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18MT63

Sixth Semester B.E. Degree Examination, June/July 2023
(Mechatronics Engineering)
COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours **Max. Marks: 100**

Instructions to Candidates:
1. Answer any **ONE** question from each part
2. Use **FIRST ANGLE** projection only.
3. Missing data if any may suitably be assumed and mentioned
4. All the dimensions are in mm.
5. Usage of calculators and drawing instruments are allowed

PART - A

1. A cylinder of base diameter 45 mm and height 70 mm long rests on its base on the HP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP and meets the axis at a height of 30 mm above the base. Draw the front view sectional top view and true shape of section. **(25 Marks)**

2. Draw the ISO thread profile by taking a pitch of 50mm and draw the ACME thread profile by taking a pitch of 60mm. **(25 Marks)**

PART - B

3. Draw a knuckle joint to connect two rods of 25mm diameter showing sectional front viewand top view. Indicate all the proportions with dimensions. **(25 Marks)**

4. Draw the sectional front view and side view of a Pin type flexible coupling to connect two rods of Diameter 20 mm. Indicate all dimensions. **(25 Marks)**

PART - C

5. Figure 1 below shows the details of a Plummer block. Assemble The parts of the Plummer block and show the following views
   a. Half sectional front view showing the right half in section
   b. Top views **(50 Marks)**

6. Figure 2 shows the details of a Connecting rod for Petrol Engine. Assemble The parts of the Connecting rod and show the following views
   a. Half sectional front view showing the right half in section
   b. Side view **(50 Marks)**

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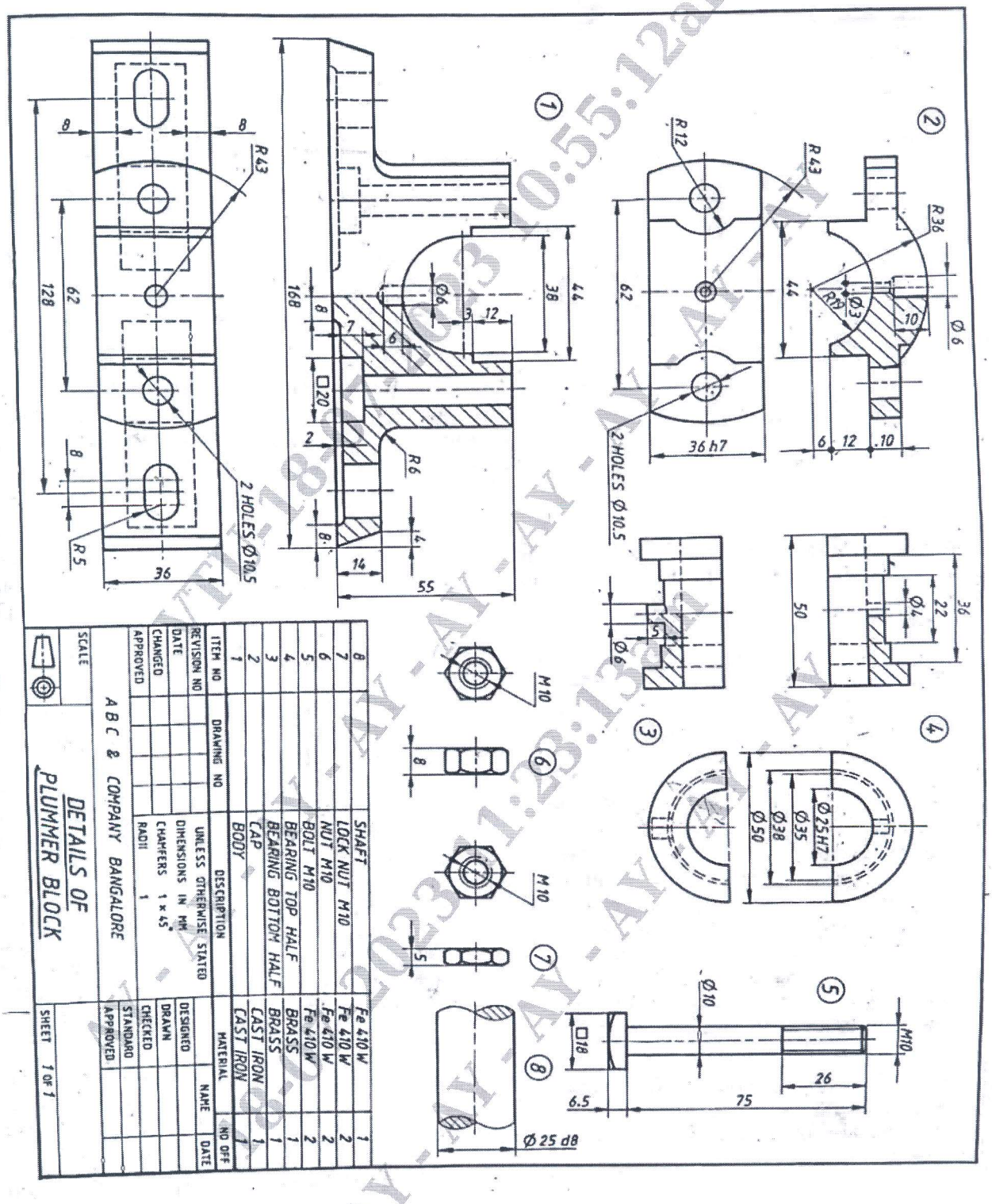

Figure 1: Details of Plummer block

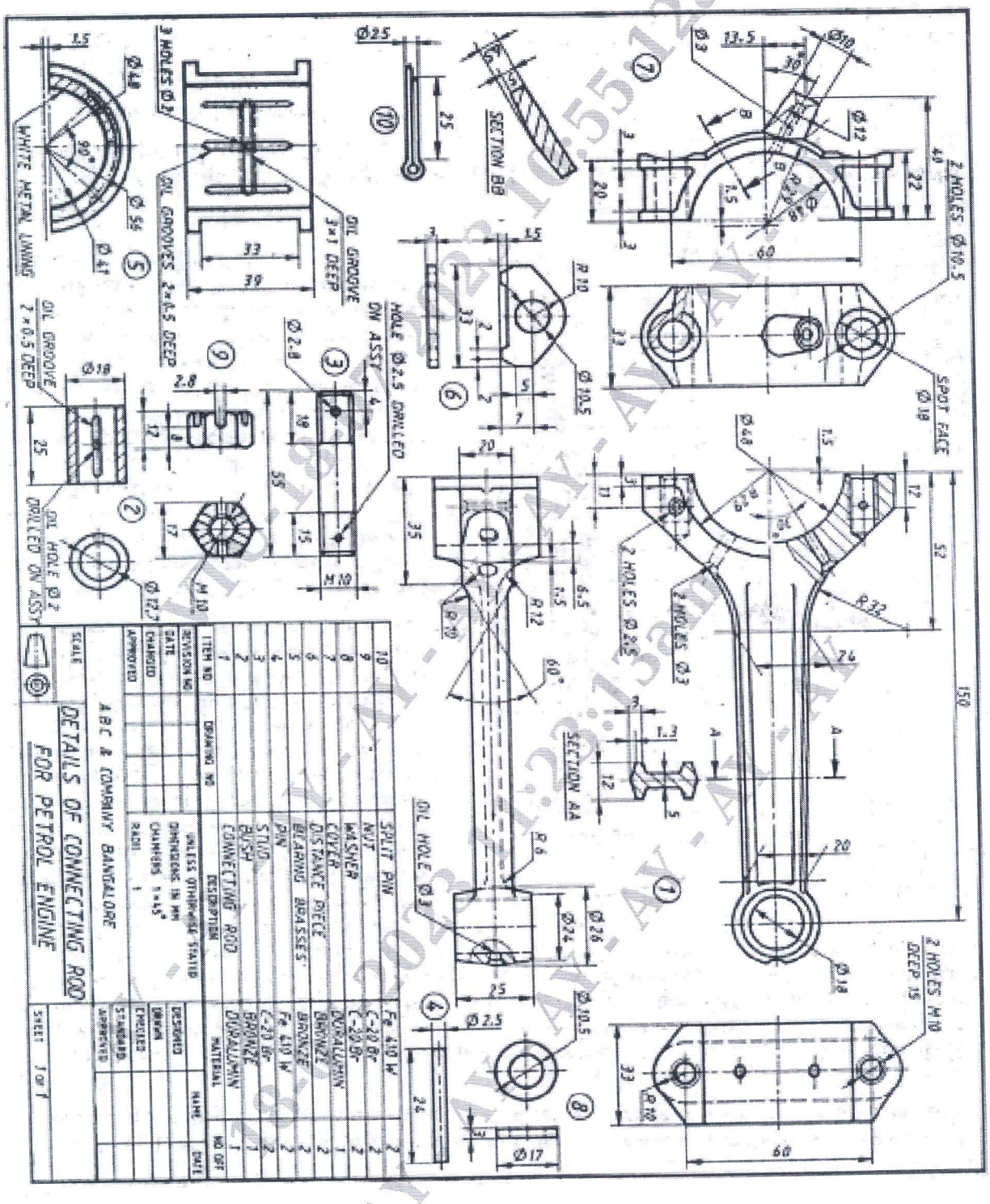

Figure 2: Details of Connecting rod of an IC Engine