Code No: RT22035 **R13** SET - 1

II B. Tech II Semester Regular Examinations, April/May – 2016
MACHINE DRAWING
(Com. to ME, AME, MM)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **TWO** question from **Part-A**
3. **Part-B** is compulsory

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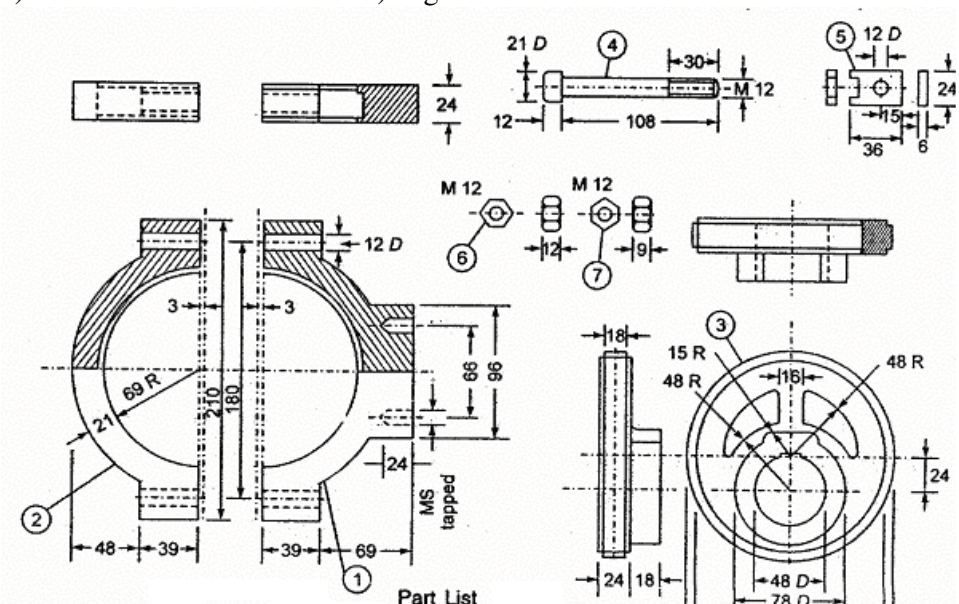
PART –A

1. Represent two views of hexagonal nut and square nut with proportions and take the diameter of the bolt as 30 mm (11M)
2. Draw a proportionate diagram of Double rivetted double strap chain type butt joint two connect plate of 20 mm size. (11M)
3. Draw two views of a Food step bearing for a shaft 100 mm diameter (11M)

PART –B

4. Draw the following views at assembly of eccentric mechanism as shown in Figure 1. (48M)
a) Sectional front view. b) Right side view



Part List

S.no.	Part name	Material	No. off
1.	Eccentric strap	C.I.	1
2.	Do	Do	1
3.	Sheave	C.I.	1
4.	Strap bolt	M.S.	2
5.	Packing strip	Brass	2
6.	Nut	M.S.	2
7.	Nut	M.S.	2

Fig. 1 *Eccentric (Details)*
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Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **TWO** question from **Part-A**
3. **Part-B** is compulsory

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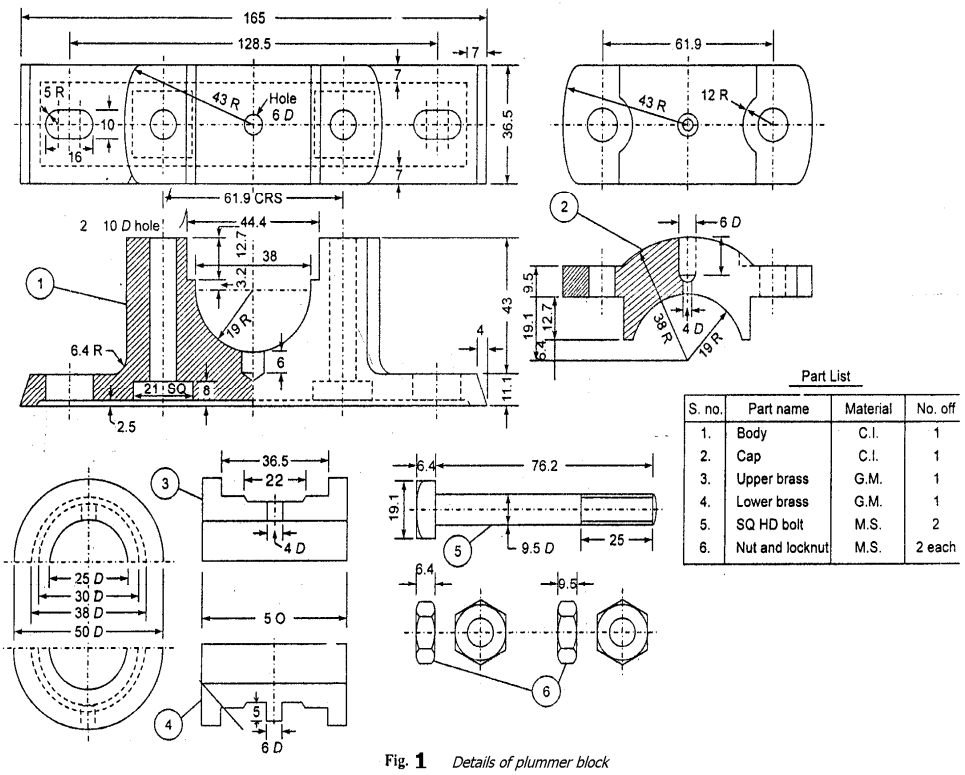
PART –A

1. a) Sketch the following thread profiles for a nominal diameter of 20 mm and pitch 2 mm (5M)
   i) Worm thread ii) ACME thread
   b) Sketch neatly, giving proportionate dimensions, the eye foundation bolt of diameter 25 mm? (6M)
2. Draw two views of a Single strap butt joint of two rows zig – zag to connect two plates of 9 mm thick? (11M)
3. Draw gib and cotter joint suitable for joining 40 mm square rods? (11M)

PART -B

4. Figure 1 gives the part drawings of Plummer block. Assemble all the parts and draw the following assembled views. (48M)

   a) Sectional front view b) Top view.



Part List

S. no.	Part name	Material	No. off
1.	Body	C.I.	1
2.	Cap	C.I.	1
3.	Upper brass	G.M.	1
4.	Lower brass	G.M.	1
5.	SQ HD bolt	M.S.	2
6.	Nut and locknut	M.S.	2 each

Fig. 1 *Details of plummer block*
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Code No: RT22035 **R13** SET - 3

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Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **TWO** question from **Part-A**
3. **Part-B** is compulsory

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PART –A

1. a) Two views of a taper sunk key positioned in a shaft of diameter 25mm and hub of diameter 50mm and mark dimensions on it. (6M)
   b) Sketch a feather key with proportions (5M)

2. Draw a proportionate diagram of Socket and spigot pipe joint to connect two pipes of ϕ 50mm (11M)

3. Draw a proportionate diagram of Journal bearing for a shaft of ϕ 40mm. (11M)
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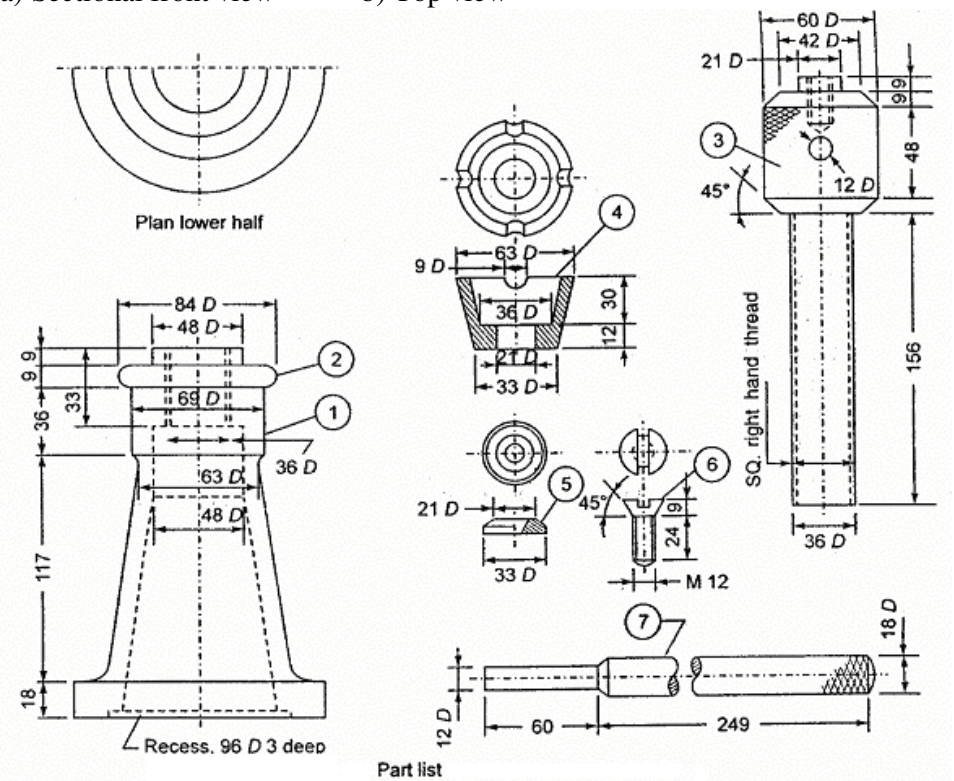
Code No: RT22035 **R13** SET - 3

PART -B

4. Figure 1 gives the detailed drawings of a screw jack. Assemble all the parts and draw the following assembled views. (48M)

a) Sectional front view b) Top view



Part list

S. no.	Name of part	Material	No. off
1.	Casting	C.I.	1
2.	Nut	G.M.	1
3.	Screw	M.S.	1
4.	Cup	Cast steel	1
5.	Washer	M.S.	1
6.	Screw	M.S.	1
7.	Tommy bar	M.S.	1

Fig. 1 *Screw-jack.*

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Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **TWO** question from **Part-A**
3. **Part-B** is compulsory

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PART –A

1. Draw a proportionate diagram of Single rivetted lap joint to connect two plates of 5mm thick. (11M)

2. Draw a proportionate diagram of pivot bearing for a shaft of ϕ 30mm (11M)

3. Draw a proportionate diagram of Sleeve type cotter joint to connect two shafts of ϕ30mm. (11M)
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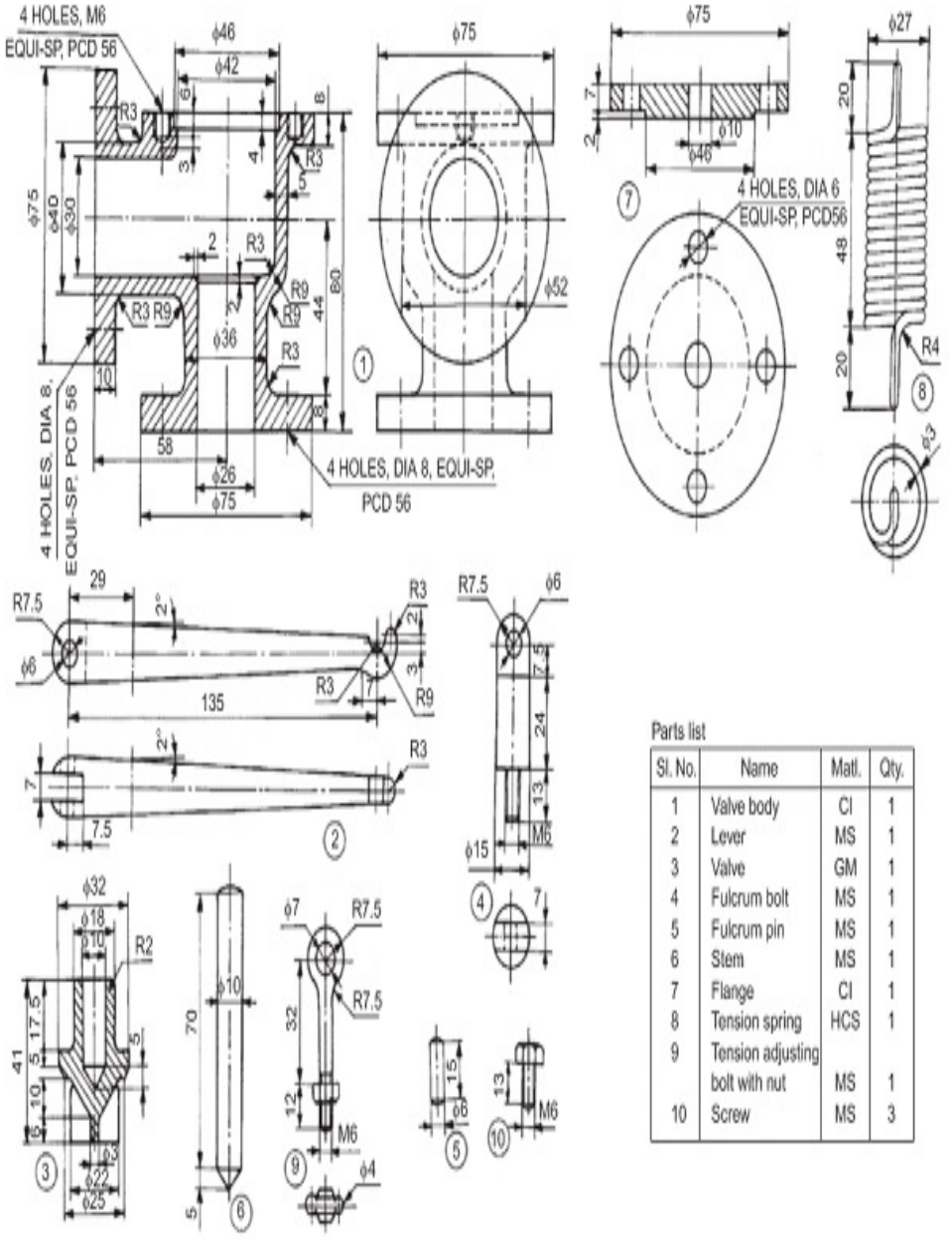
Code No: RT22035 **R13** SET - 4

PART -B

4. Assemble the parts of a spring loaded relief valve, shown in figure and draw the following views: (48M)
   a) Sectional view from the front
   b) View from the right



Sl. No.	Name	Matl.	Qty.
1	Valve body	CI	1
2	Lever	MS	1
3	Valve	GM	1
4	Fulcrum bolt	MS	1
5	Fulcrum pin	MS	1
6	Stem	MS	1
7	Flange	CI	1
8	Tension spring	HCS	1
9	Tension adjusting bolt with nut	MS	1
10	Screw	MS	3