USN | | | | | | | | |

18ME36A/18MEA306/18MA36

Third Semester B.E. Degree Examination, January 2020

COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours   Max. Marks: 100

Note:
1. Answer any one question from each of the parts A,B,C
2. Use **FIRST ANGLE** projection only.
3. Missing data if any may suitable 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 the other 2 views in 2D**

PART-A

Q. No. 1   A cone of base diameter 50 mm and axis Length 65 mm rests with its base on the HP Draw the sectional top view and true shape of the section made by the sectional plane perpendicular to VP and inclined to HP at 50^0 and passing through an end point on the circumference of the base circle of the cone.

         (25 Marks)

Q. No. 2   Draw the conventional form of following threads for pitch 40 mm at least 3 threads each a) BSW thread b) Sellers thread.   **(25 Marks)**

PART-B

Q. No. 3   Draw two views of socket and spigot cotter joint of diameter of shaft 25 mm.

         (25 Marks)

Q. No. 4   Draw two views of a flanged coupling (Protected type) of diameter of shaft of 30 mm.   **(25 Marks)**

PART-C

Q. No. 5   Figure: 1 Shows the details of "Screw Jack". Assemble the parts and draw the following: a) Sectional front view b) Top view

         (50 Marks)

Q. No. 6   Figure: 2 Shows the details of "Tail Stock". Assemble the parts and draw the following: a) Sectional front view b) Top view

         (50 Marks)

Details of screw jack
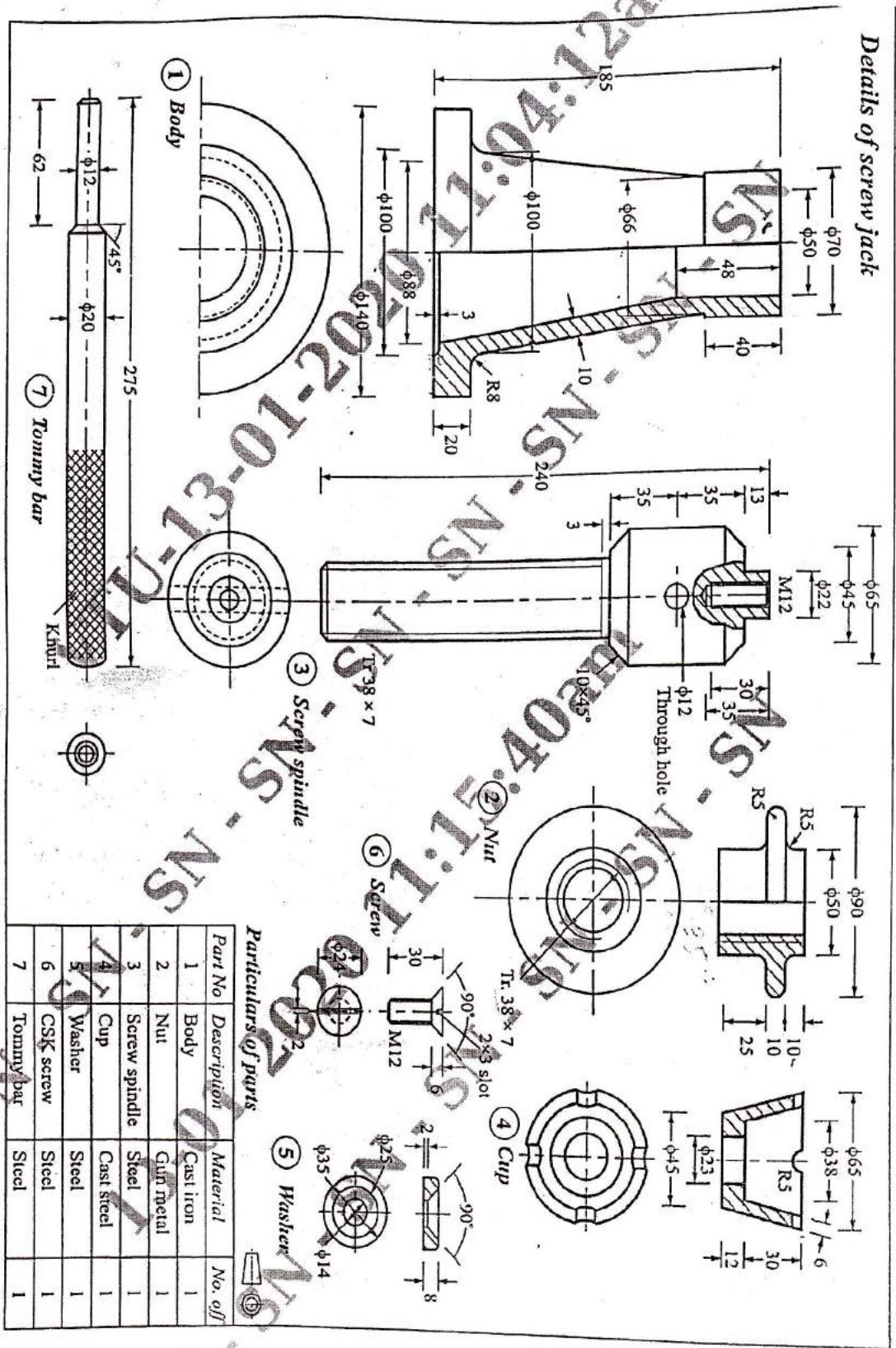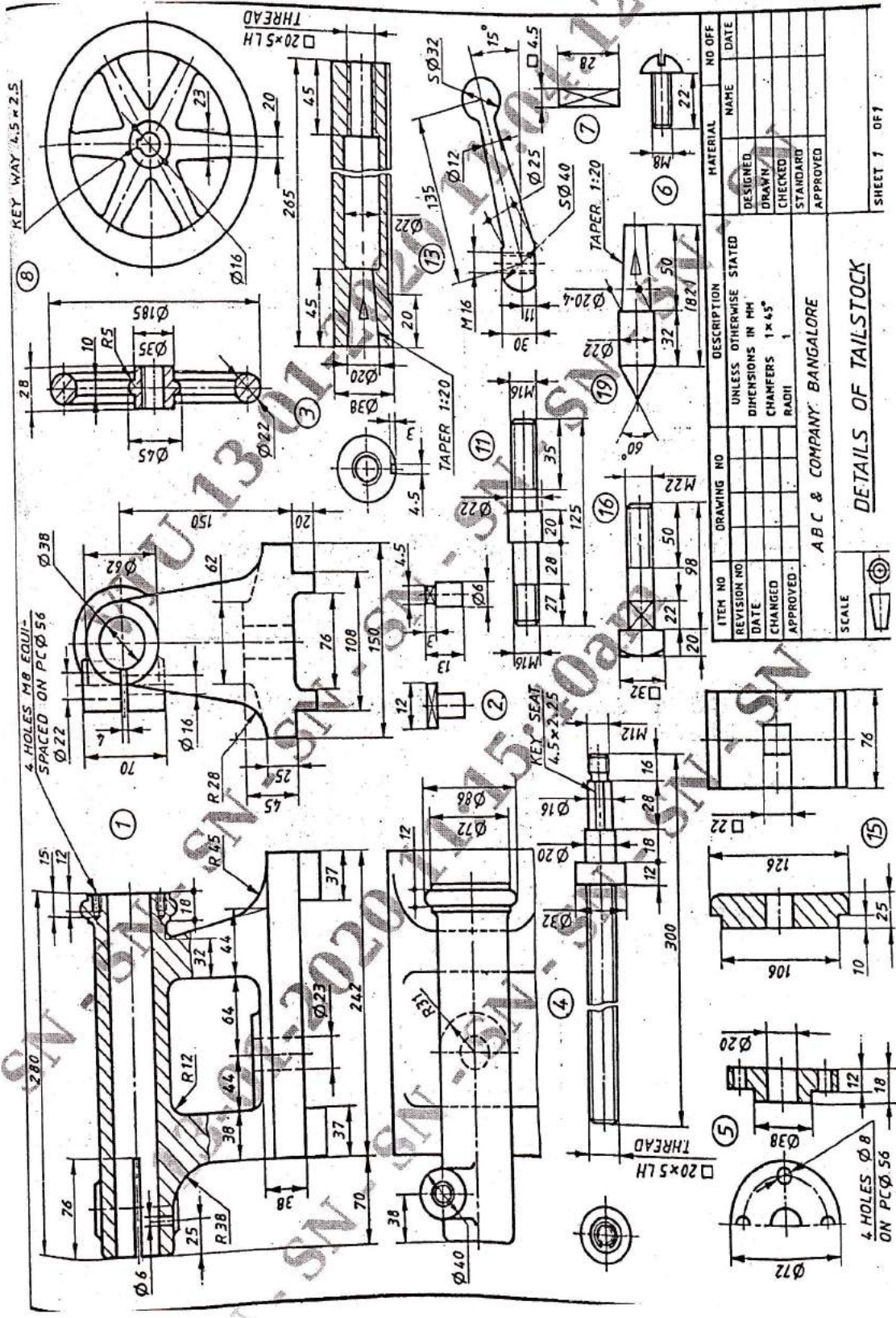
① Body

⑦ Tommy bar

③ Screw spindle

Tr 38 × 7

② Nut

M12
φ22
φ45
φ65
φ12
Through hole
30
35

φ12
45°
φ20
275
62
Knurl

⑥ Screw

φ90
φ50
R5
R5
10
25

M12
Tr. 38 × 7
2×3 slot
30
φ24

④ Cup

φ65
φ45
φ38
R5
φ23
12
30
6

⑤ Washer

φ35
φ25
φ14
2
90°
8

185
φ100
φ66
φ50
φ70
48
φ88
φ100
φ140
3
10
40
R8
20
240
35
35
13
3

Particulars of parts

Part No	Description	Material	No. off
1	Body	Cast iron	1
2	Nut	Gun metal	1
3	Screw spindle	Steel	1
4	Cup	Cast steel	1
5	Washer	Steel	1
6	CSK screw	Steel	1
7	Tommy bar	Steel	1

Figure 2: Details of Screw Jack

Figure 2: Details of Tail Stock