

Code: 13A03303

B.Tech II Year I Semester (R13) Regular Examinations December 2014

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 projection to be adopted

Section – I

(Answer any two)

2 × 4 = 08 Marks

- 1 Show by sketches:
 - (a) Dimensioning of chamfers.
 - (b) Dimensioning of countersinks.
- 2 Show by sketches dimensioning of tapered features:
 - (a) External.
 - (b) Internal.
- 3 Sketch the following thread profiles for a nominal size of 30 x 3 mm, to a scale of 10:1.
 - (a) BSW thread.
 - (b) Square thread.

Section – II

(Answer any two)

2 × 10 = 20 Marks

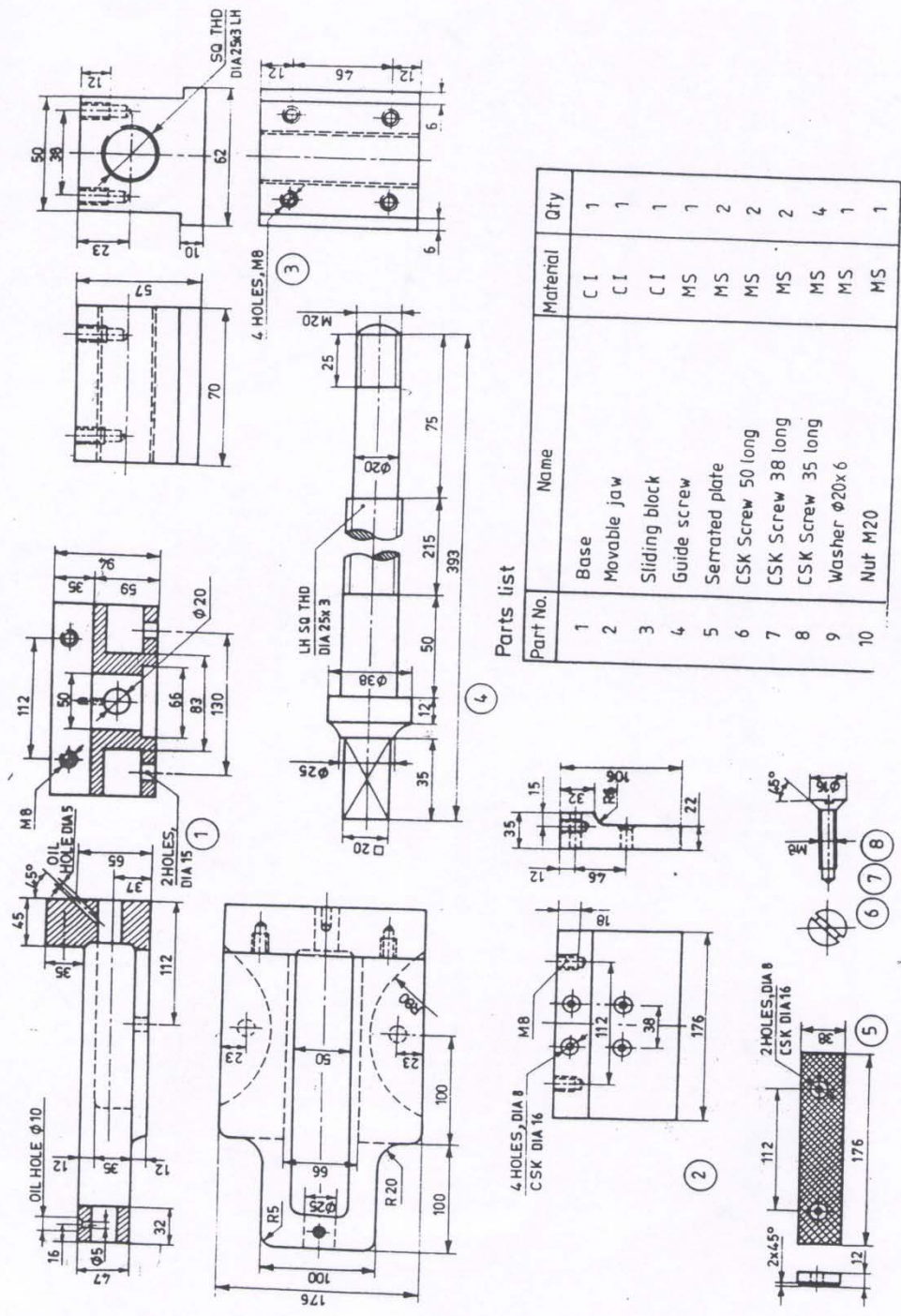
- 4 Draw three views of a hexagonal headed bolt of nominal diameter 30 mm and length 100 mm with a square nut and a washer in position.
- 5 Draw the half sectional view from the front and view from the side of a Cottered joint with sleeve to connect two shafts of 40 mm dia. each.
- 6 Draw the sectional view from the front (left half in section) and view from the above of a bushed journal bearing to support a shaft of dia. 50 mm.

Section – III

1 × 42 = 42 Marks

- 7 Assemble all parts of the Machine vice given in the fig. and draw (i) Sectional view from the front. (ii) View from the above and (iii) View from the left.

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Parts list

Part No.	Name	Material	Qty
1	Base	CI	1
2	Movable jaw	CI	1
3	Sliding block	CI	1
4	Guide screw	MS	1
5	Serrated plate	MS	1
6	CSK Screw 50 long	MS	2
7	CSK Screw 38 long	MS	2
8	CSK Screw 35 long	MS	4
9	Washer $\phi 20 \times 6$	MS	1
10	Nut M20	MS	1
