Menoufa University
Faculty of Engineering
Academic year 2013-2014



Dept.: Prod Engg. & Mech. Design

Year: Diploma Program

Subject/code: Jigs & fixtures/PRE 510

Time allowed: 3 hours

Date: 21/1/2014

Answer all the following questions (with help of sketches)

Question (1):

(25 Marks)

- a) Discuss the advantages of jigs and fixtures.
- b) What is the advantage of conical locators?
- c) Define indexing device.
- d) Sketch and discuss the function of mandrels in turning fixtures.
- e) What are the welding fixtures? State the general purpose of welding fixtures

Question (2):

(25 Marks)

Design a jig for drilling four equi-spaced radial through holes in a ring as shown in Fig. 1 (assuming that this is the last operation to be preformed).

Question (3):

(25 Marks)

Design and sketch a drill jig to drill the hole in the component shown in Fig. 2

Question (4):

(25 Marks)

Design a milling fixture to make a slot as shown in Fig. 3

Good Luck

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)- a2			
	b)- a1			
Skill 2 intell.	c)- b2			
×	d)- b3			
	d)-b1		-	
Skill 3 Profiss		c1	c5	c4

