CBCS SCHEME

18MT63

Sixth Semester B.E. Degree Examination, June/July 2024
(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 hexahedron of 40mm sides is cut by a section plane so that the true shape of the section is a rhombus of sides of maximum length. Draw the sectional top view and true shape of the section. Also find the inclination of the section plane with the reference plane and the size of the rhombus.

(25 Marks)

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

PART - B

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

4. Draw the sectional front view and side view of a Protected type flanged 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 left half in section
   B. Top views (50 Marks)

6. Figure 2 shows the details of a screw jack. Assemble the parts of the screw jack and show the following views
   a. Half sectional front view showing the right half in section
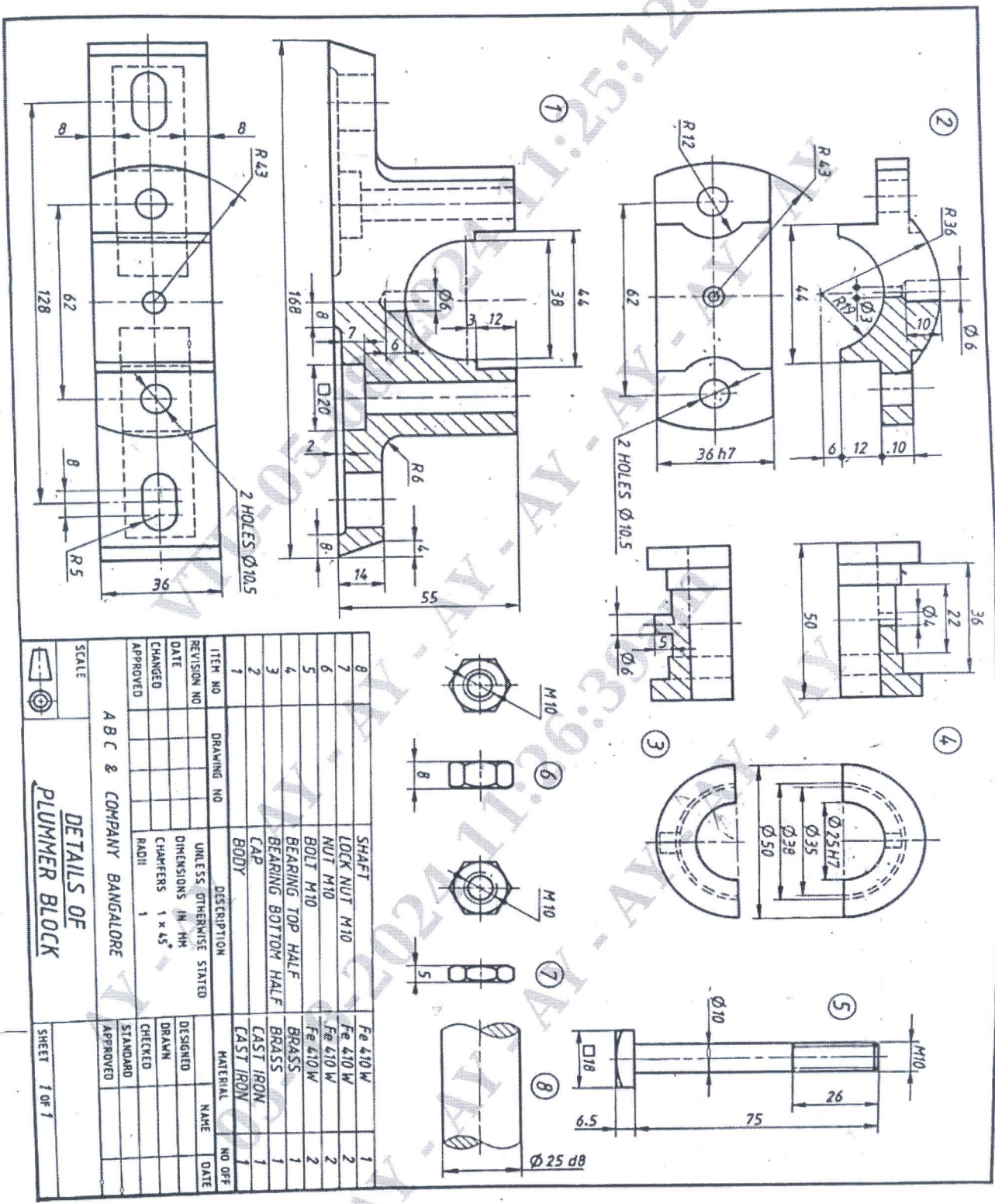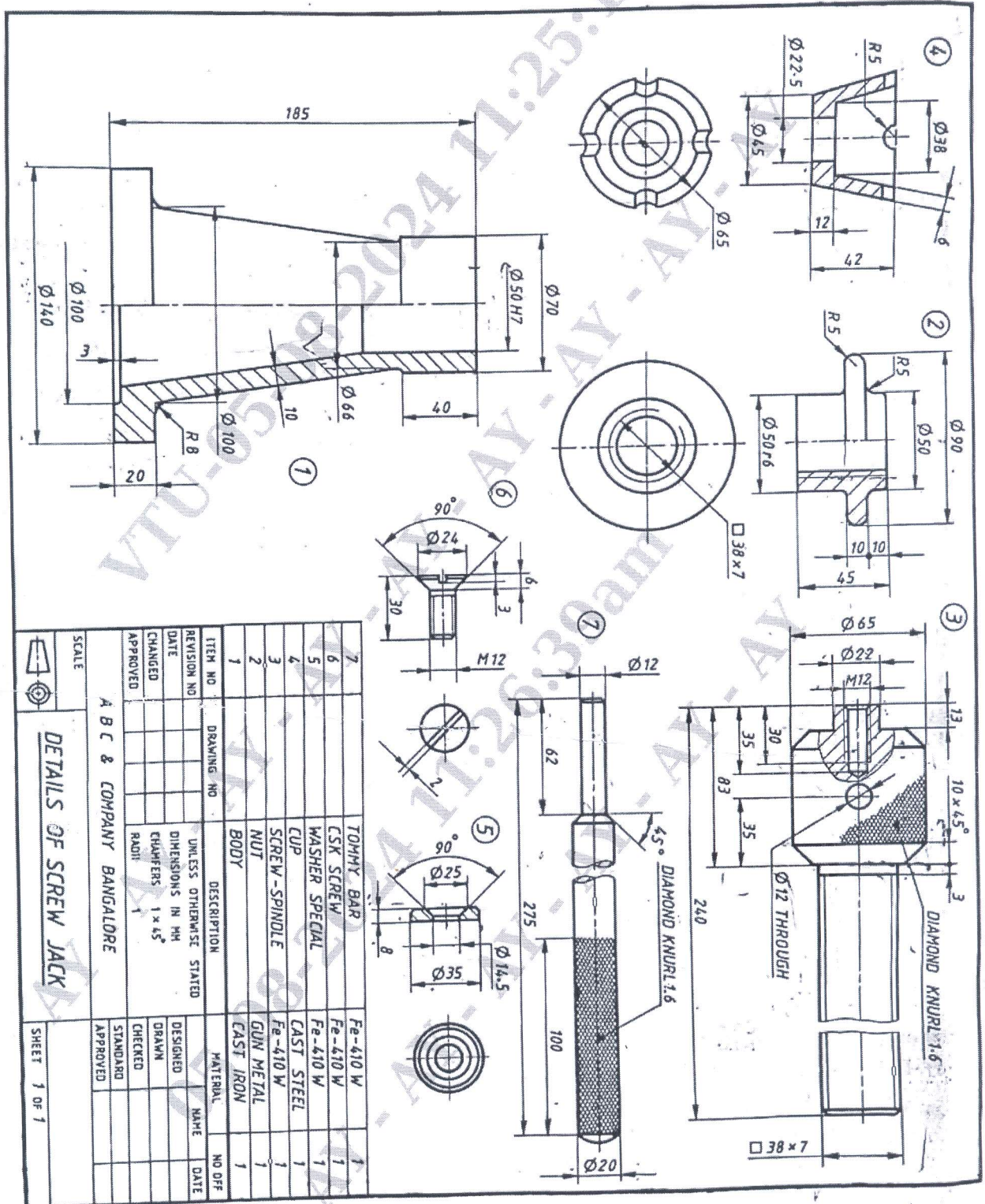   b. Top views (50 Marks)

Figure 1: Details of Plummer block

Figure 2: Details of Screw jack