



Answer all the following questions(with the help of sketches) .

Question No.1

(25 Marks)

- a- What are the basic design principles for turning or lathe fixtures ?
- b- Distinguish between Jigs and Fixtures .
- c- Name some materials commonly use in Jigs and Fixtures .
- d- Which machine tool is known as the mother machine tool, and discuss your answer.
(Drilling – Milling – lathe – Non of mentioned)
- e- What are the welding fixture ? state the general purpose of a welding fixture .

Question No. 2

(25 Marks)

In figure 1: Design and sketch the required Jigs and fixtures to make holes No.1 and No.2 .

Question No. 3

(25 marks)

Design a milling fixture to make a slot as shown in figure 2 .

Question No. 4

(25 marks)

Design and sketch a drill jig to drill 8 mm hole in the component shown in figure 3 .

(assuming)that this is the last operation to be performed .

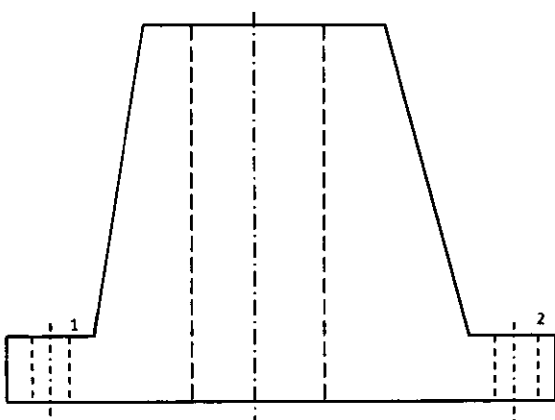


Fig 1

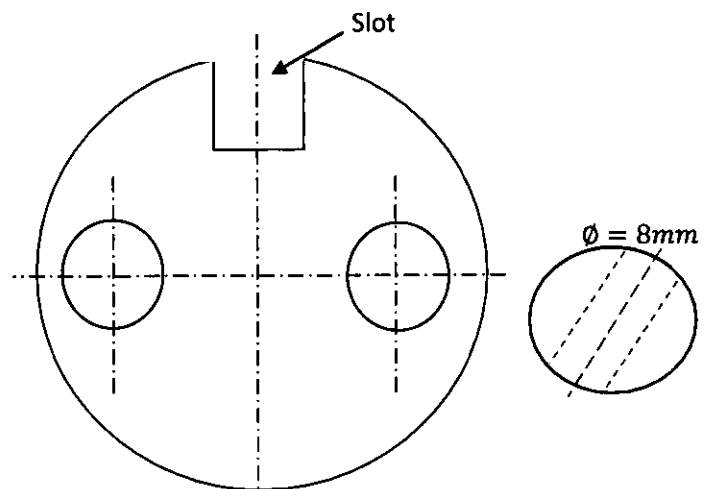


Fig 2

Fig 3

The exam measures the following ILOs.

Q . No.	Q . No. 1	Q . No. 2	Q . No. 3	Q . No. 4
Skill 1 (K,u) a b	a 1-1 b 1-1	d1-1	d 2-1	d2-2
Skill 2 intell. c d e	c 2-1 d 2-1 e 4-1	d 2-1	b1-1	-
Skill 3 Profiss		c1	c5	c2, c4

Good Luck