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***B.Tech. Degree III Semester Regular/Supplementary Examination in
Marine Engineering December 2021***

**19-208-0306 MACHINE DRAWING
(2019 Scheme)**

Time: 4 Hours

Maximum Marks: 60

- I. (a) The isometric view of a bearing block is shown in Figure-1. Draw to a suitable scale the elevation, plan and end view of the object. (10)
- (b) Draw three views of a hexagonal nut for M 40 bolt. Mark all important dimensions. (10)
- OR**
- II. An isometric view of a Knuckle joint is shown in Figure-2. Draw the following views (20)
- (i) Elevation, top half in section
- (ii) Plan
- (iii) End view, looking from left side.
- III. An isometric view of a bushed bearing is given in Figure-3. Draw to the full scale (25)
- (i) Right half sectional elevation
- (ii) Plan.
- OR**
- IV. (a) Isometric view of a Muff coupling is shown in Figure-4. Draw the sectional elevation of the coupling. Also prepare an item list. (10)
- (b) Draw the top half sectional elevation and end view of an integral flanged joint for the following specifications in mm. (15)
- Diameter of the pipe to be joined = 80
 - Outside diameter of the flange = 176
 - Outside diameter of the pipe = 100
 - Pitch circle diameter of bolts = 140
 - Size of the bolt = M 12
 - Number of bolts = 6
 - Thickness of the flange = 20
 - Thickness of gasket = 3
- V. Disassembled isometric view of a stuffing box is shown in Figure-5. Assemble the parts and draw the right half sectional elevation of the stuffing box. (30)
- OR**
- VI. The details of I.C engine connecting rod is given in Figure-6. Assemble the parts and draw the bottom half sectional elevation. (30)

(P.T.O)

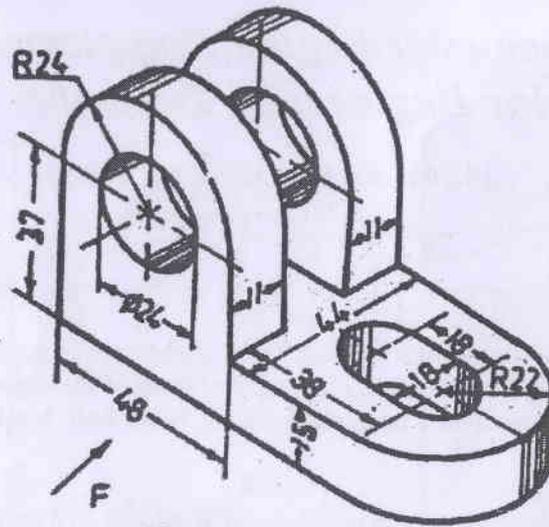


Figure- 1

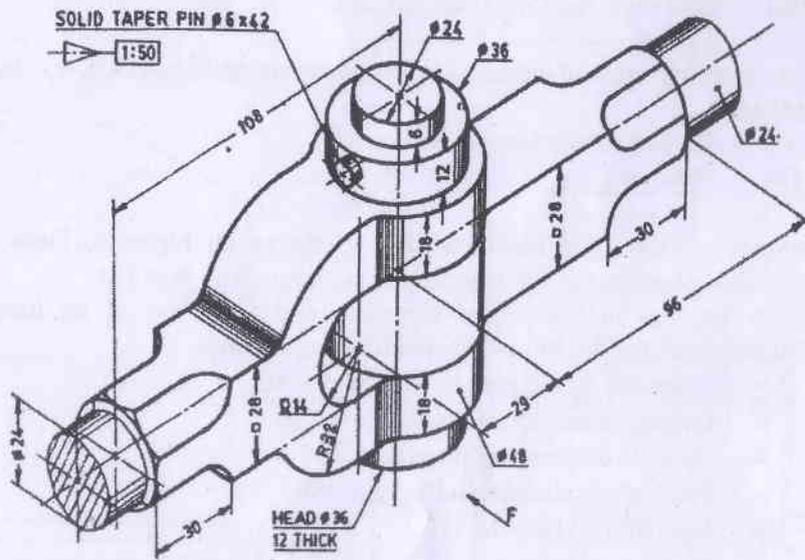


Figure-2

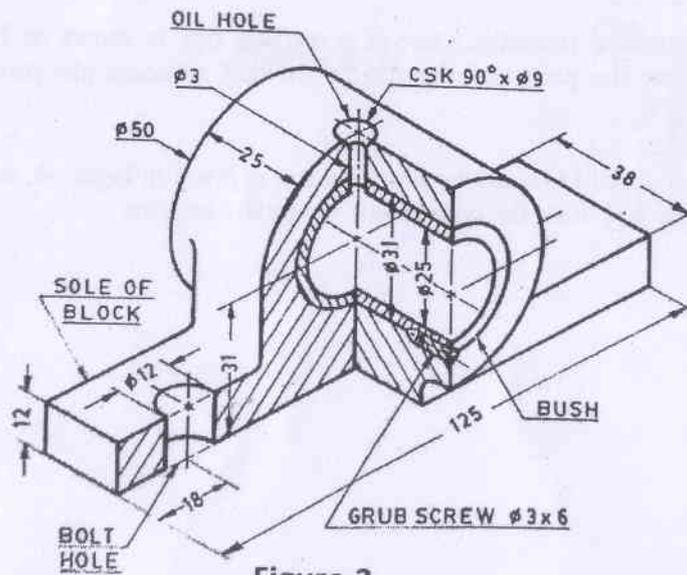


Figure-3

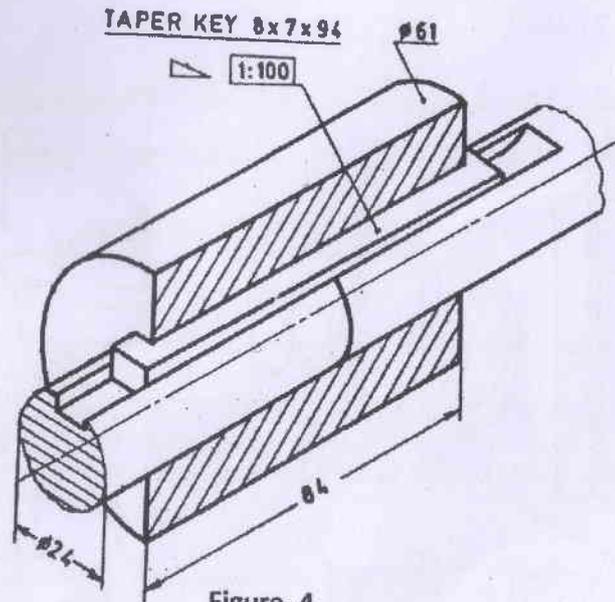


Figure-4

ITEM LIST		
Description	Qty	Material
Body	1	C.I
Gland bush	1	Brass
Stud	2	M.S
Nut	2	M.S
Gland	1	C.I
Piston rod	1	Steel

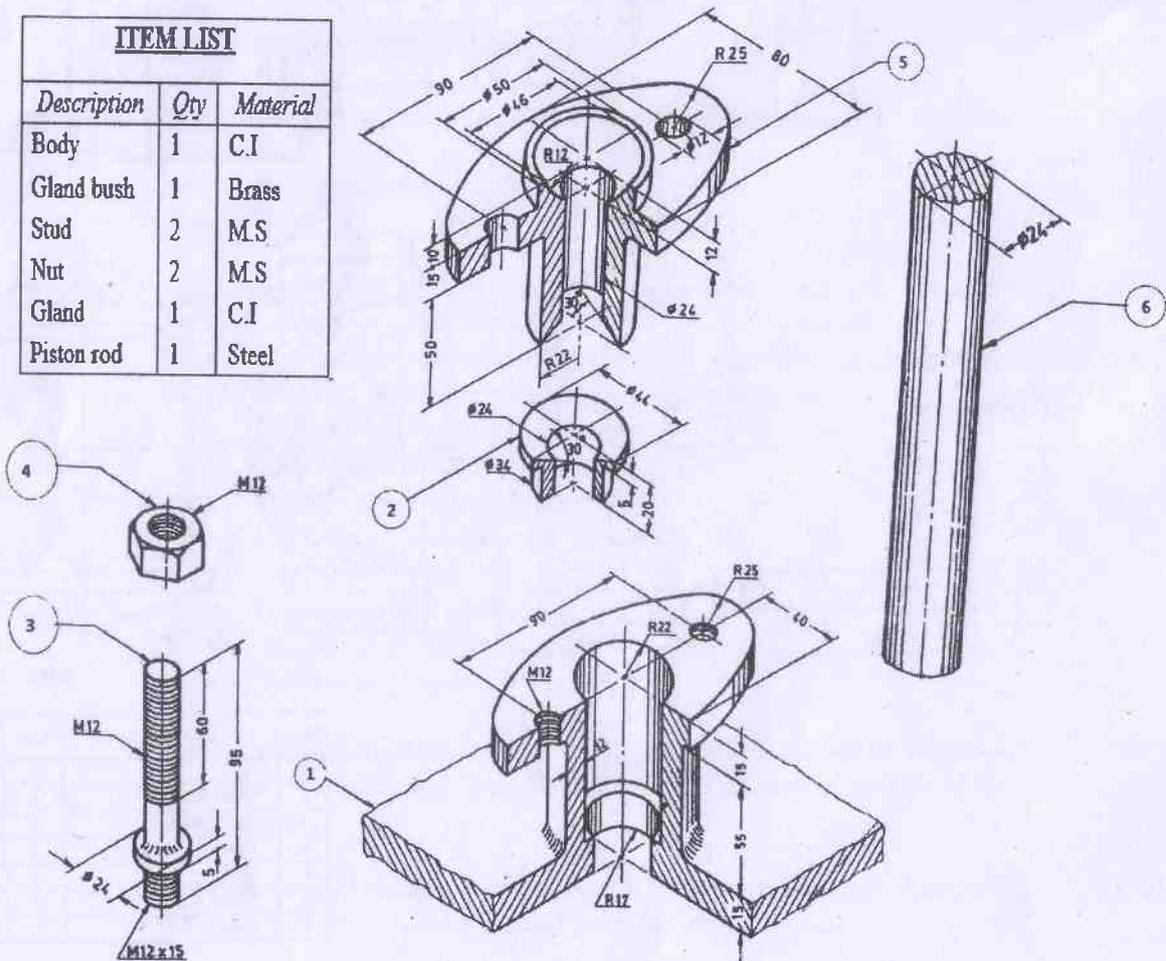
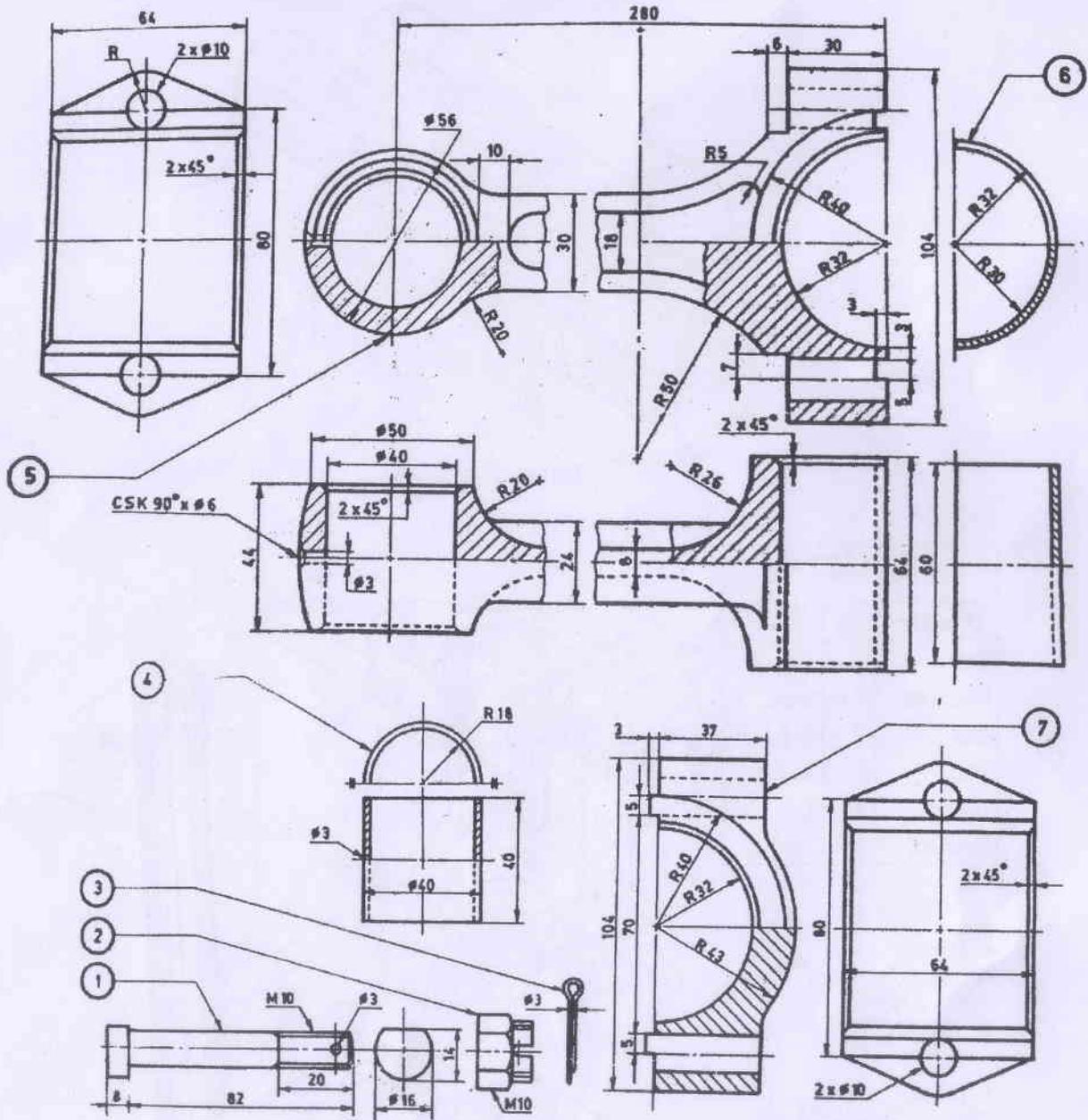


Figure-5



ITEM LIST

Item	Description	Qty.	Material
1	Bolt	2	M. S.
2	Lock nut	2	M. S.
3	Split pin	2	M. S.
4	Bush (Small end)	1	Bronze
5	Body	1	Steel
6	Bush (Big end)	2	Bronze
7	Cap	1	Steel

Figure- 6
