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Roll No

FT - 503
B.E. V Semester
Examination, June 2015
Machine Drawing and Design

Time : Three Hours

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Maximum Marks : 70

Note : Attempt all questions. rgpvonline.com

Unit - I

- 1 a) Draw the conventional representation of the following: 7
i) External thread
ii) Internal thread
iii) Rivet head
iv) Splined shaft
b) Explain various method of dimensioning. 7

OR

- Draw sectional front view and top view of lap joint for a plate 10mm thickness. 7
- Sketch the conventional representation of various welding symbol. 7

Unit - II and - III

2. Figure.1 shows the details of stuffing box, assembly part draw the following views: 28
- i) Front view
 - ii) Top view

[2]

OR

Figure. 2 shows the details of knuckle joint draw its Front view and Top view.

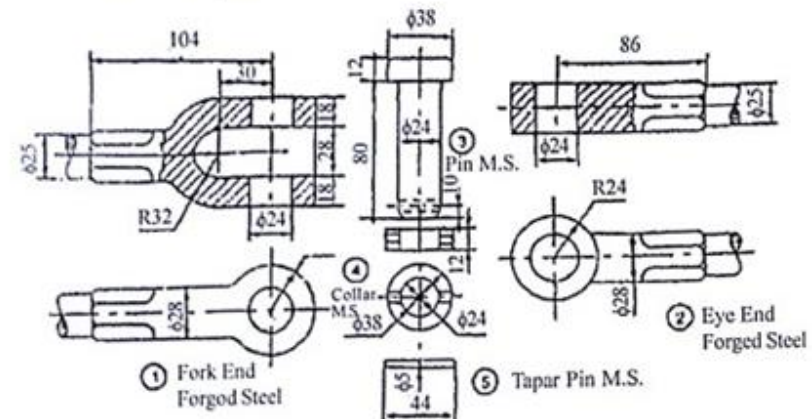


Fig. 2

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Unit - IV

3. a) What do you mean by 2D and 3D modelling. 7
- b) What is CAD state five advantages of CAD. 7

OR

- Draw the flow chart for standardization in design. 7
- Describe in brief design consideration for environment.

Unit - V

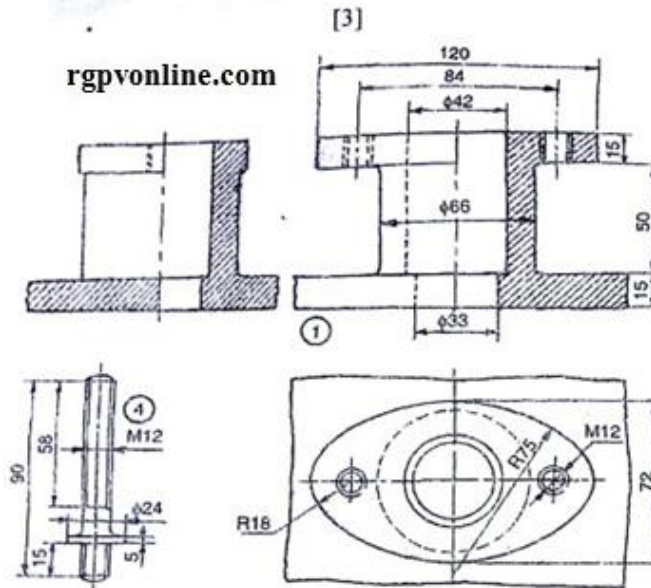
4. Design a knuckle joint to transmit 150 kN. The design stress may be taken as $\sigma_t = 75 \text{ MPa}$, $\tau = 60 \text{ MPa}$, $\sigma_c = 150 \text{ MPa}$.

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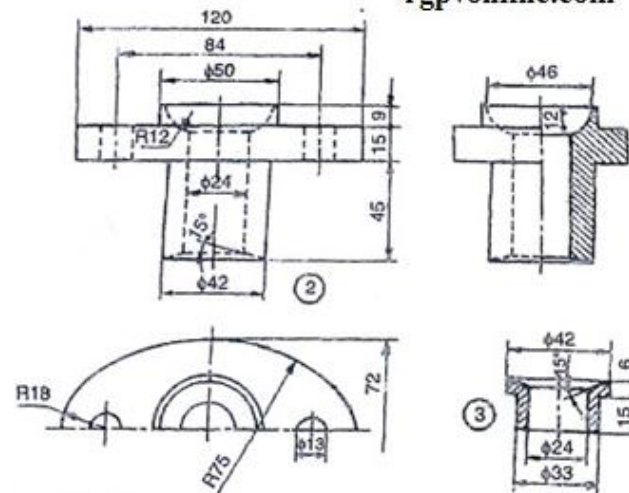
OR

A double riveted lap joint is to be made between 15 mm thick plates. The rivet diameter and pitch are 25 mm and 75 mm. If $\sigma_t = 400 \text{ MPa}$, $\tau = 320 \text{ MPa}$, $\sigma_c = 640 \text{ MPa}$. Find the efficiency of the joint.

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Parts list

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Gland	Brass	1
3	Bush	Brass	1
4	Stud	MS	2
5	Nut, M12	MS	2

STUFFING BOX

Fig. 1