CBCS SCHEME

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15MT64

Sixth Semester B.E. Degree Examination, June/July 2019
(Mechatronics Engineering)
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** projections only.
3. If any data is missing it may be suitably assumed and mentioned.
4. All the calculations should be on the answer sheet supplied.
5. All the dimensions are in mm.
6. Drawing instruments may or may not be used for sketching.
7. Part C assembly view should be in 3-D and other views in 2-D.

Part – A

1. An Equilateral Triangle pyramid of base side, 40mm and height 70mm rests with its base on the HP such that one of its slant edges parallel to VP. A section plane perpendicular to VP and inclined to 63° to HP cuts the pyramid passing through one of its lateral faces at the height of 9mm above the HP. Draw the front view, sectional top view, sectional side view along with the cut solid. **(20 Marks)**

2. Draw the profile of
   a. ISO Screw thread
   b. ACME thread of pitch 40mm indicates all the proportions and dimensions.
   (20 Marks)

Part – B

3. Draw the following view of a SOCKET and SPIGOT COTTER JOINT used to joining two rods of diameter 20mm (a) Sectional front view (b) A view looking from socket end. **(20 Marks)**

4. Draw sectional front view and side view of a Protected Type Flange Coupling to connect two rods of diameter 20mm, indicate all dimensions. **(20 Marks)**

Part – C

5. Figure 1 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 view. **(40 Marks)**

6. Figure 2 shows the part drawing of a tail stock. Assemble the tail stock and show the following views.
   a. Sectional front view showing the top spindle portion in section
   b. Left profile view **(40 Marks)**

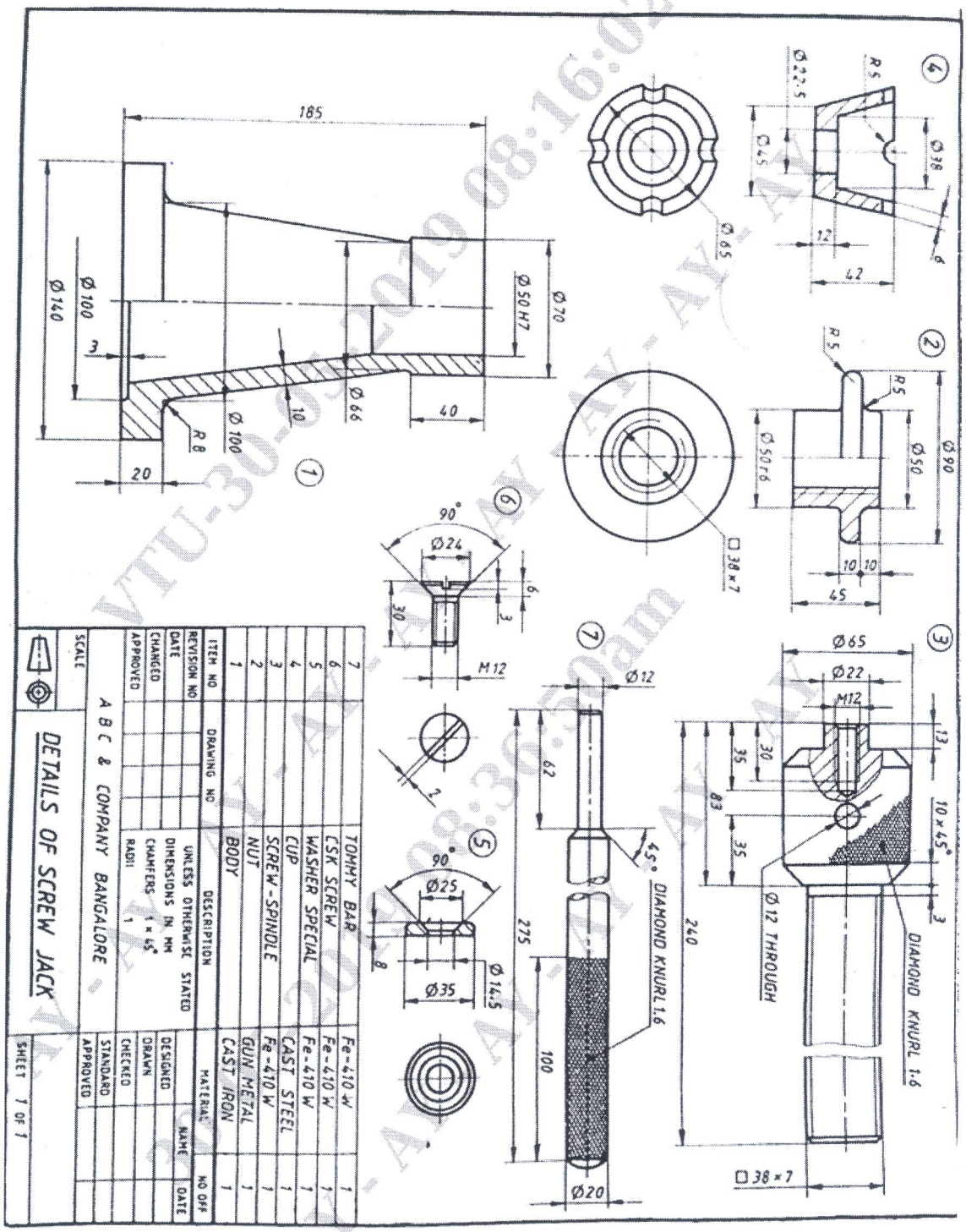

Figure 1: Details of screw jack

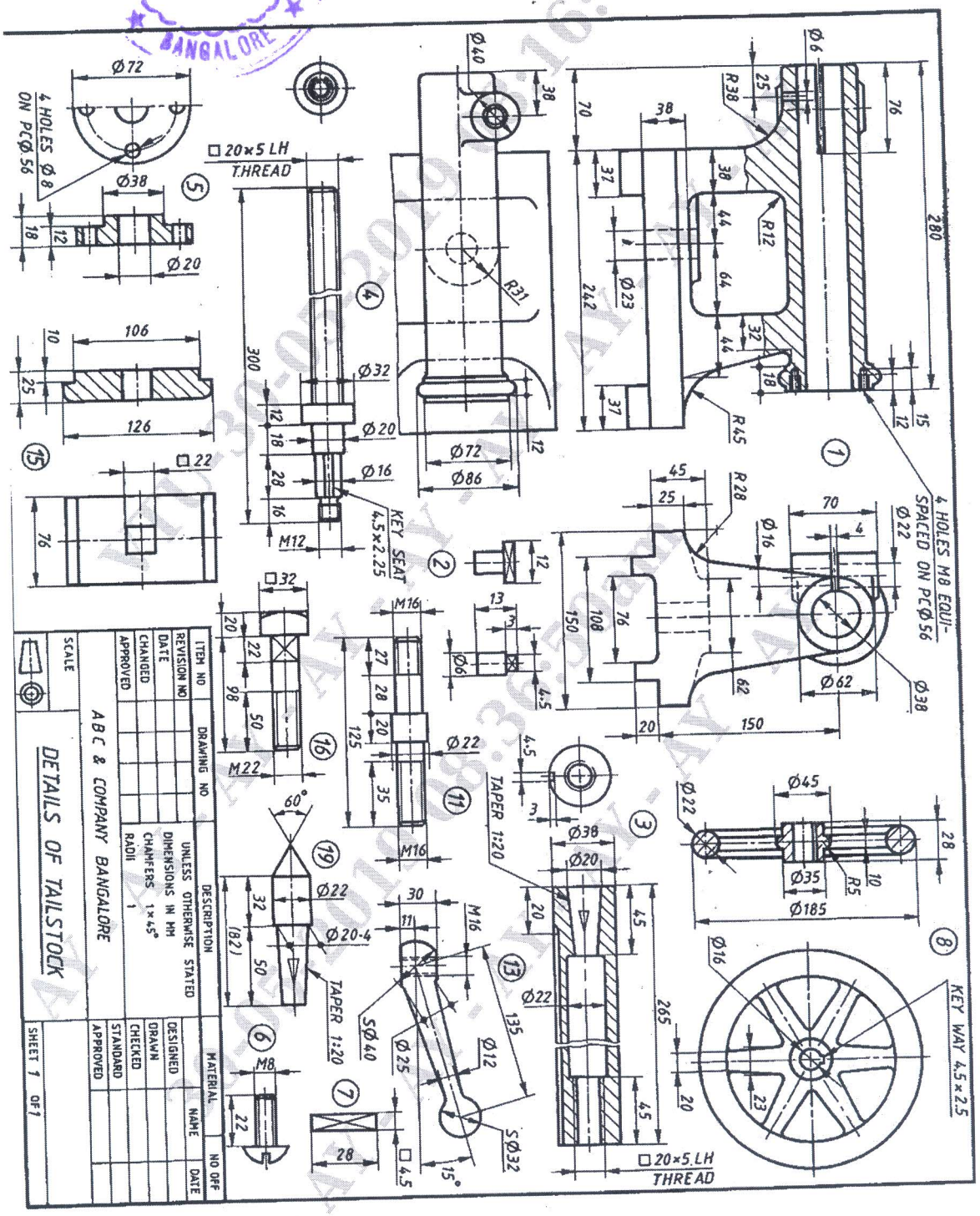

Figure 2: Details of tailstock