

[Total No. of Printed Pages :3

Roll No

FT - 503
B.E. V Semester
Examination June, 2013
Machine Drawing and Design
Time : Three Hours

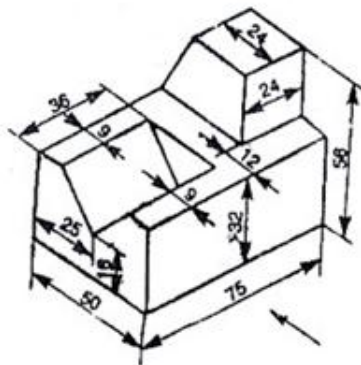
Maximum Marks : 70/100

- Note :** 1. Attempt any five questions.
2. All questions carry equal marks.

- 1 Draw the conventional representation of the following:
- i) External thread
 - ii) Semi elliptical spring
 - iii) Holes on circular pitch
 - iv) Bearing
 - v) Diamond knurling

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2. Draw the top view and front view of the block given in Fig.1

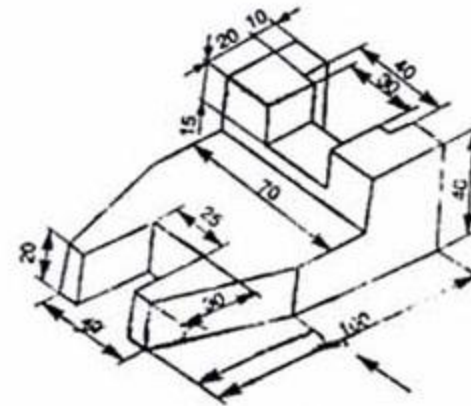


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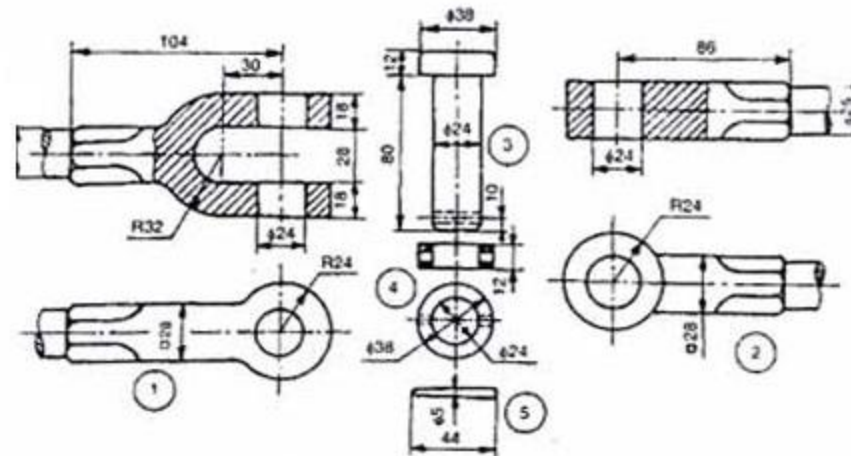
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3. Draw the sectional front view and top view of block given in Fig.2



4. Assemble the parts of a knuckle joint shown in Fig.3 and draw sectional view of the assembly.



Sl. No.	Name	Matl	Qty
1	Fork end	Forged steel	1
2	Eye end	Forged steel	1
3	Pin	Mild steel	1
4	Collar	Mild steel	1
5	Tapnr pin	Mild steel	1

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5. a) What is CAD. State five advantages of CAD.
b) Differentiate between 2D & 3D modeling.
6. a) What B factor of safety. Discuss the factors which affect the selection of factor of safety.
b) What do you mean by machine design. Draw the flow chart of design problem.
7. Two plates of 6mm thickness are to be joined by rivet joint. Select any type of revert joint and design the joint if the allowable strength of mild steel plates are $\sigma_t = 100 \text{ N/mm}^2$, $\sigma_c = 130 \text{ N/mm}^2$ and $z = 80 \text{ N/mm}^2$.
8. Write short notes on any two
 - i) Dimensioning and it's rules
 - ii) Design consideration for environment
 - iii) Types of weld joints.
