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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:** 1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** A hexagonal pyramid side of base 30mm and altitude 70mm is rests with its base on the HP and with a side of base parallel to the VP. It is cut by a cutting plane inclined at 35° to the HP and perpendicular to the VP and is bisecting the axis. Draw the front view, the sectional view looking from the top and true shape of section. **(15 Marks)**
- Q.No.2** Draw the following External thread profiles, (minimum three threads)
 a) BSW thread b) ISO thread of pitch 50 mm. **(15 Marks)**

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Double Riveted Chain Butt Joint with Double Strap, Taking thickness $t = 12\text{mm}$. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw the sectional Front View & Side View of a Oldham's Coupling to connect two shafts of diameter 20mm. Indicate dimensions. **(15 Marks)**

PART - C

- Q.No.5** Details of "Plummer Block" are shown in following Figure 1. Assemble the parts and draw the following views.
 i) Left half sectional front view,
 ii) Top view. **(50 Marks)**
- Q.No.6** Details of "Tail Stock of Lathe" are shown in following Figure 2. Assemble the parts and draw the following views.
 i) Sectional front view,
 ii) Top view. **(50 Marks)**

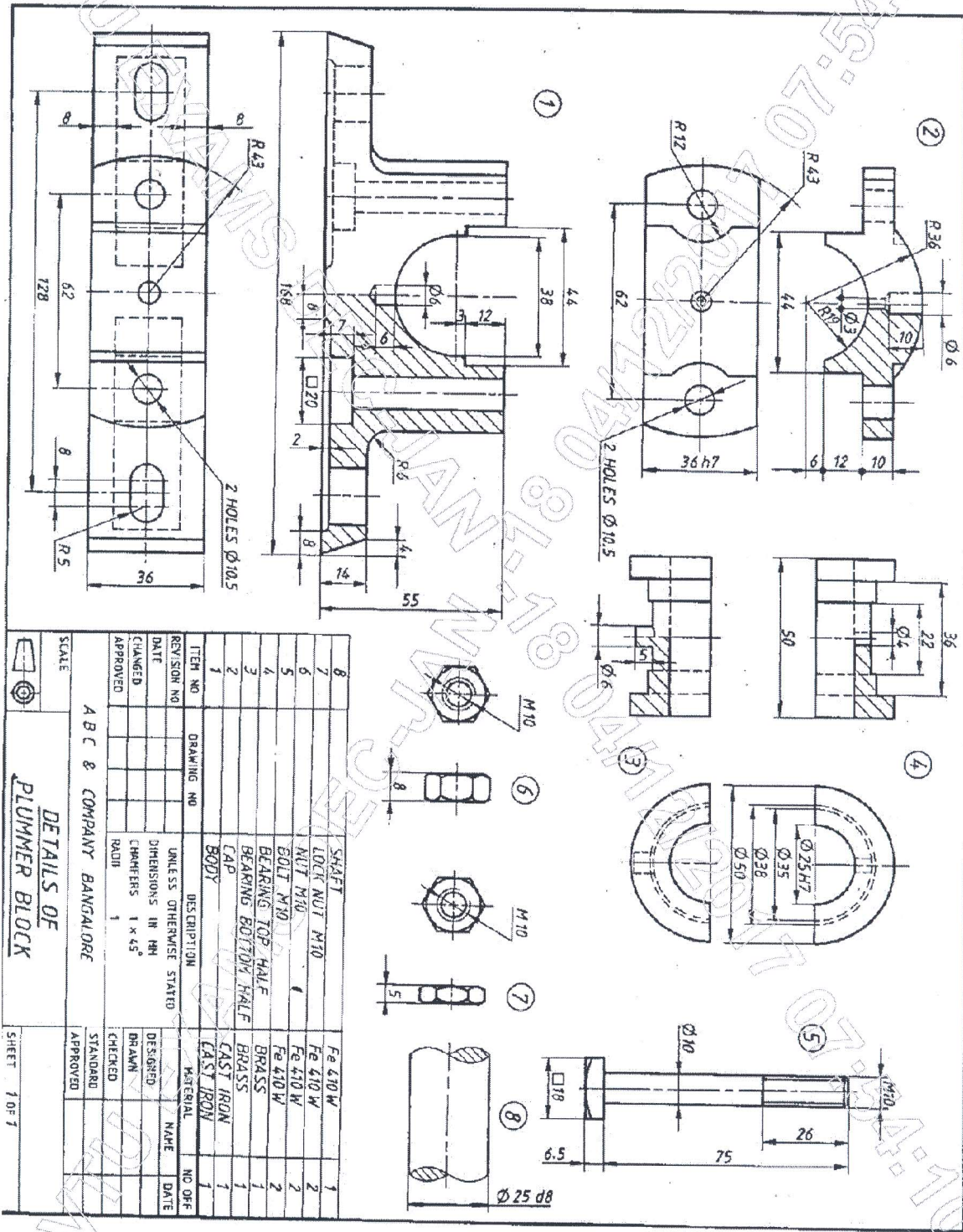


Figure 1. "Plummer Block"

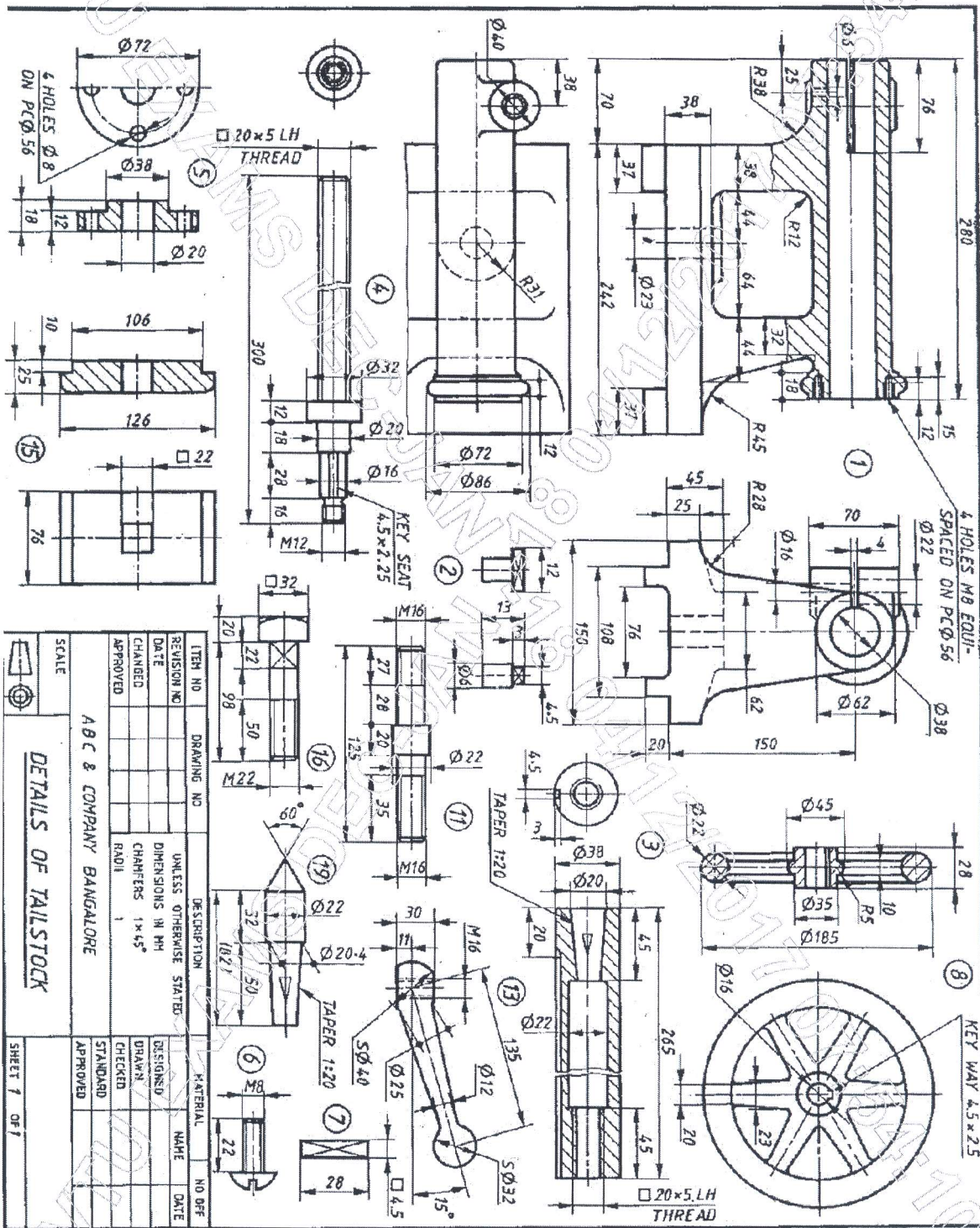


Figure 2. "Tail Stock of Lathe"

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

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Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Draw the following views for the given machine component. a) Front View b) Top view.
(15 Marks)

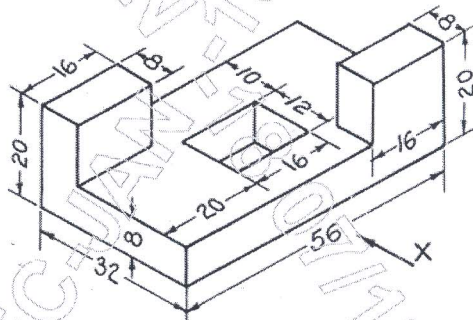


Figure 1.

- Q.No.2** Draw the two views of Hexagonal Headed Bolt M25 x 100 and a thread length of 60 mm, with a hexagonal nut. Indicate all the proportions and actual dimensions. (15 Marks)

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Double Riveted Zig Zag Lap Joint, taking thickness $t = 9$ mm. Indicate dimensions. (Minimum three rows) (15 Marks)
- Q.No.4** Draw sectional Front View and a view looking from socket end of a SOCKET and SPIGOT COTTER JOINT used for joining two rods of diameter 20mm. Indicate dimensions. (15 Marks)

PART - C

- Q.No.5** Details of MACHINE VICE is shown in following Figure 2. Assemble the parts and draw the following views.
a. Sectional Front View
b. Top View. (50 Marks)

Q.No.6 Details of I C ENGINE CONNECTING ROD is shown in following Figure 3. Assemble the parts and draw the following views.
 a. Sectional Front View b. Side View. (50 Marks)

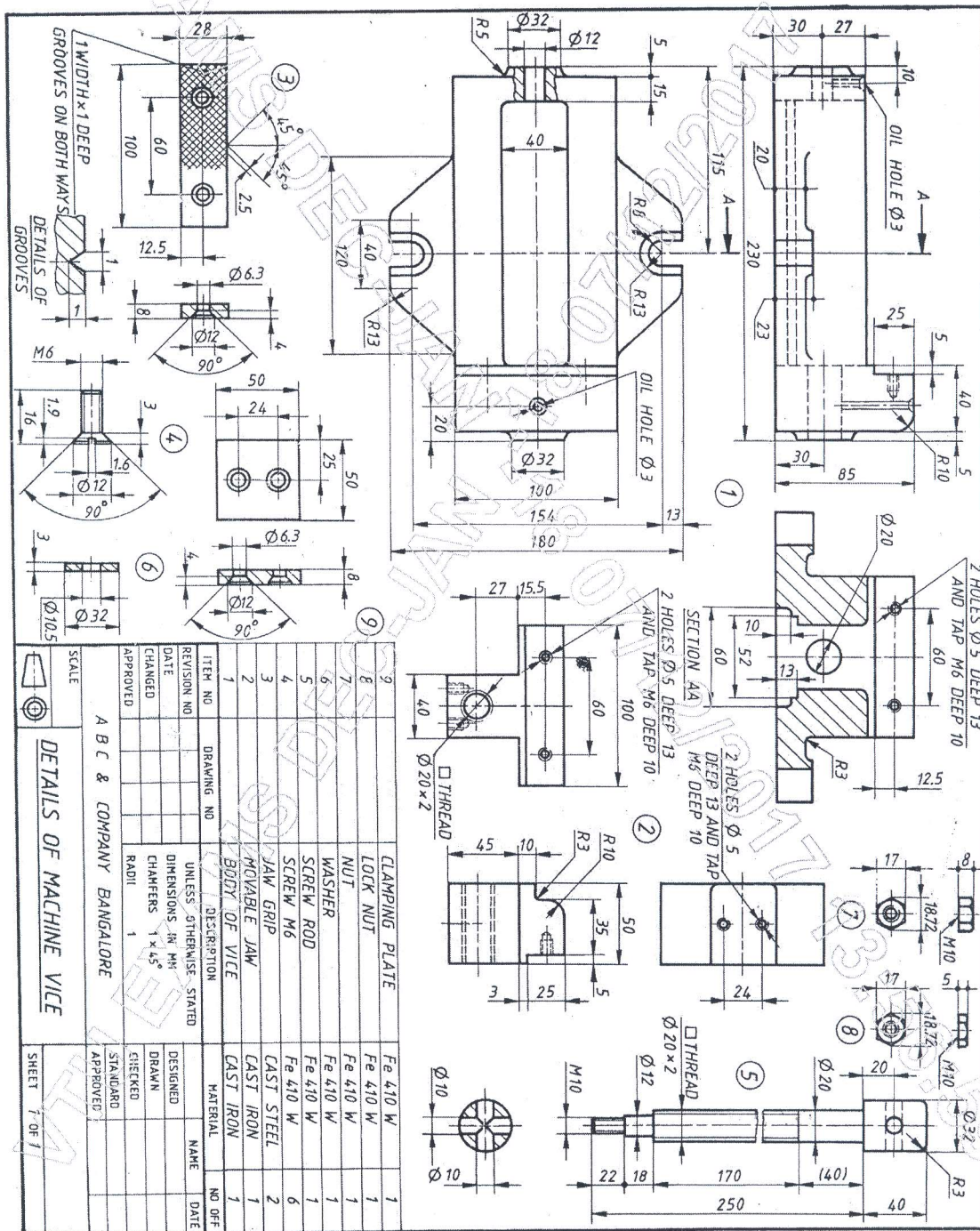


Figure 2. MACHINE VICE

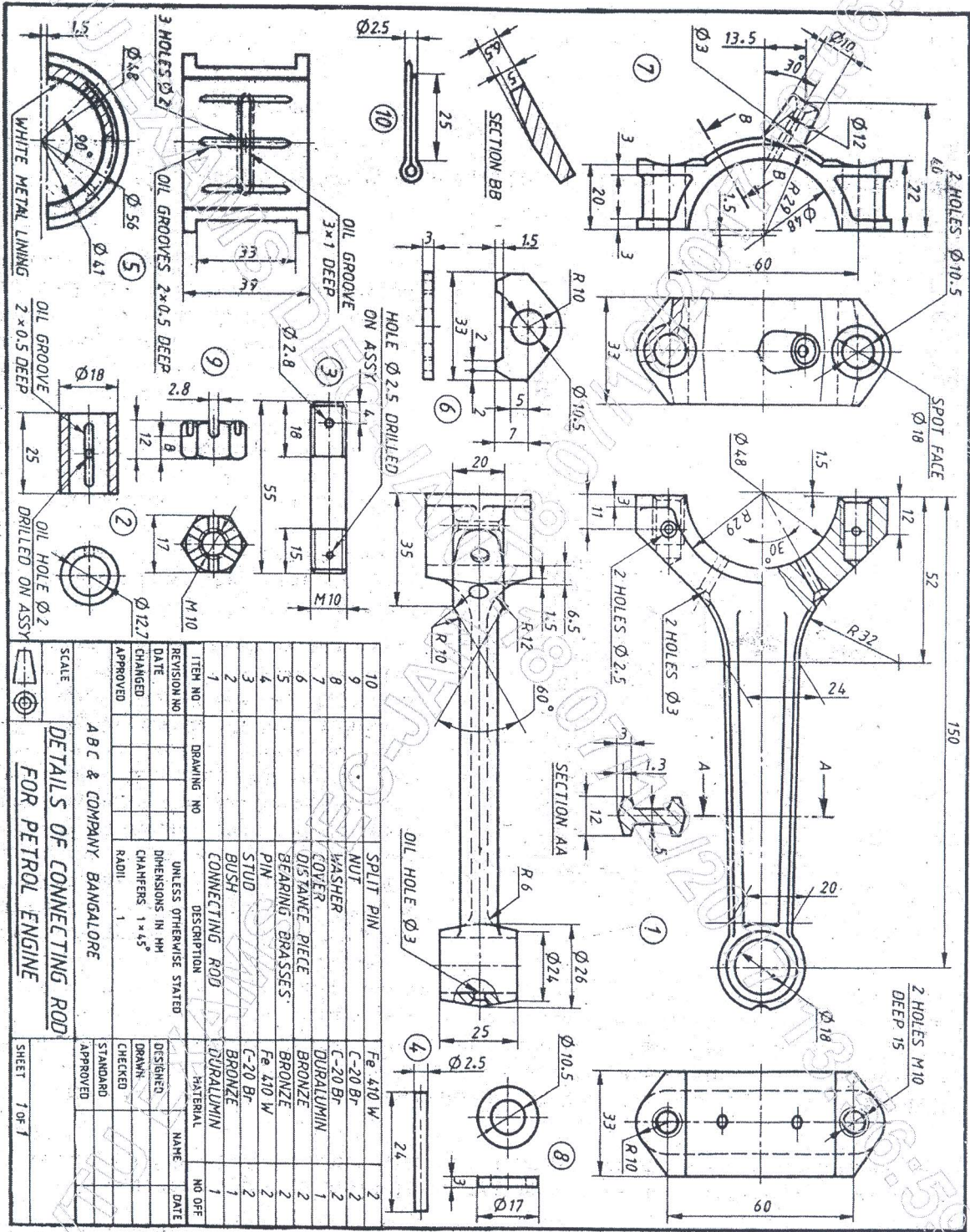


Figure 3. I C ENGINE CONNECTING ROD

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:** 1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Figure.1 shows a machine component Draw the following views.
 a) Front View b) Sectional Left side View

(15 Marks)

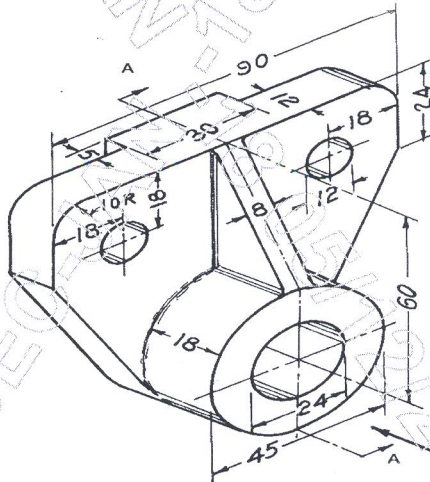


Figure 1.

- Q.No.2** Draw the two views of Hexagonal Headed Bolt M25 x 100 and a thread length of 60 mm, with a Hexagonal nut with Washer. Indicate all the proportions and actual dimensions.

(15 Marks)

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Single Riveted Butt Joint, with single cover plate Zig Zag riveting taking thickness $t = 9$ mm. Indicate dimensions. (Minimum three rows)
- Q.No.4** Draw the following views of a 'Pin Type Flexible Coupling' used to connect two shafts of 30 mm diameter. (i) Front View with Top Half In Sectional (ii) Side View from the pin end.

(15 Marks)

PART - C

Q.No.5 Details of "SCREW JACK" is shown in following Figure 2. Assemble the parts and draw the following views. (a) Sectional Front View (b) Top View. **(50 Marks)**

Q.No.6 Details of "RAMS BOTTOM SAFETY VALVE" is shown in following Figure 3. Assemble the parts and draw the following views. (a) Front View (b) Top View. **(50 Marks)**

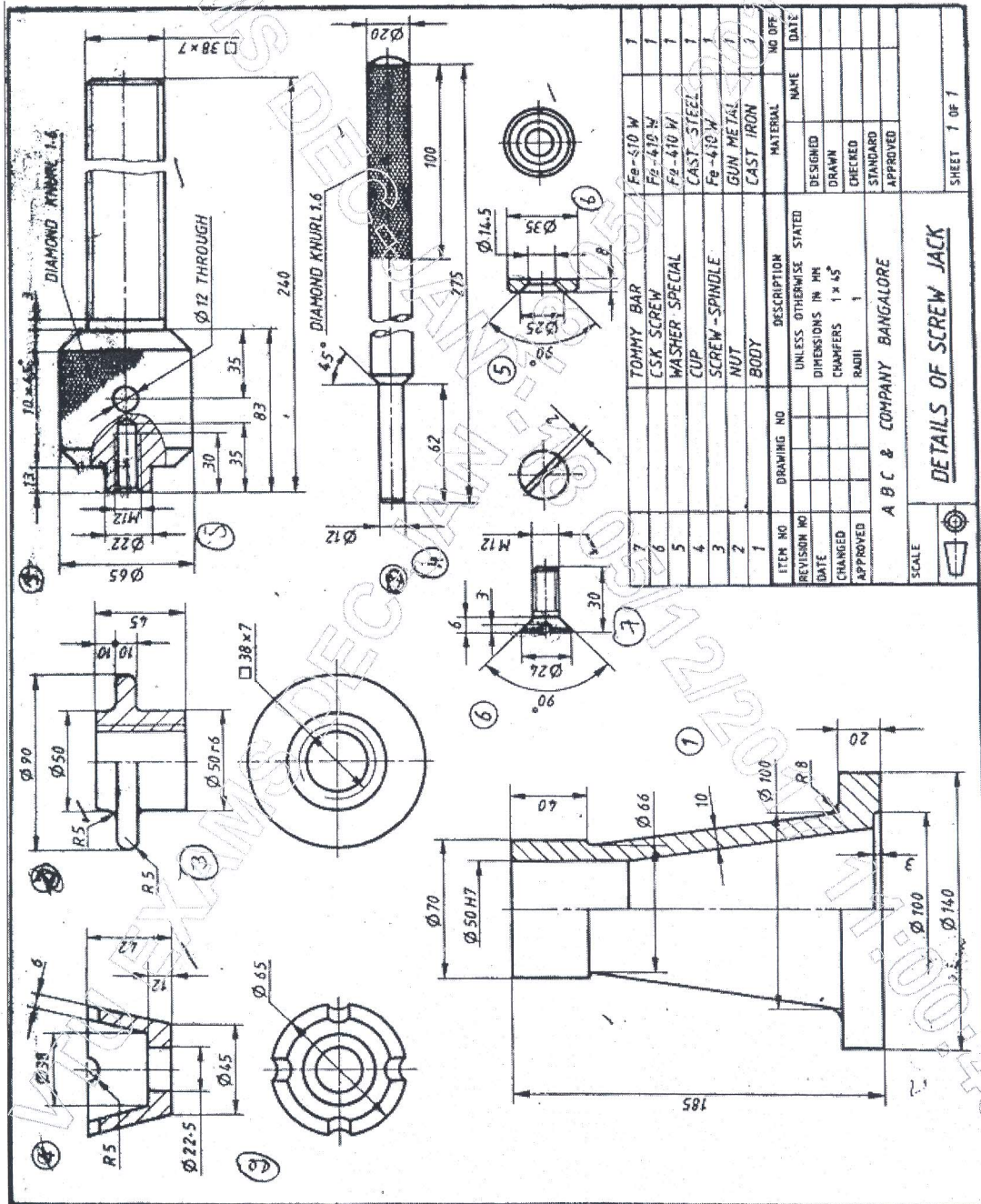


Figure 2. "SCREW JACK"

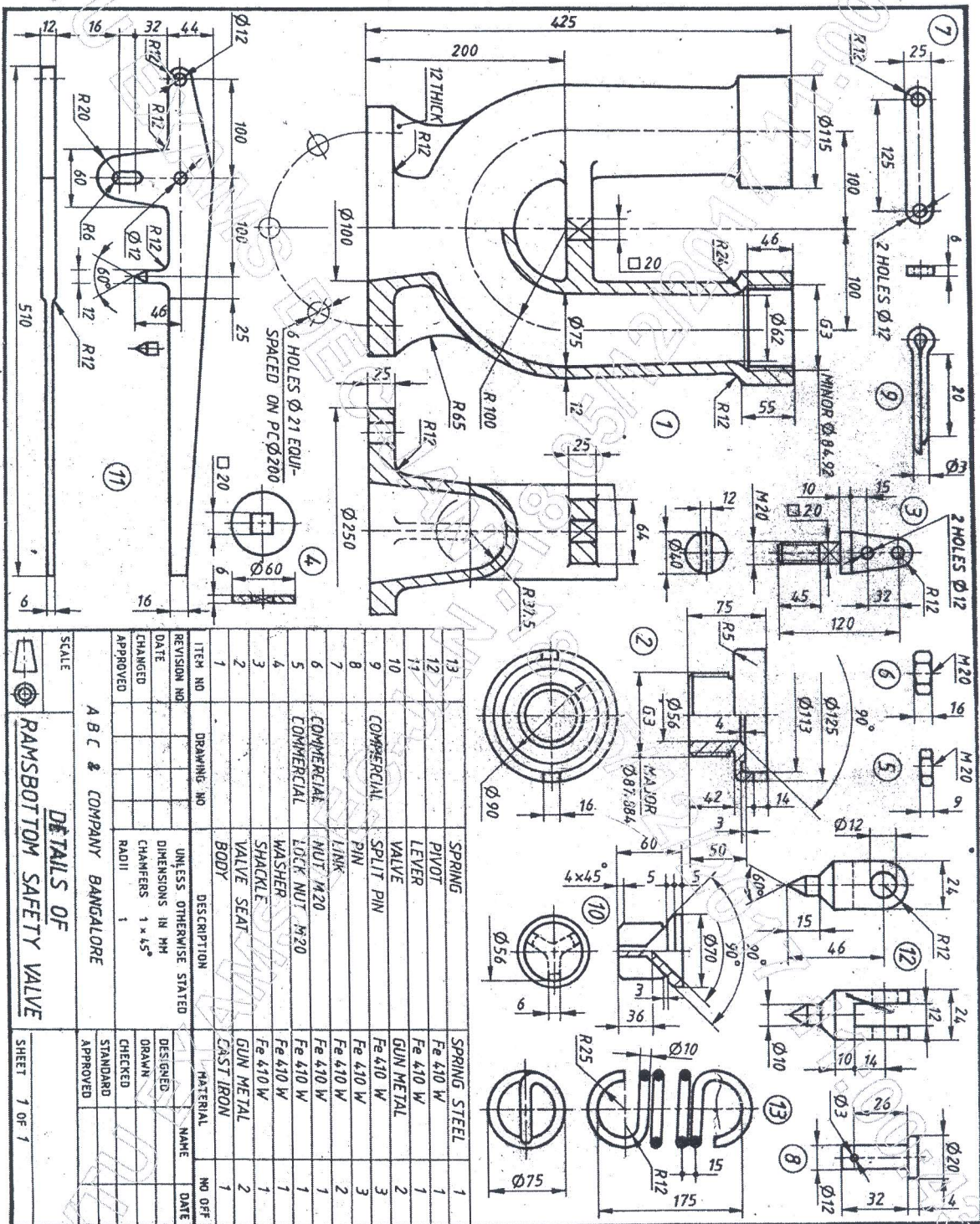


Figure 3. "RAMS BOTTOM SAFETY VALVE"

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Figure.1 shows a machine component Draw the following views. a) Front View
b) Top View. **(15 Marks)**

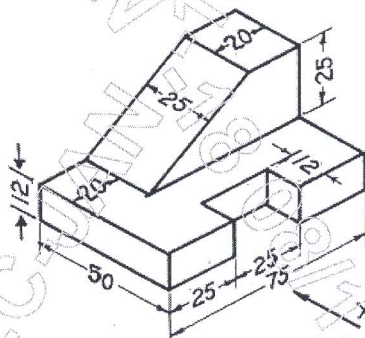


Figure.1

- Q.No.2** Draw the two views of Hexagonal Headed Bolt M25 x 100 and a thread length of 60 mm, with a Hexagonal nut with Washer. Indicate all the proportions and actual dimensions. **(15 Marks)**

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Single Riveted Butt Joint, with single cover plate Chain riveting. Taking thickness $t = 9$ mm. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw the following views of a 'Pin Type Flexible Coupling' used to connect two shafts of 30 mm diameter. a) Front View with Top half in sectional b) Side View from the pin end. **(15 Marks)**

PART - C

- Q.No.5** Details of SCREW JACK is shown in following Figure 2. Assemble the parts and draw the following views. (a) Sectional Front View (b) Top View. **(50 Marks)**

Q.No.6 Details of TAILSTOCK of a Lathe is shown in following Figure 3. Assemble the parts and draw the following views. (a) Sectional Front View (b) Top View. (50 Marks)

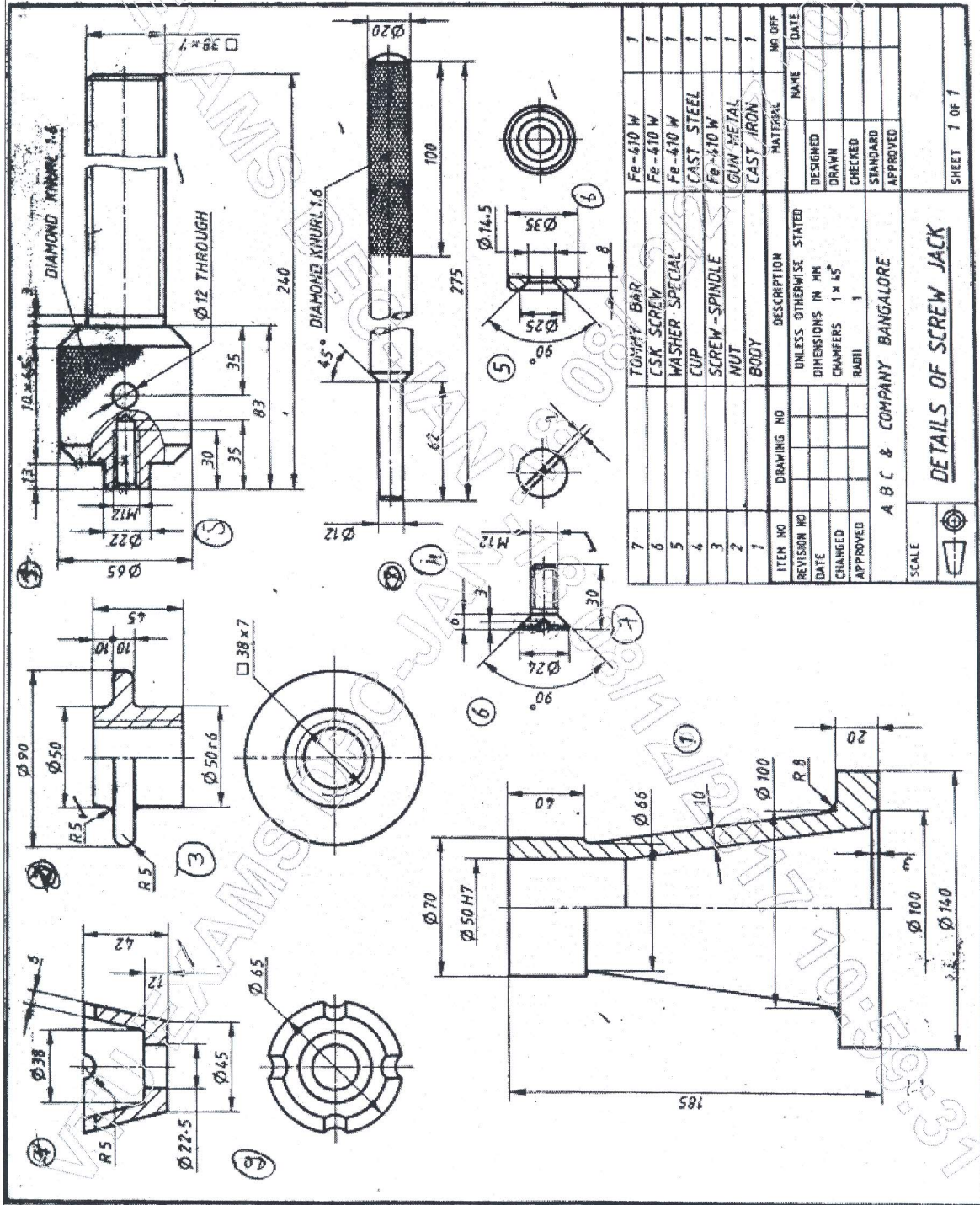


Figure 2. SCREW JACK

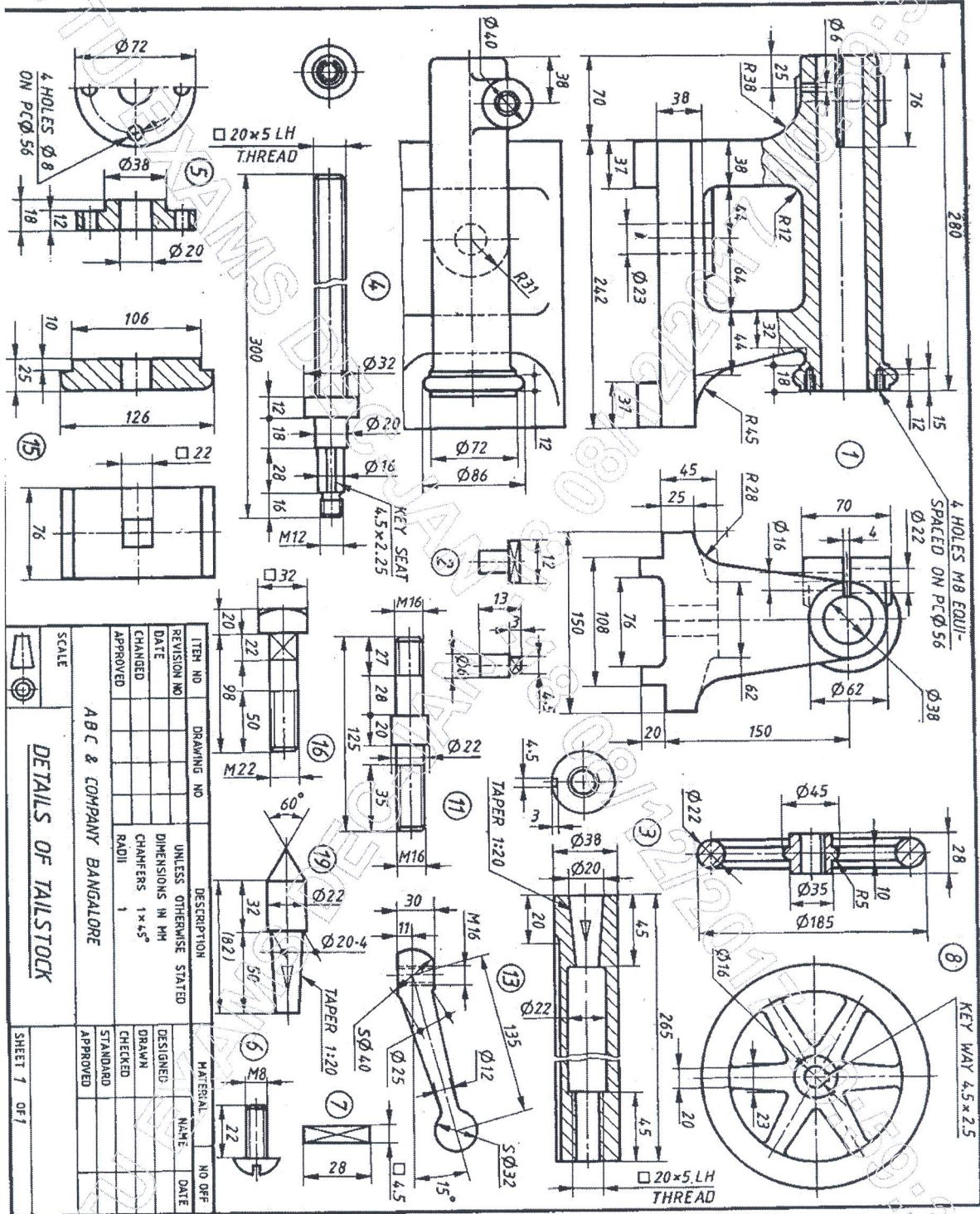


Figure 3. TAILSTOCK OF A LATHE

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:** 1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** A cone of base diameter 50mm and height 60mm stands with its base on the HP. It is cut by a VT inclined at 70° to the reference line XY and is passing through the apex of the cone. Draw its front view, sectional top view and true shape of section. **(15 Marks)**
- Q.No.2** Draw the following External thread profiles. (Minimum three threads)
 a) Sellers thread of pitch 45 mm
 b) ACME thread of pitch 40 mm **(15 Marks)**

PART - B

- Q.No.3** Draw sectional Front View & Top View of the double riveted zigzag butt joint with double strap, taking $t = 10\text{mm}$. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw sectional FV and side view of a protected type flange coupling to connect two shafts of diameter 30mm. Indicate dimensions. **(15 Marks)**

PART - C

- Q.No.5** Details of "SQUARE TOOL POST" is shown in following figure 1. Assemble the parts and draw the following views.
 a) Sectional front view,
 b) Top view. **(50 Marks)**
- Q.No.6** Details of "TAILSTOCK OF LATHE" is shown in following figure 2. Assemble the parts and draw the following views.
 a) Sectional front view
 b) Top view. **(50 Marks)**

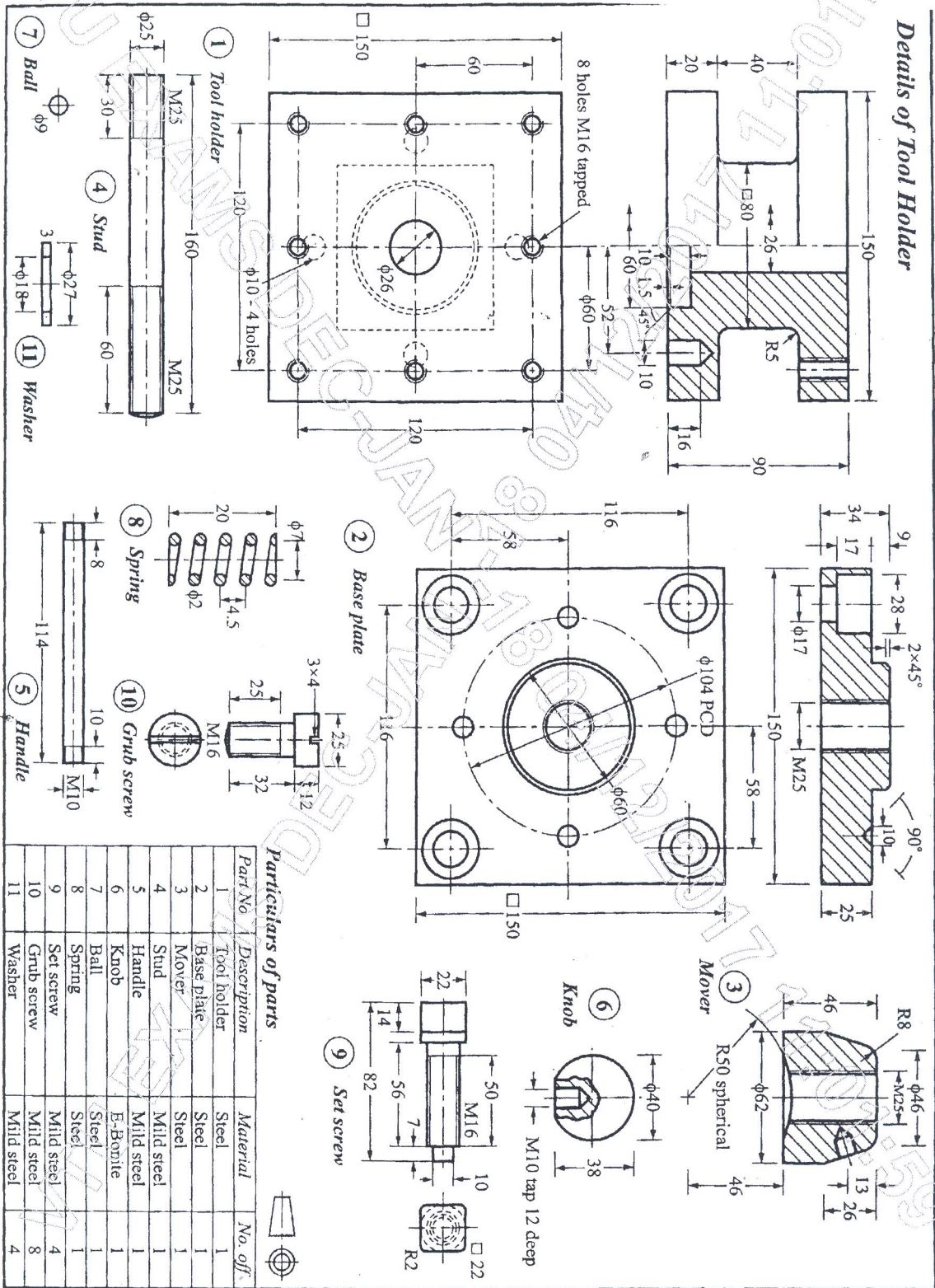


Figure 1. "SQUARE TOOL POST"

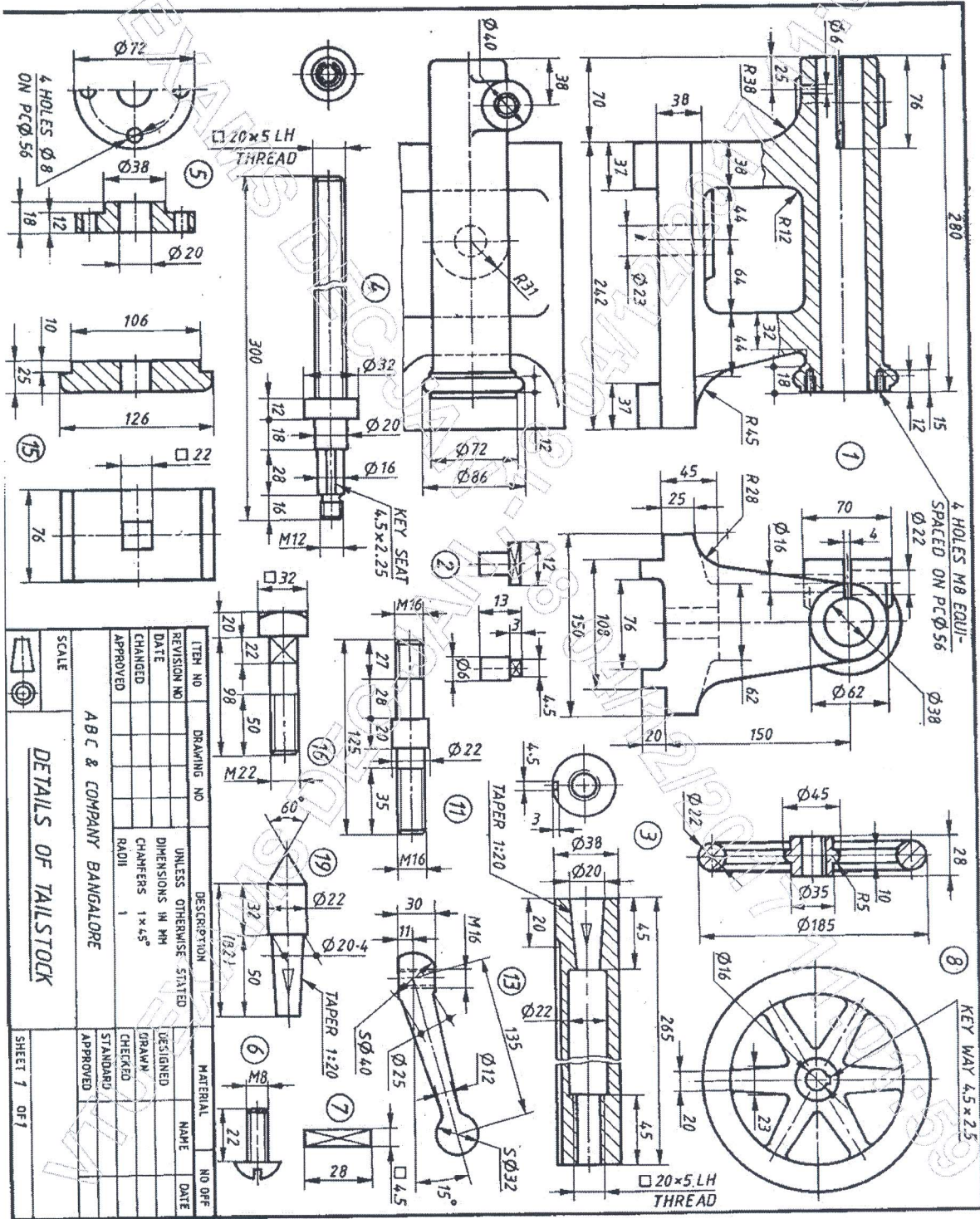


Figure 2. "TAILSTOCK OF LATHE"

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** A rectangular Prism of height 80 mm and cross section 48 x 32 mm is resting on HP with its base. It is Cut by a section Plane In such a way that the true shape of section is a square of sides of maximum dimension. Draw the front view and determine the inclination of section plane to the reference plane. Also draw the sectional top view and true shape of section. **(15 Marks)**
- Q.No.2** Draw the following External thread profiles. (Minimum three threads in section)
- a) ACME Thread of pitch 40 mm
 - b) Square Thread of pitch 40 mm
- (15 Marks)**

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Single Riveted Chain Butt Joint with double strap, taking thickness $t = 09$ mm. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw sectional Front View and Top View of a Knuckle Joint, take diameter of rods equal to 25mm. Indicate dimensions. **(15 Marks)**

PART - C

- Q.No.5** Details of SQUARE TOOL POST of a Lathe is shown in following Figure 1. Assemble the parts and draw the following views. **(50 Marks)**
- Q.No.6** Details of SCREW JACK is shown in following Figure 2. Assemble the parts and draw the following views. **(50 Marks)**
- a. Sectional Front View
 - b. Top View.

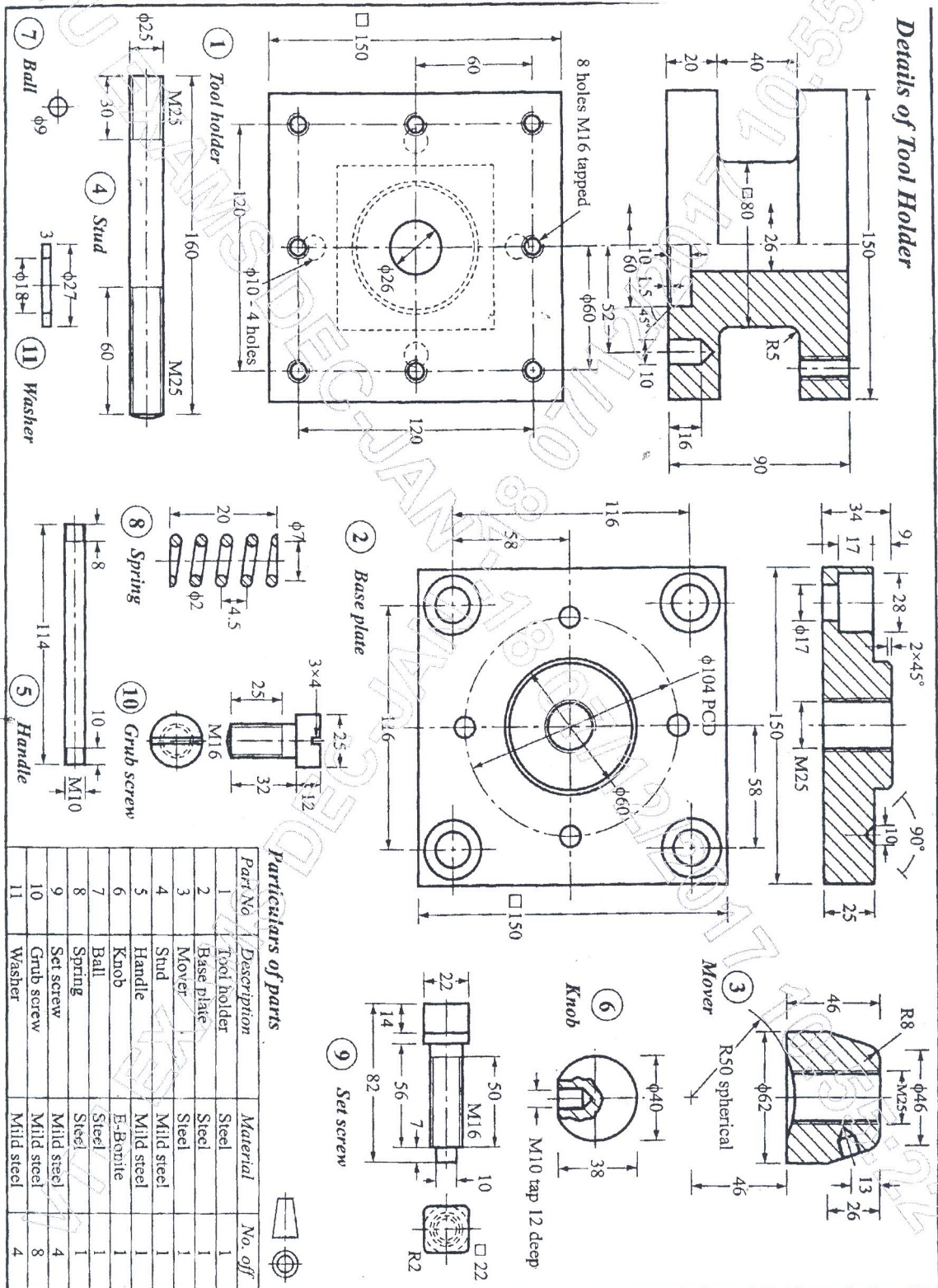


Figure. 1. SQUARE TOOL POST OF A LATHE

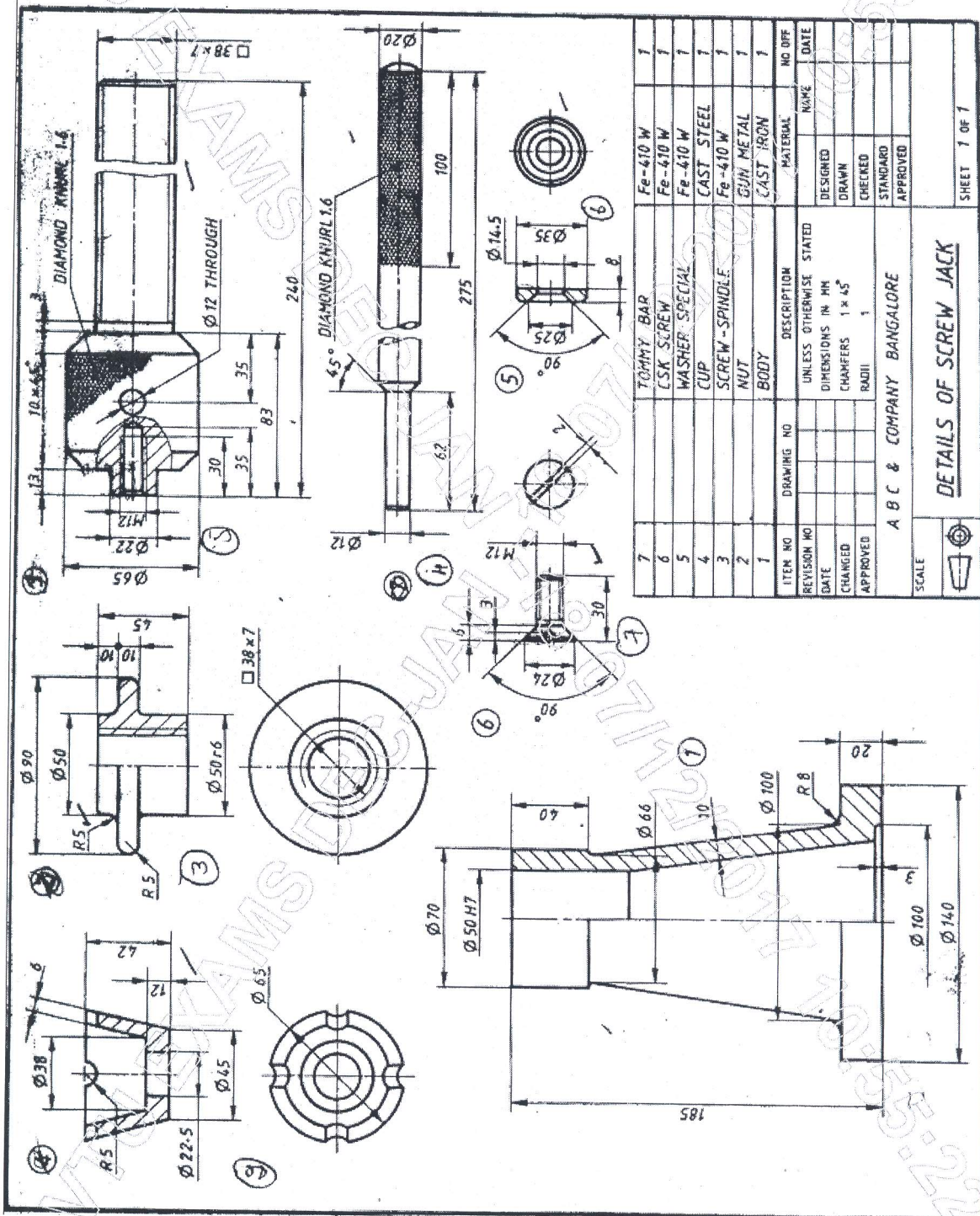


Figure. 2 – SCREW JACK

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

- Note:** 1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Following Figure.1 Shows a Machine Component. Draw a) Front View b) Top View
 c) Side View from Left. **(15 Marks)**

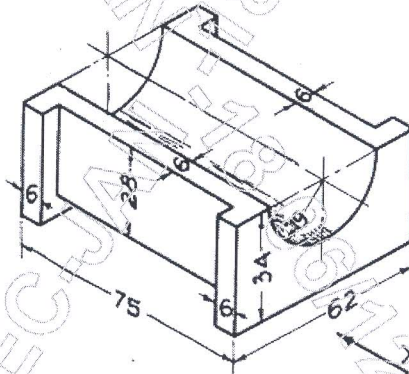


Figure.1

- Q.No.2** Draw two views of a ISO Threaded Stud with Hexagonal Nut taking diameter $d = 25$ mm, and overall length of the stud 120 mm and thread length = 60 mm. **(15 Marks)**

PART - B

- Q.No.3** Draw Sectional Front View with Top Half in Section and Top View of a GIB & COTTER Joint. Assume sides of the square rods $s=20$ mm. all other proportions should be in terms of mm. **(15 Marks)**
- Q.No.4** Draw Sectional Front View & Top View of the Single riveted Lap joint, taking thickness $t = 09$ mm. Indicate dimensions. (Minimum three rows) **(15 Marks)**

PART - C

- Q.No.5** Details of SCREW JACK is shown in following Figure 2. Assemble the parts and draw the following views.
 a. Right half sectional Front View, b. Top View. **(50 Marks)**

Q.No.6 Details of MACHINE VICE is shown in following Figure 3. Assemble the parts and draw the following views. (a) Sectional Front View (b) Top view. (50 Marks)

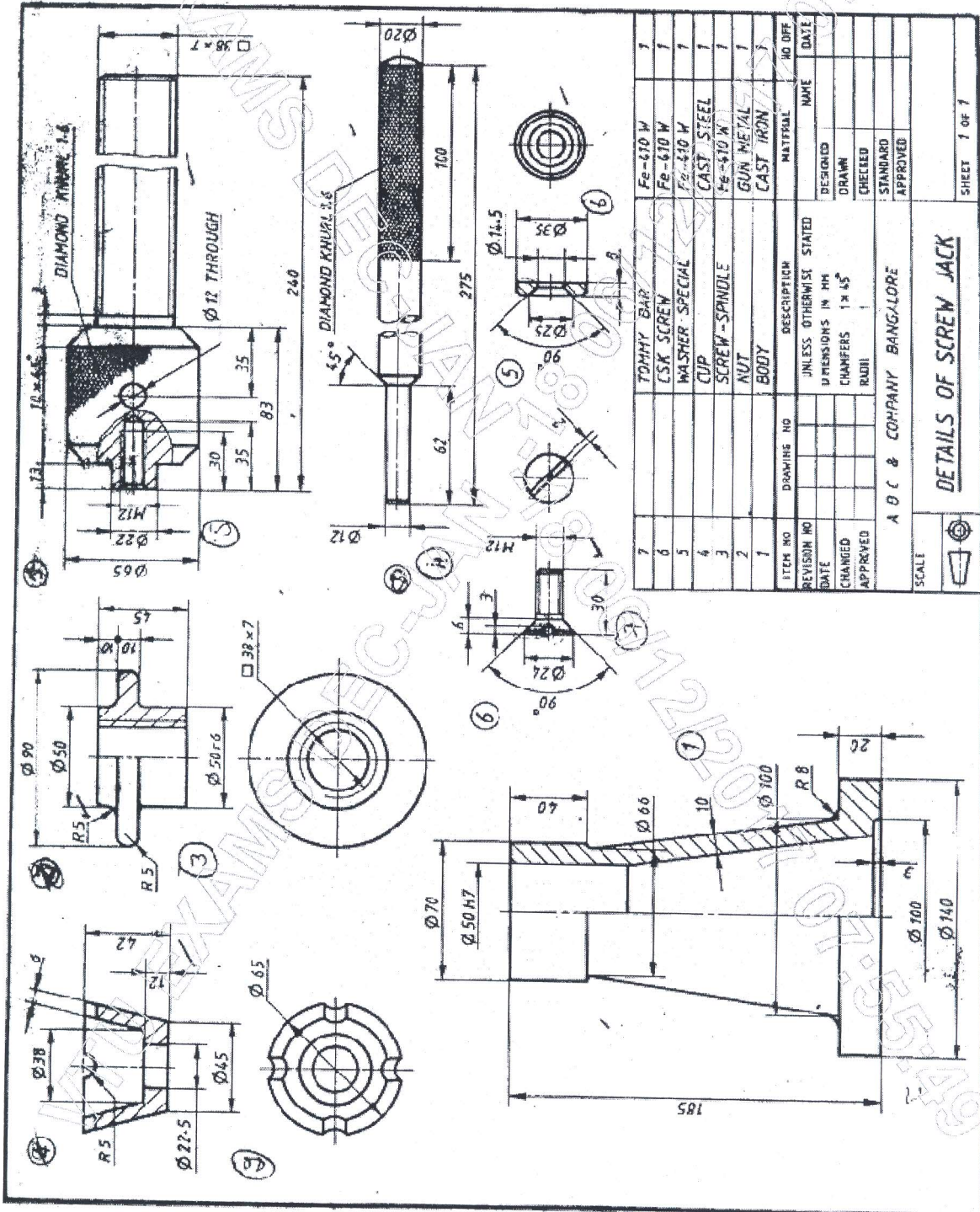


Figure 2. SCREW JACK

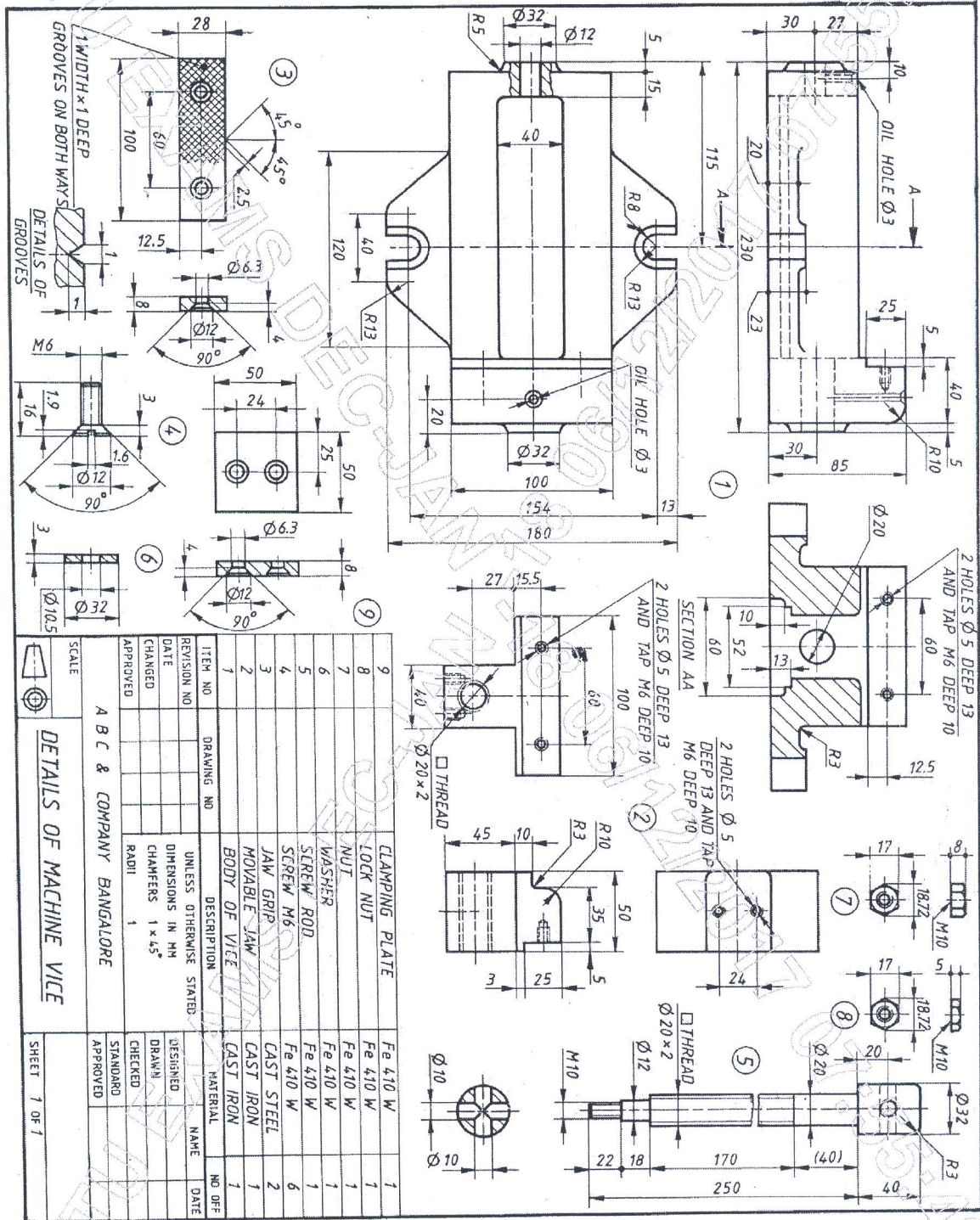


Figure 3 – MACHINE VICE

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours,

Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Figure.1 shows a machine component Draw the following views. a) Front View
b) Top view. **(15 Marks)**

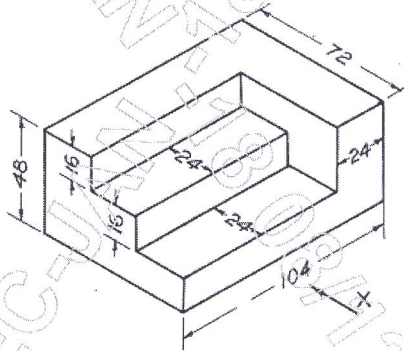


Figure.1

- Q.No.2** Draw the two views of Square Headed Bolt M25 x 100 and a thread length of 60 mm, with a Square nut. Indicate all the proportions and actual dimensions. **(15 Marks)**

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Double Riveted Lap Joint, with Zig Zag riveting. Taking thickness $t = 9$ mm. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw the following views of a 'Universal Coupling' used to connect two 20 mm diameter shafts. a) Sectional Front View b) Profile View. **(15 Marks)**

PART - C

- Q.No.5** Details of SCREW JACK is shown in following Figure 2. Assemble the parts and draw the following views.
a. Sectional Front View b. Top View. **(50 Marks)**

Q.No.6 Details of RAMS BOTTOM SAFETY VALVE. is shown in following Figure 3. Assemble the parts and draw the following views.

a. Front View

b. Top View.

(50 Marks)

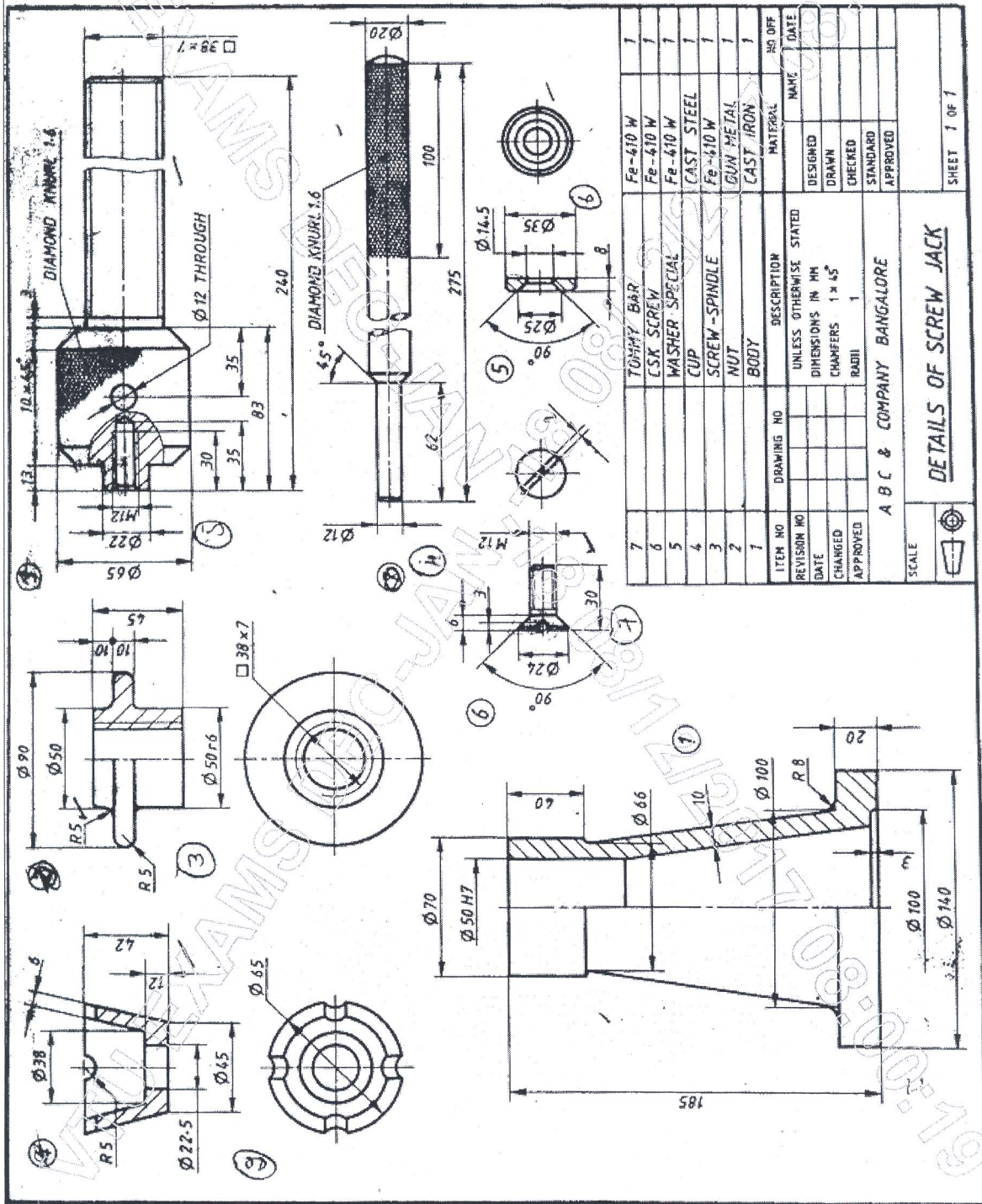


Figure 2. SCREW JACK

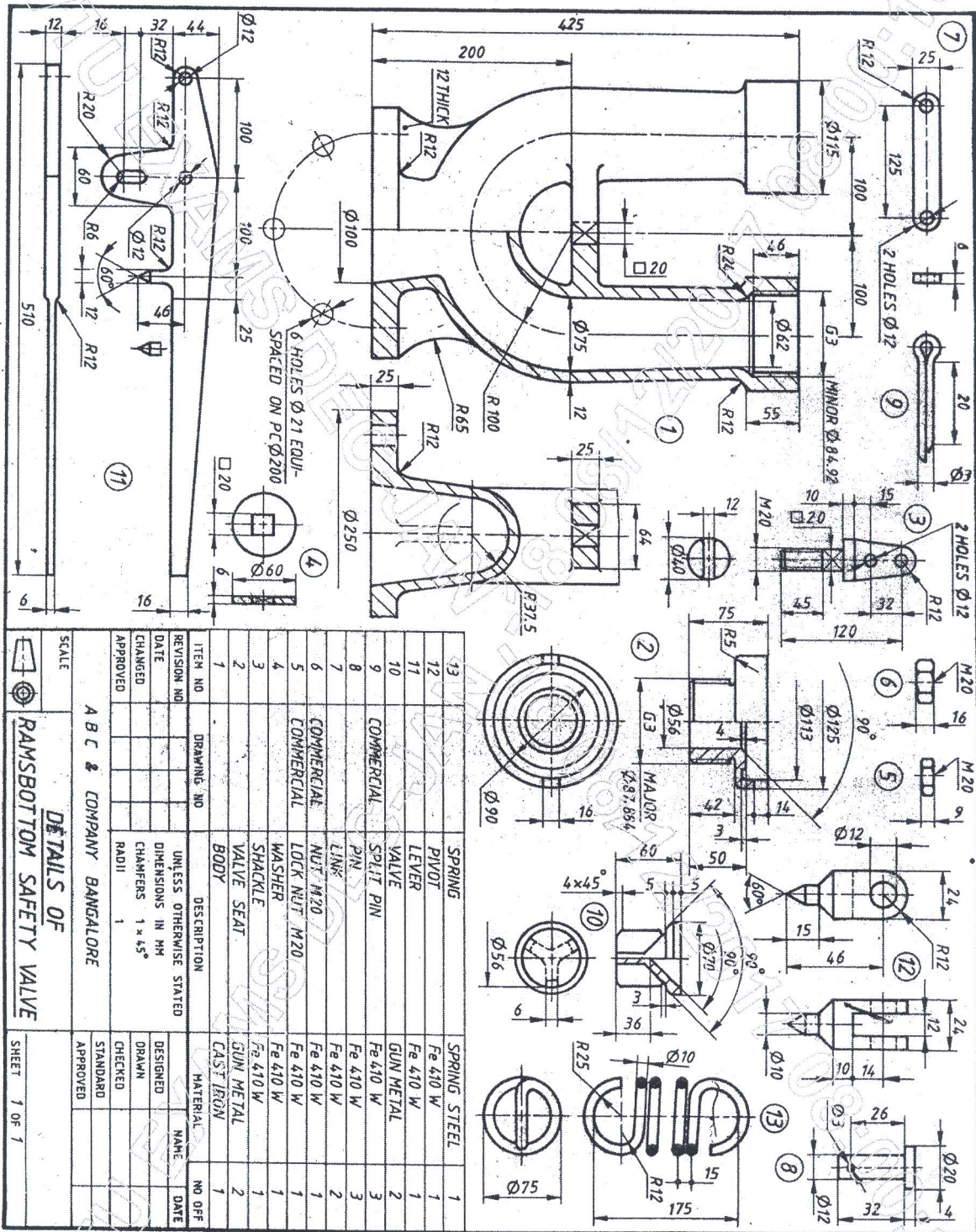


Figure.3 RAMS BOTTOM SAFETY VALVE

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Third/Fourth Semester B.E. Degree Examination, December 2017

(ME/MA)

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Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** Draw the following views for the given machine component. a) Front View b) Top view. (15 Marks)

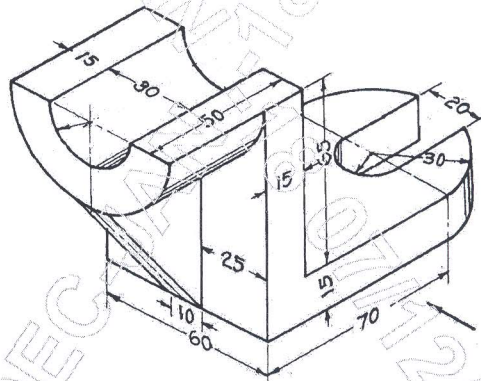


Figure 1.

- Q.No.2** Draw the two views of Square Headed Bolt M25 x 100 and a thread length of 60 mm with a hexagonal nut. Indicate all the proportions and actual dimensions. (15 Marks)

PART - B

- Q.No.3** Draw sectional Front View & Top View of the Single riveted Chain Butt joint, with single strap taking thickness $t = 9$ mm. Indicate dimensions. (Minimum three rows) (15 Marks)

- Q.No.4** Draw sectional Front View and a view looking from socket end of a SOCKET and SPIGOT COTTER JOINT used for joining two rods of diameter 20mm. Indicate dimensions. (15 Marks)

PART - C

- Q.No.5** Details of MACHINE VICE is shown in following Figure 2. Assemble the parts and draw the following views. (a) Sectional Front View (b) Top View. (50 Marks)

Q.No.6 Details of I C ENGINE CONNECTING ROD is shown in following Figure 3. Assemble the parts and draw the following views.
 a. Sectional Front View b. Side View. **(50 Marks)**

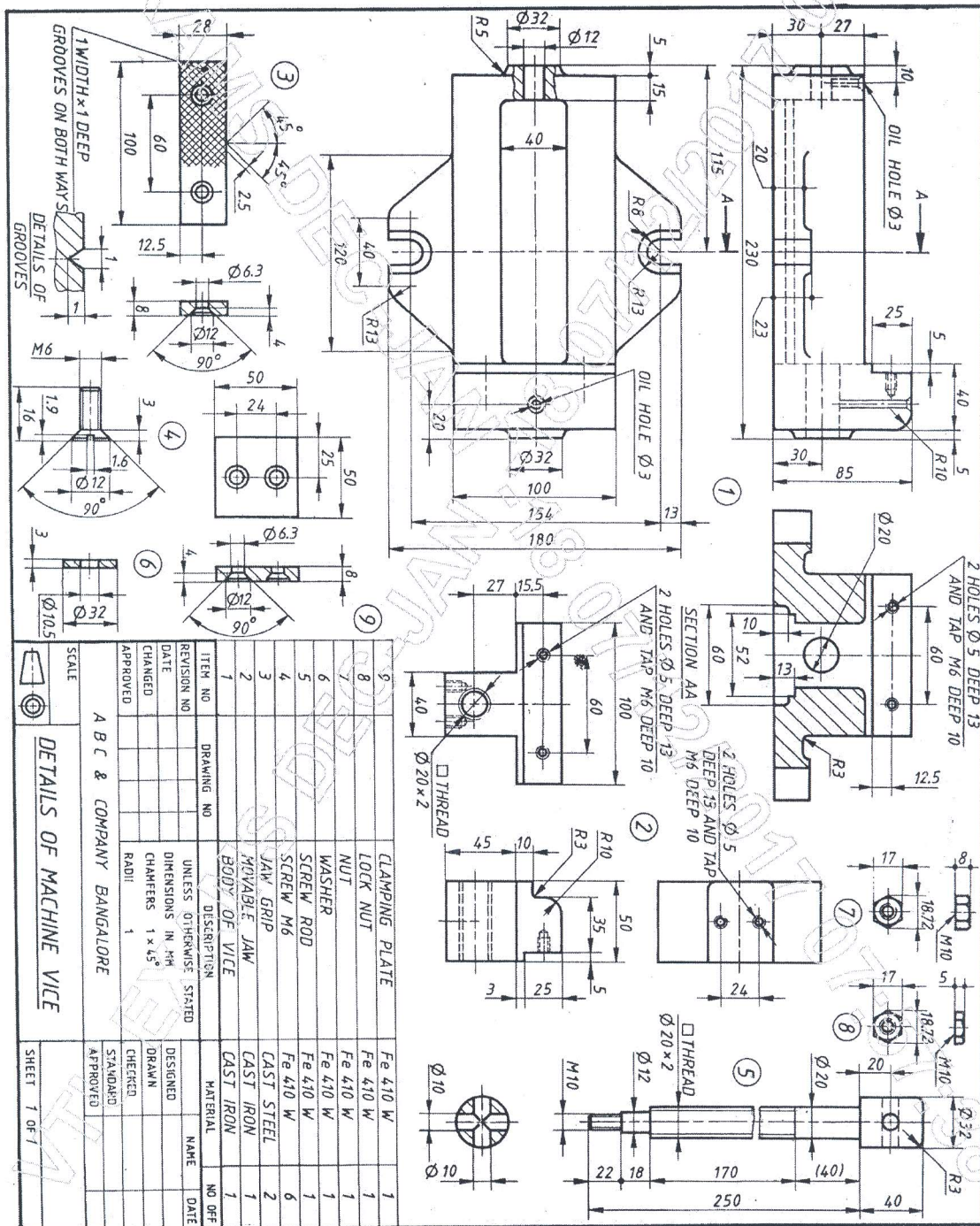


Figure 2. MACHINE VICE

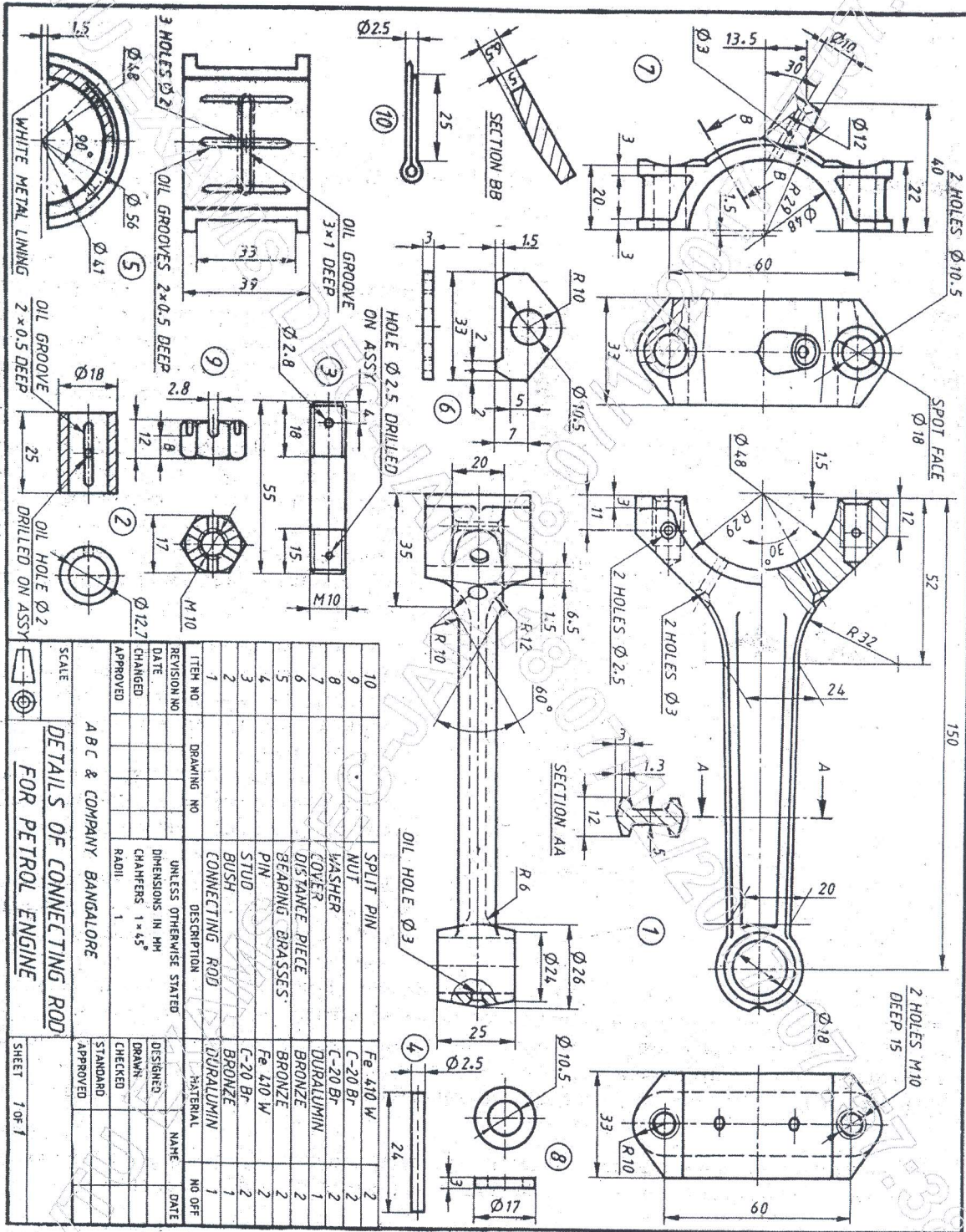


Figure 3. I C ENGINE CONNECTING ROD

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Third/Fourth Semester B.E. Degree Examination, December 2017

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Max. Marks: 80

- Note:**
1. Answer any ONE question from each of the parts A, B and C.
 2. Use **FIRST ANGLE** projection only.
 3. Missing data if any may suitably be assumed.
 4. All the calculations should be on answer sheet supplied.
 5. All the dimensions are in mm.
 6. **Part C Assembled View should be in 3D and other 2 views in 2D.**

PART - A

- Q.No.1** A cube of sides 40mm is cut by a VT, so that the true shape of the section is an equilateral triangle of sides of maximum length. Draw the sectional top view and true shape of the section. Determine the inclination of the section plane with HP and also measure the sides of the equilateral triangle. **(15 Marks)**
- Q.No.2** Draw the following External thread profiles. (Minimum three threads in section)
- a) BSW thread of pitch 40 mm
 - b) Square thread of pitch 40 mm
- (15 Marks)**

PART - B

- Q.No.3** Draw sectional F V & T V of the double riveted chain butt joint with single strap, taking thickness $t = 09$ mm. Indicate dimensions. (Minimum three rows) **(15 Marks)**
- Q.No.4** Draw sectional FV and top view of a Knuckle Joint, take diameter of rods equal to 25mm. Indicate dimensions. **(15 Marks)**

PART - C

- Q.No.5** Details of "SQUARE TOOL POST" is shown in following Figure 1. Assemble the parts and draw the following views.
- a. Sectional Front View,
 - b. Top View.
- (50 Marks)**
- Q.No.6** Details of "MACHINE VICE" is shown in following Figure 2. Assemble the parts and draw the following views.
- a. Sectional Front View,
 - b. Side View.
- (50 Marks)**

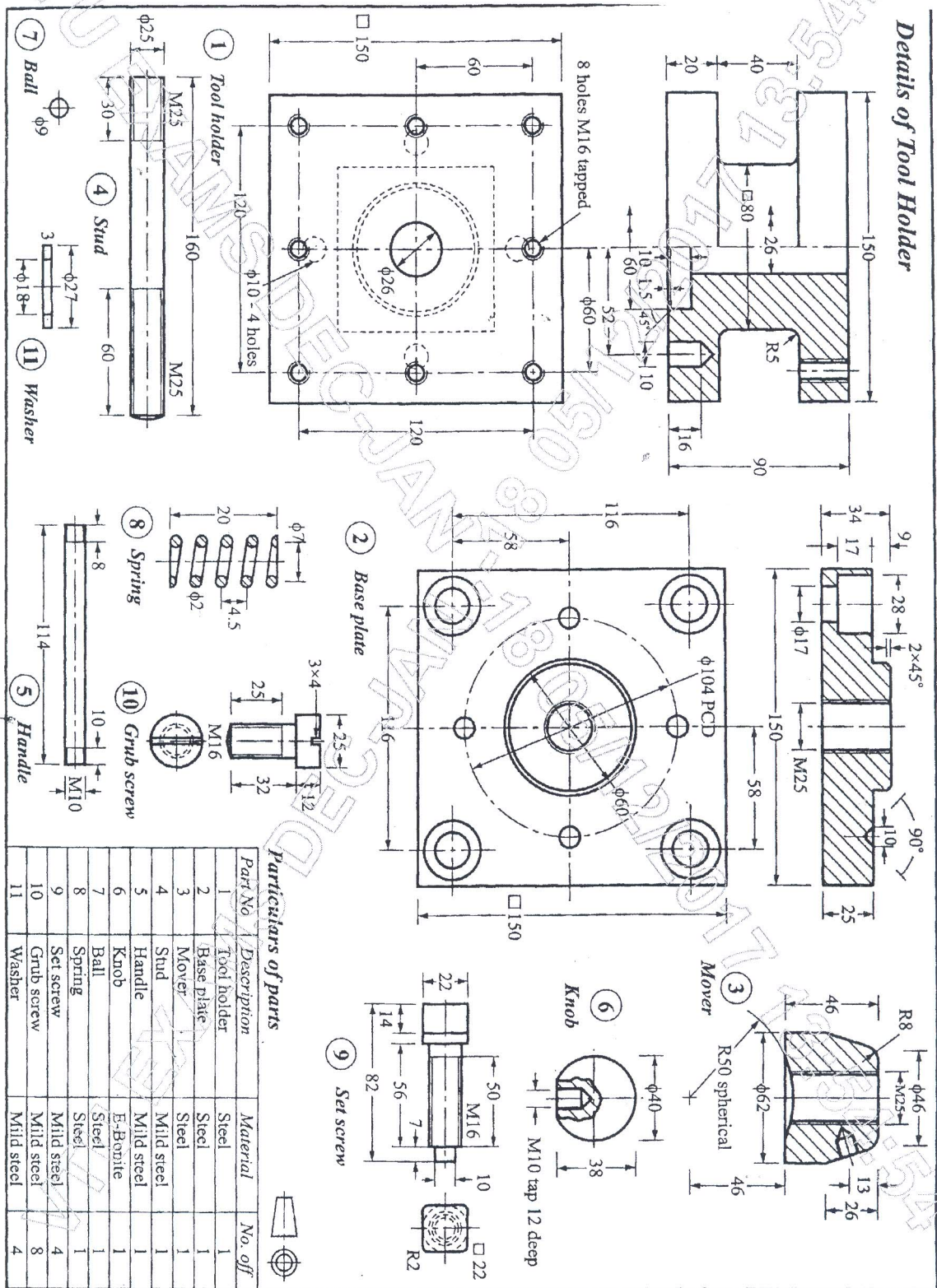


Figure 1. "SQUARE TOOL POST"

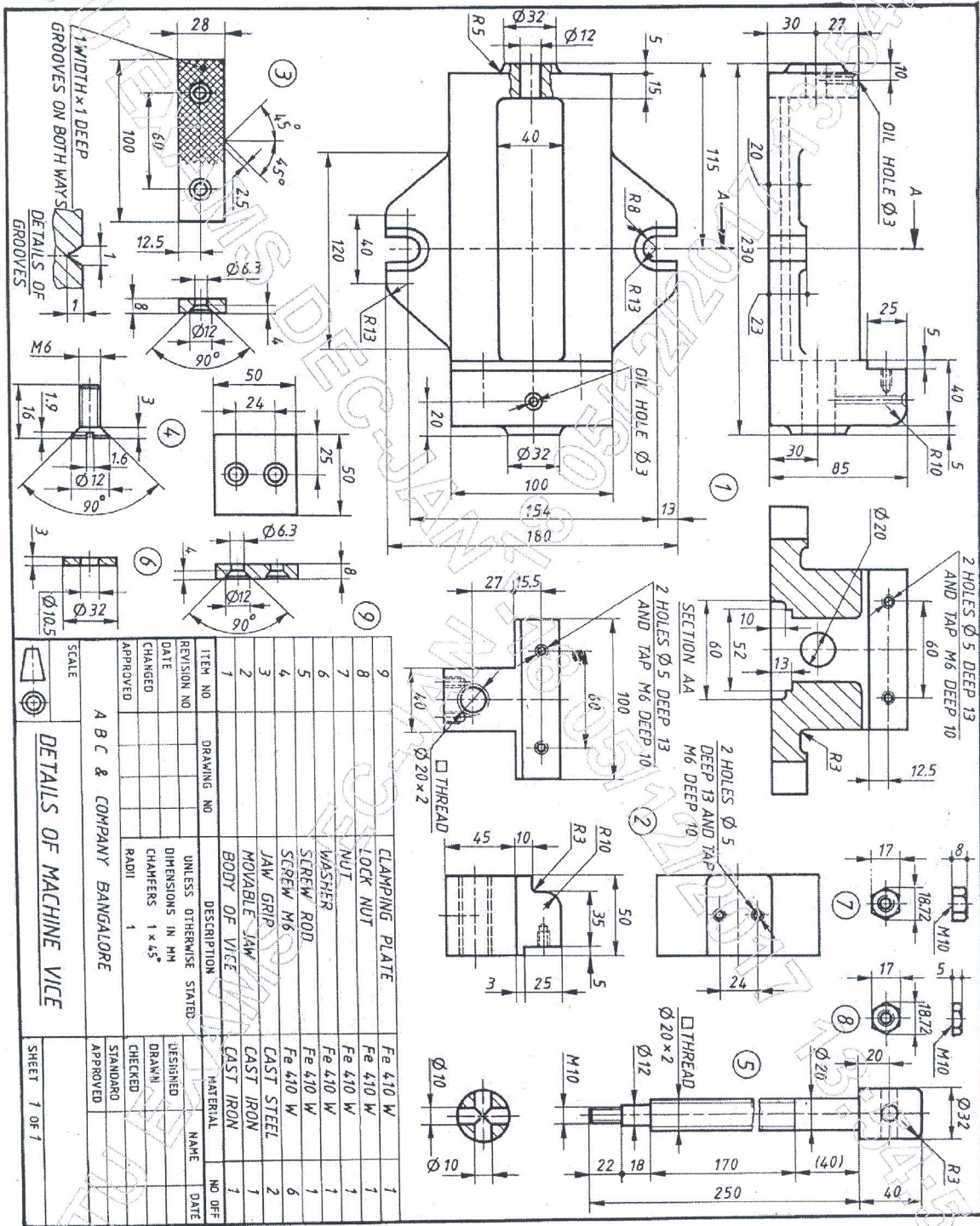


Figure 2. "MACHINE VICE"