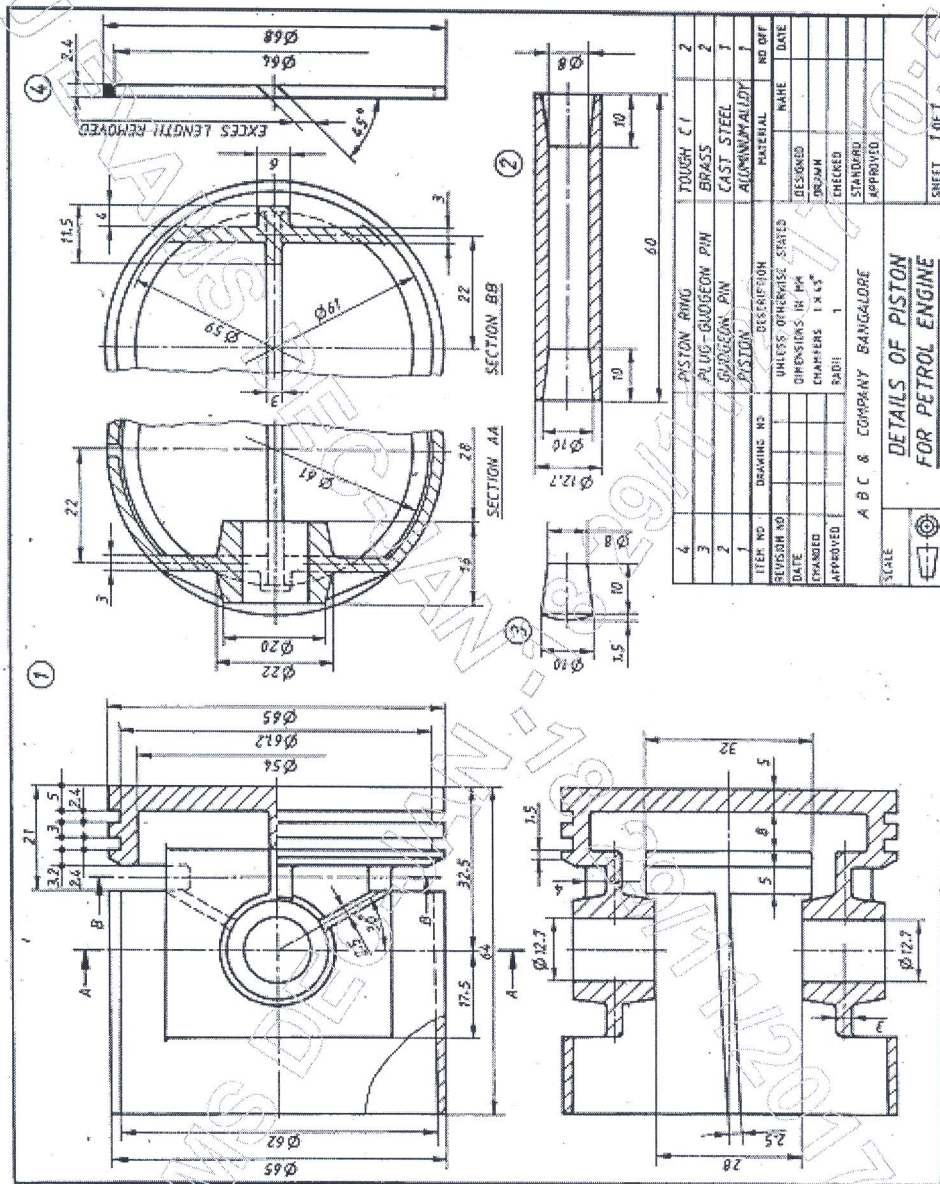


Figure 3

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PART - A

(1X15=15marks)

1. Draw the front, top and side views of the machine element shown in figure 1.

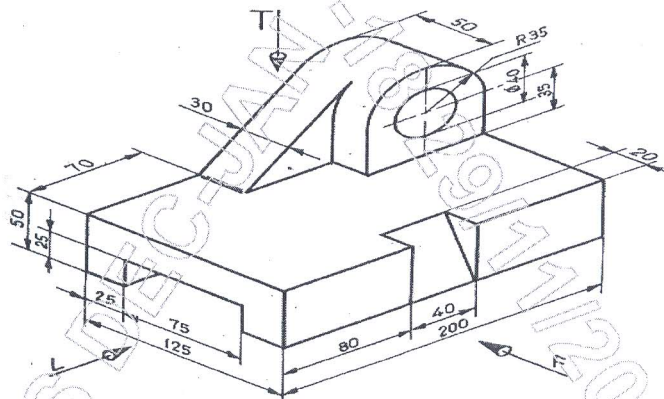


Figure 1

2. Draw the views of ISO threaded square bolt 100mm long, 20mm diameter and a thread length of 50mm and square nut assembly in the horizontal axis position. Indicate the actual dimensions.

PART - B

(1x15=15marks)

1. Draw to 1:1 scale the top and sectional front views of a single riveted buttjoint. The thickness of the plate is equal to 9mm. Show at least three rivets. Indicate all dimensions. Use snap head rivets.
2. Draw sectional front view and side view of pin type flexible coupling to connect two rods of diameter 25mm. Indicate all dimensions.

PART - C

(1x50=50marks)

- The details of machine vice are shown in figure 2. Assemble the parts and draw the following views of assembly.
 - Front view in half section
 - Top view
- The details of petrol engine piston are shown in figure 3. Assemble the parts and draw the following views of assembly.
 - Front view in half section
 - Top view

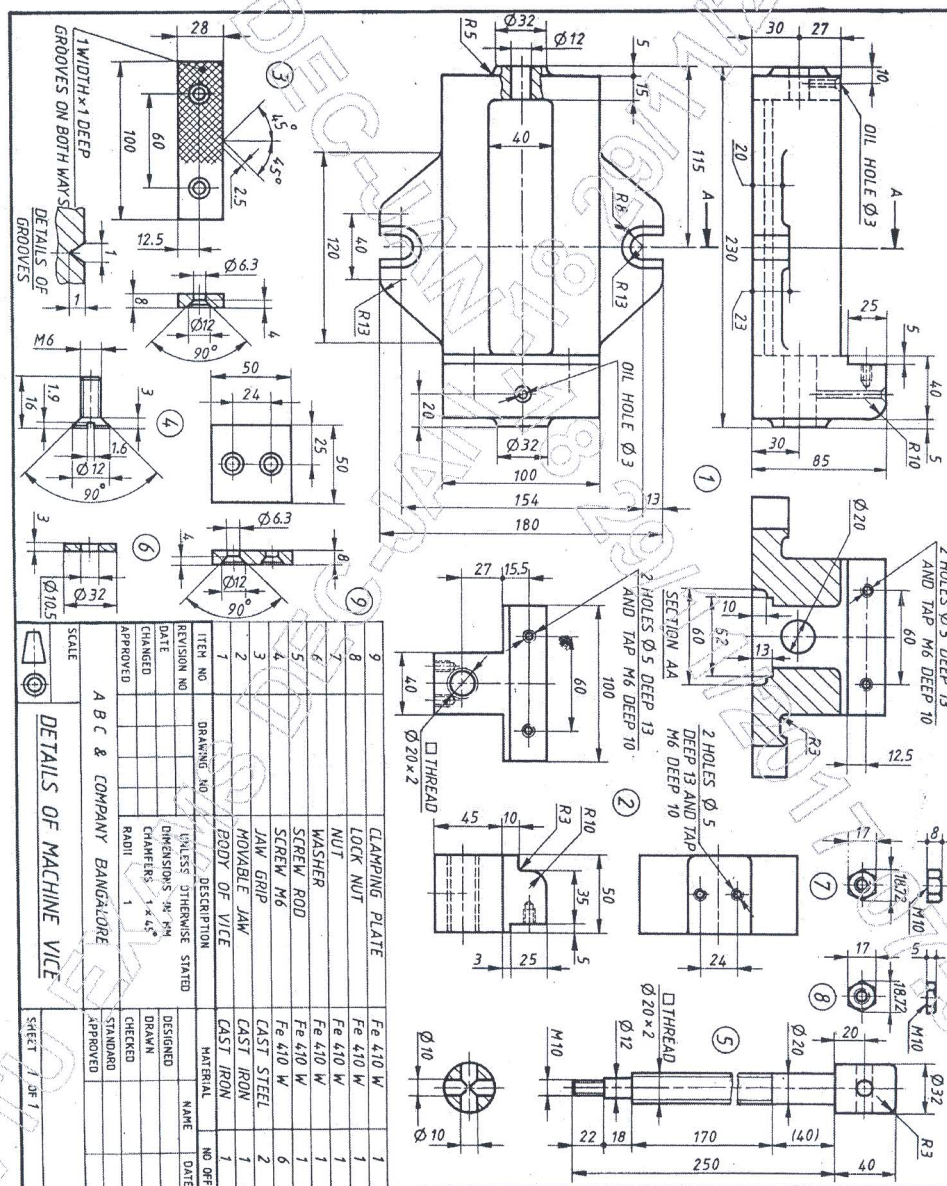


Figure 2

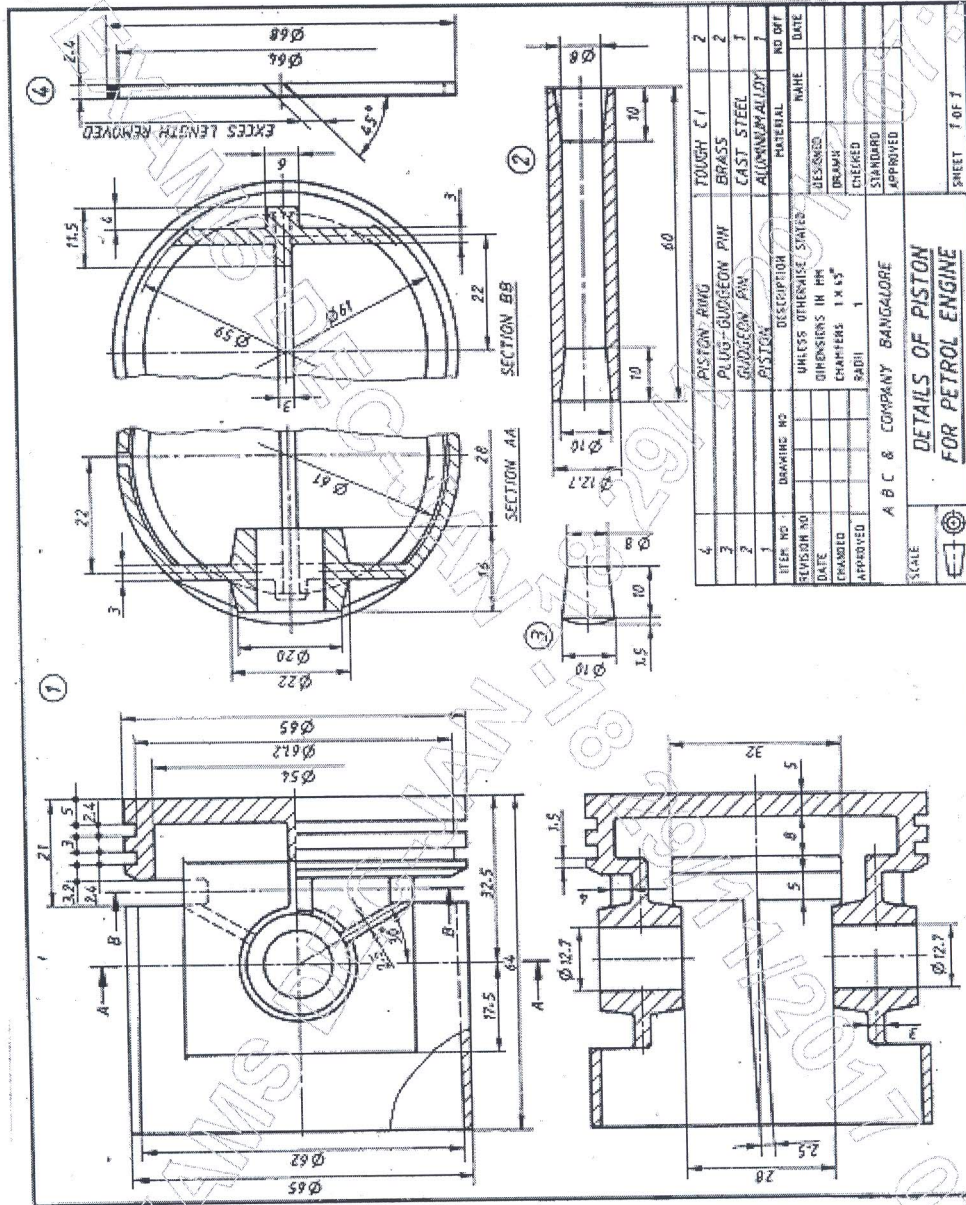


Figure 3

ITEM NO.	DESCRIPTION	QUANTITY	DATE
1	PISTON RING	2	
2	PLUG-GUDGEON PIN	2	
3	GUDGEON PIN	1	
4	PISTON	1	

DESIGNED	CHECKED	DATE

APPROVED	NAME	DATE

SCALE	SHEET
1:1	1 OF 1