

**Indian Institute of Technology Delhi**  
**Department of Mechanical Engineering**

**Minor Test-II**

MCL-201 Mechanical Engineering Drawing

Time: 1 hour

Marks: 50

(Later on it will be converted to the scale  
as announced by course coordinator)

**NB:** Attempt both the questions. Answers of question 1 must be in brief and to the point. Any missing dimension may be assumed suitably. Marks of each questions are indicated in RHS corresponding to it.

- Q. 1 (a) Sketch (free hand) the weld symbols to indicate the weld all round. (Marks: 3)  
 (b) What is a typical rivet (provide free hand drawing of it) and of which metal it is usually made? (Marks: 2+1)  
 (c) Why caulking and fullering are done in riveted joints? Explain these diagrammatically. (Marks: 3+3)  
 (d) Illustrate mounting of bush bearings on a shaft. (Marks: 5)
- Q.2 Stuffing box is used to prevent the loss of fluid through the turning part (mainly shaft) of machinery. Various parts of stuffing box are shown in Fig.1. Draw the half sectional front view of assembled stuffing box. (Marks: 17)

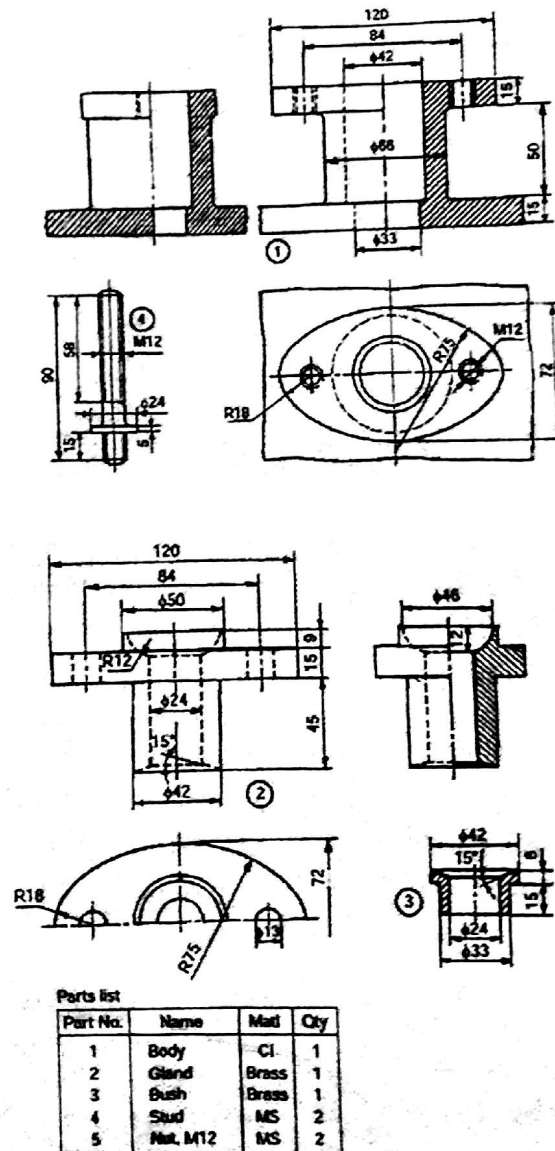


Fig.1

- Q.3 Draw front view, top view and side view of the swing bracket as shown in Fig.2 and indicate suitable joints (using symbols) in the three views in order to fabricate it. (Marks: 16)

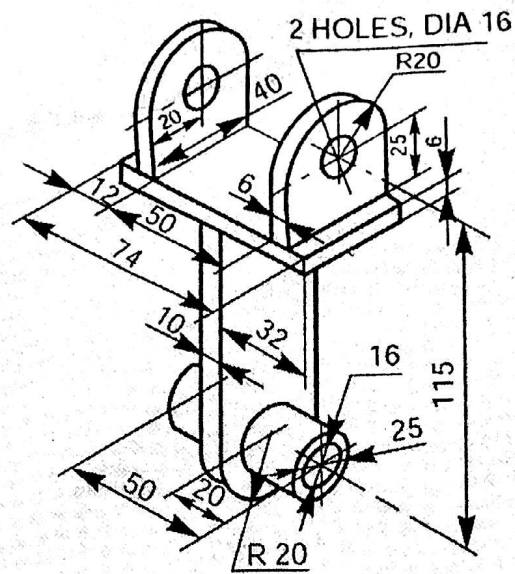


Fig.2

Table1 Weld symbols

No.	Designation	Illustration	Symbol
1.	Butt weld between plates with raised edges (the raised edges being melted down completely)		∧
2.	Square butt weld		
3.	Single-V butt weld		∨
4.	Single-bevel butt weld		∕
5.	Single-V butt weld with broad root face		Y
6.	Single-bevel butt weld with broad root face		Y
7.	Single-U butt weld (parallel or sloping sides)		U
8.	Single-U butt weld		U
9.	Backing run; back or backing weld		⌒
10.	Fillet weld		△
11.	Plug weld; plug or slot weld		⌒