

B.Tech II Year II Semester (R15) Regular Examinations May/June 2017

MACHINE DRAWING
(Mechanical Engineering)

Time: 4 hours

Max. Marks: 70

All answer should be on the drawing sheet only
Answers on the drawing sheet only will be valued
First angle projections to be adopted

Section – I

Answer any two of the following (2 × 4 = 08 Marks)

- 1 Sketch the conventional representation of the following
 - (a) Splined shafts.
 - (b) Cylindrical tension spring.
 - (c) Internal threads.
 - (d) External threads.
 - (e) Bearings.
- 2 Draw the three views of a square headed bolt of nominal diameter 25 mm and length 100 mm with a hexagonal nut and washer.
- 3 Sketch the following types of keys in two views as fitted in position between shaft and the mounting. Choose the shaft diameter as 30 mm and the hub diameter of the mounting as 60 mm.

Section – II

Answer any two of the following (2 × 10 = 20 Marks)

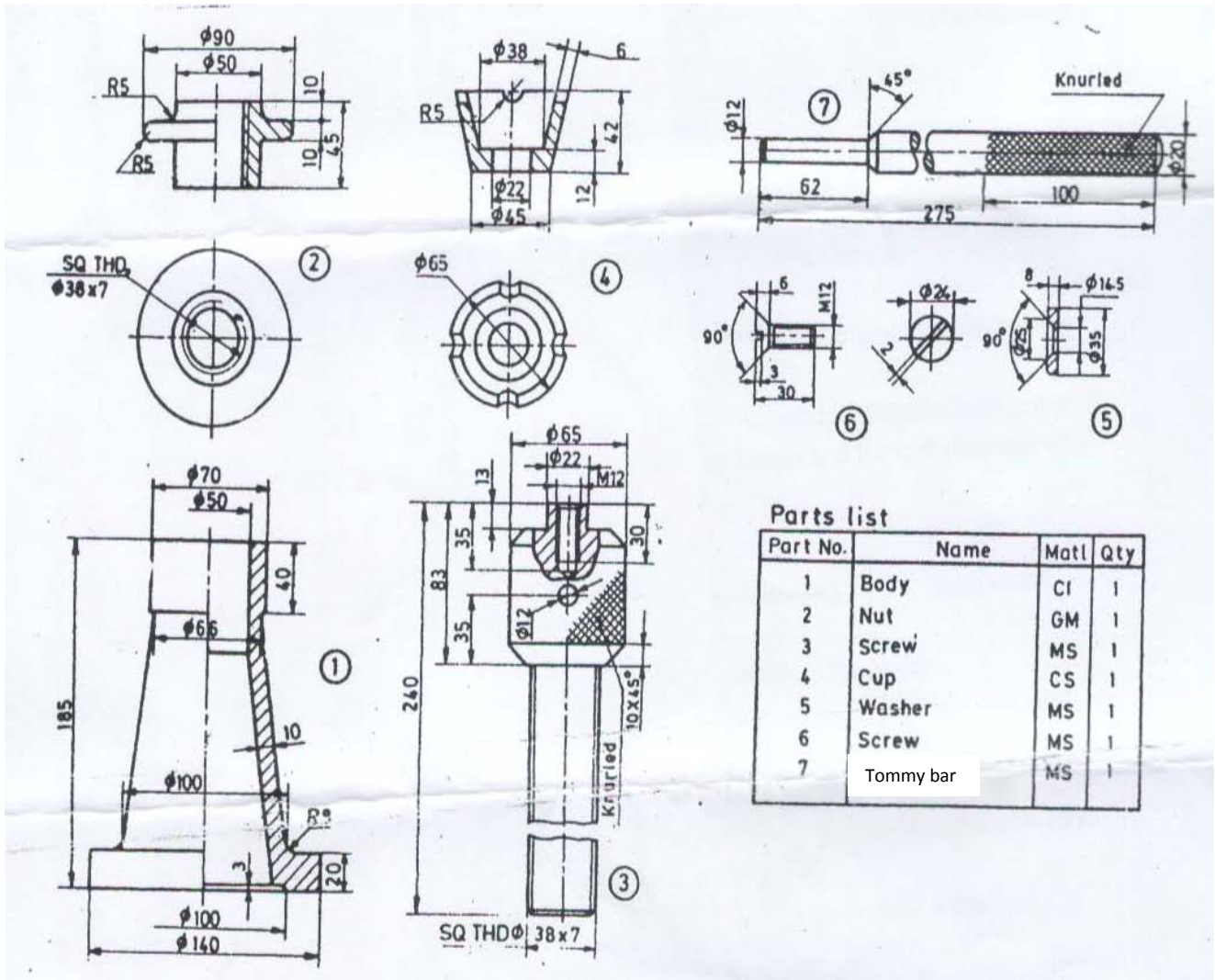
- 4 Draw half sectional view from the front, top half in section and view from the side of a bushed pin type flange coupling, indicating proportion to connect two shafts, each of diameter 30 mm.
- 5 Sketch the full sectional front view and top view of a double riveted double strap, chain butt joint. Assume the plate thickness is 10 mm.
- 6 Sketch the necessary views of a foot step bearing for supporting a shaft of diameter 50 mm.

Section – III

Answer the following (1 × 42 = 42 Marks)

- 7 The details of screw jack are shown in figure below. Assemble the parts and draw sectional view from the front, side view and top view.

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Parts list

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Nut	GM	1
3	Screw	MS	1
4	Cup	CS	1
5	Washer	MS	1
6	Screw	MS	1
7	Tommy bar	MS	1
