Liabrary

Con. 3422-08.

S.E (MECH.) III (Rev.)

Machine Drawing.

9/6/08

CO-9508

(REVISED COURSE)

(4 Hours) **[Total Marks : 100**

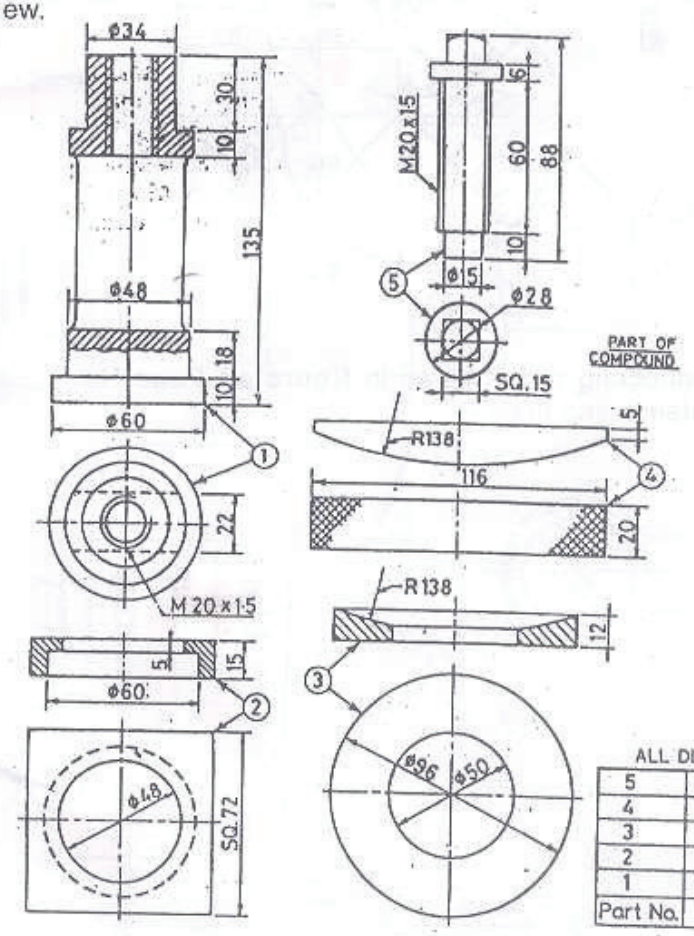
MASTER

N.B. (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions from remaining.
(3) Assume **suitable** dimension wherever **necessary**.
(4) Use drawing **sheet** only.

1. (a) A vertical cone of diameter 100 mm and axis 100 mm is penetrated by a vertical square prism, having edges of base 45 mm. The axis of the square prism is 10 mm away from the axis of the cone and plane containing both the axis is perpendicular to V.P. A rectangular face of the square prism makes 30° with V.P. Draw the front view and top view showing the curves of intersection. **10**

   (b) An equilateral triangular prism of 70 mm side of base and 90 mm height has its base on H.P. and one of the rectangular face perpendicular to V.P. It is completely penetrated by another equilateral traingular prism of 40 mm side and 90 mm length of axis. The axis of the smaller prism is parallel to both H.P. and V.P. and bisets the axis of the vertical prism. One of the rectangular faces of horizontal prism is parallel to V.P. and away from the observer. Draw three view and add the line of intersection. **10**

2. Details of a tool post is given in **figure**. Assemble the components in proper sequence and draw—
   (a) Right Half Sectional front view. **12**
   (b) Top view. **8**



ALL DIMENSIONS IN MM

5	Screw	M.S.	1
4	Wedge	C-30	1
3	Ring	C-30	1
2	Block	C-30	1
1	Post	C-30	1
Part No.	Name	Material	No. off

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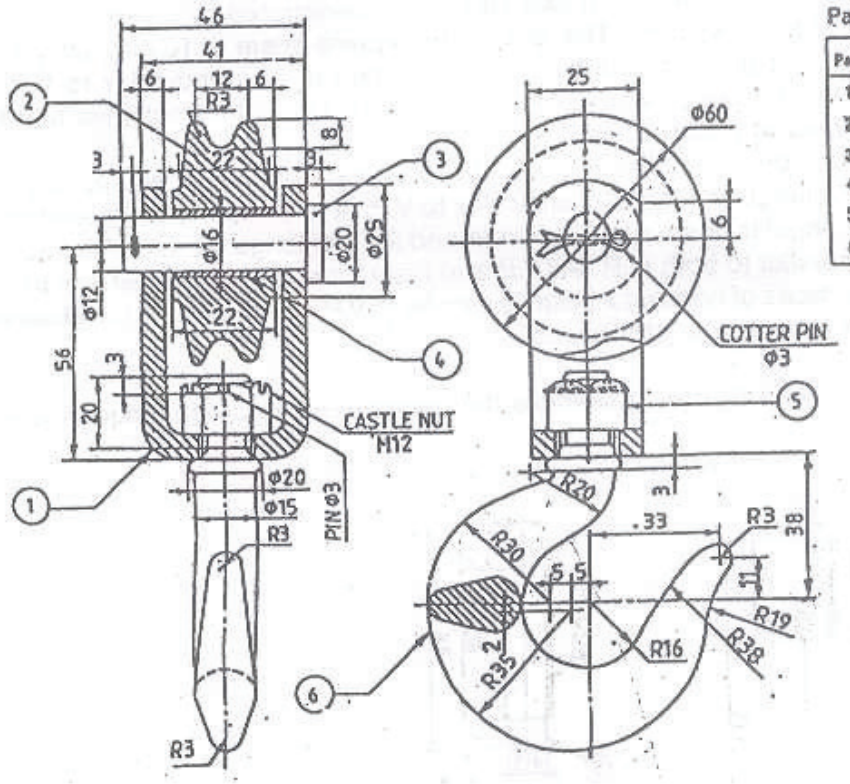
3. **Figure** shows an assembly of Crane Hook. Daw the following details :

(a) Hook :	(i)	Front view	3
	(ii)	L.H.S.V.	4
(b) Pulley	(i)	Sectional front view	4
	(ii)	Side view	2
(c) Strap	(i)	Sectional front view	3
	(ii)	Top view	2
	(iii)	Left hand sideview.	2



Parts List

Part No.	Qty.	Name	Mat.
1	1	Strap	HCS
2	1	Pulley	CI
3	1	Pin	MS
4	1	Bush	Bronze
5	1	Castle nut	MS
6	1	Hook	FS

CRANE HOOK

4. Details of Piston and connecting rod is given in **figure on Page No. 3.** Assemble the component in proper sequence and draw— 12

(a) Sectional F.V. 8

(b) Side view.

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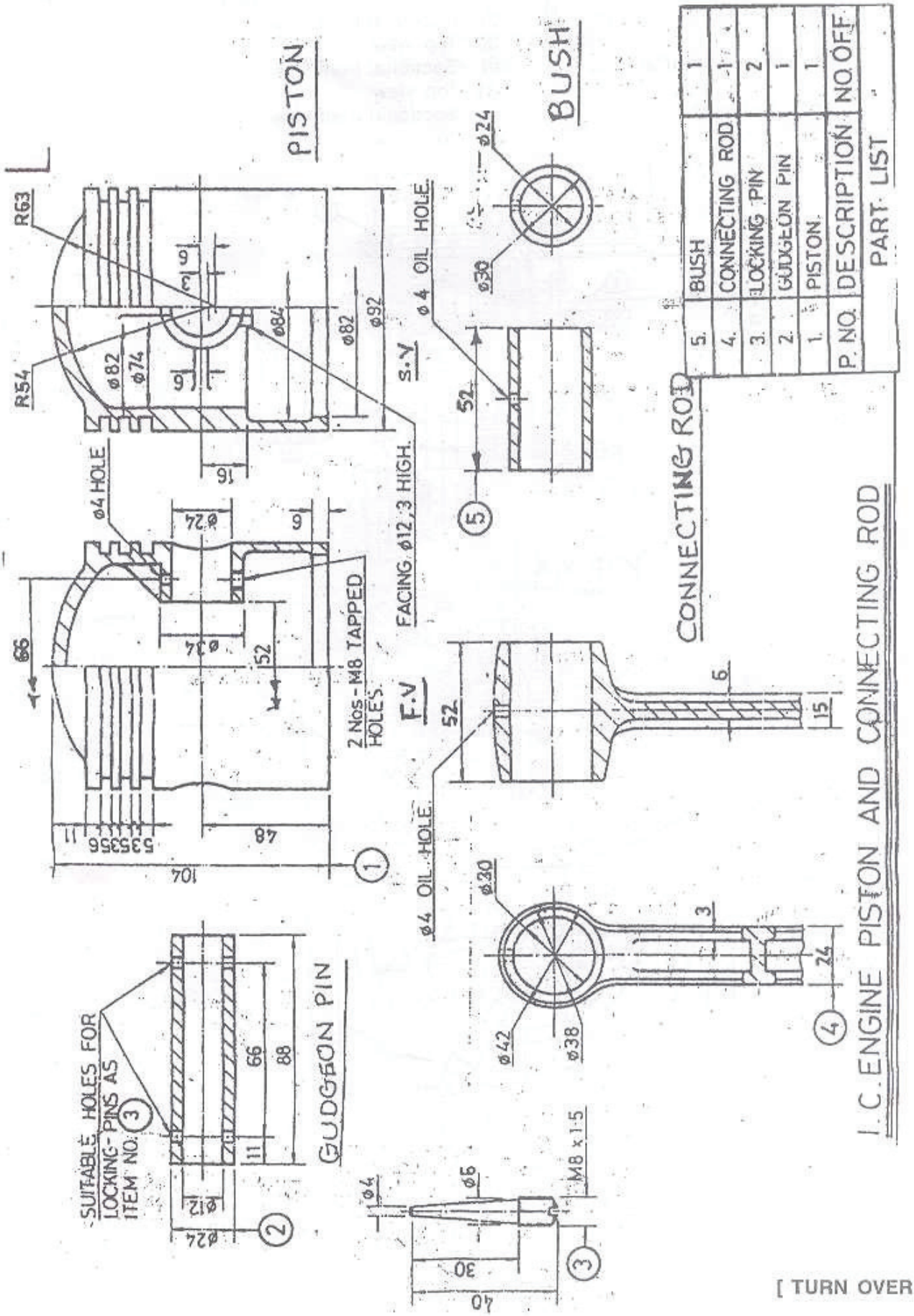

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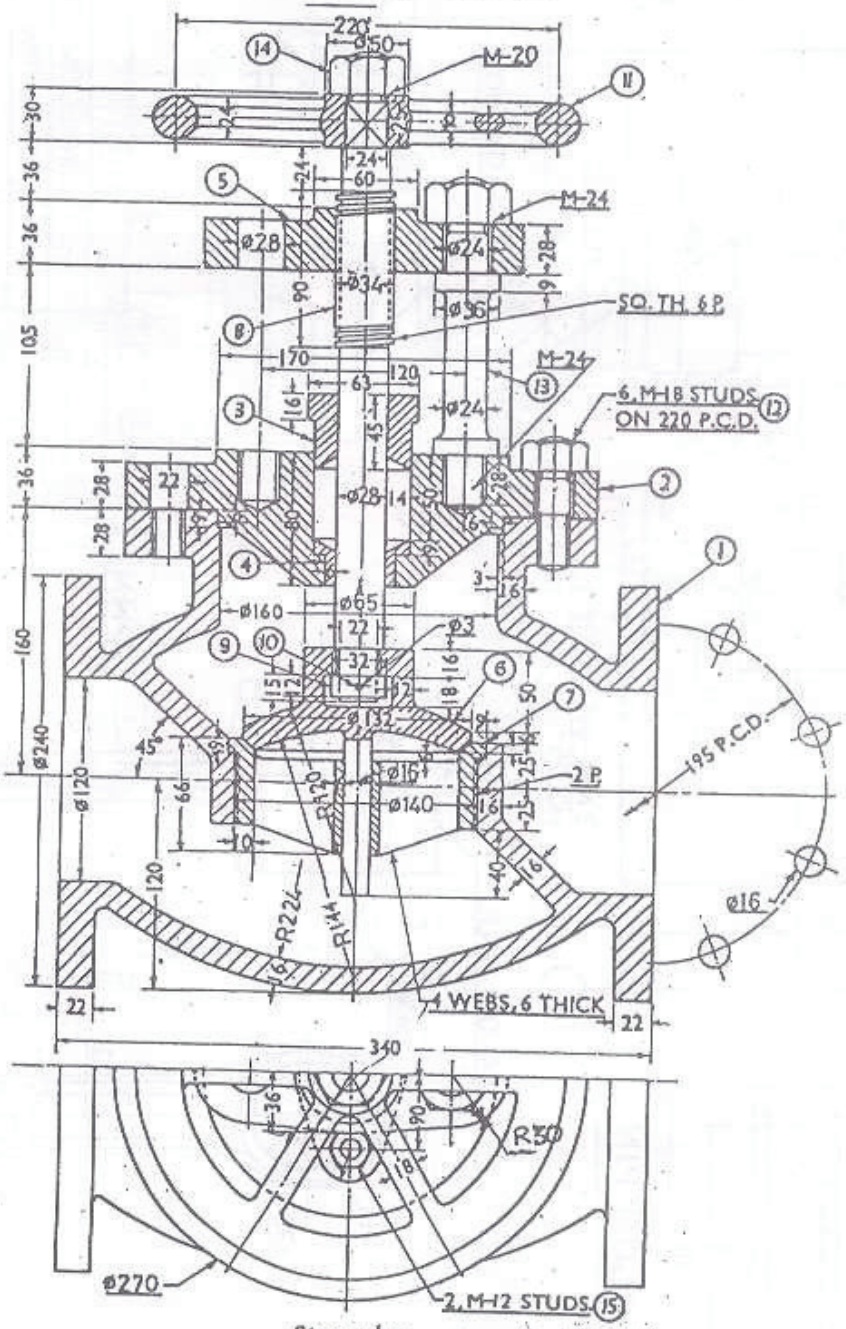
5. **Figure** shows an assembly of stop valve. Draw the following details : 4

(a)	Cover (Part No. 2) :	(i) Sectional front view	6
		(ii) Top view	4
(b)	Valve seat (Part No. 7) :	(i) Sectional front view	3
		(ii) Top view	2
(c)	Bridge (Part No. 5) :	(i) Sectional front view	3
		(ii) Top view	2



Stop valve

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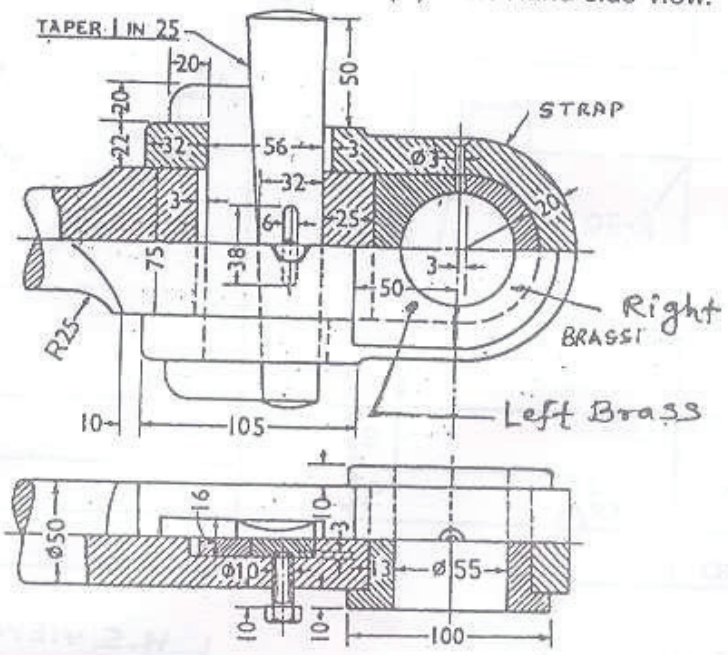
5. (a) **Figure** shows an assembly of strap end of connecting rod. Draw the detail drawing of :

(a) Strap :—
- (i) Sectional front view — 3
- (ii) Top view — 2

(b) Left Brass :—
- (i) Section front view — 3
- (ii) Top view — 2
- (iii) Left Hand side view. — 2



Strap-end of connecting rod

(b) Make neat free hand sketches of the following (any **two**) :— 8
- (i) Knuckle joint
- (ii) Foot step Bearing
- (iii) Split muff coupling.

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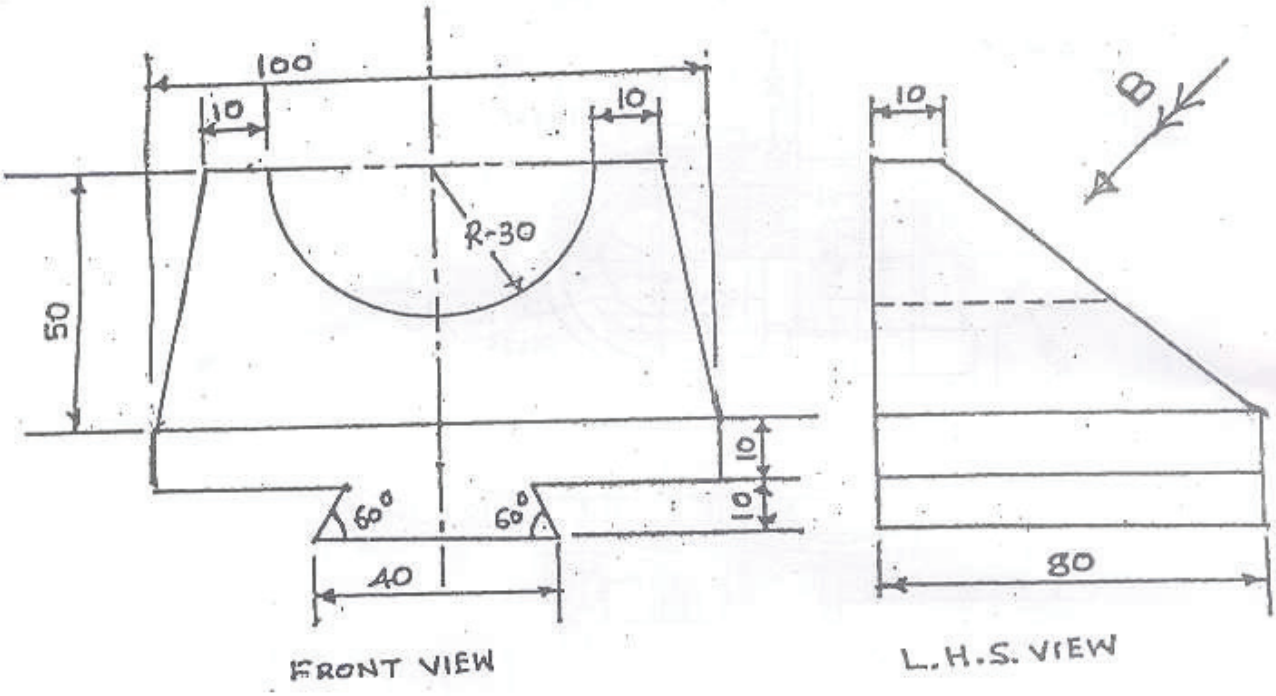
7. (a) **Figure** shows the front view and Left hand side view of an object. Draw the following :—
   (i) F.V. and L.H.S.V. 2
   (ii) Top view 4
   (iii) Auxiliary view from the direction of arrow 'B' 6



(b) Explain meaning of ϕ 50 H_7/S_6 value of tolerance are : 5

H_7 : + 25 μm
00 μm

S_6 : + 59 μm
+ 43 μm

Indicate type of fit . Draw with neat sketch.

(c) Define :— (i) Tolerance 3
(ii) Allowance.