

**Philadelphia University
Faculty of Engineering**

**Student Name:
Student Number:**

**Second Exam, Second Semester: 2009/2010
Computer Engineering Department**

Course Title: Reverse Engineering	Date: 16/05/2010
Course No: 630307/610307/650307	Time: 1 hour
Lecturer: Dr. Mohammed Bani Younis	No. of pages: 3

Question 1: (8 marks)

- 1) Mention the two benefits of modular Design? (2 marks)

- 2) Mention the two types of modularity. (2 marks)

- 3) Mention the function-based modularity. (4 marks)

Question 2: (10 marks)

- 1) Mention four of the machinery tools which are used in the production of mechanical parts. (2 marks)

- 2) Mention three of the digitising techniques. (3 marks)

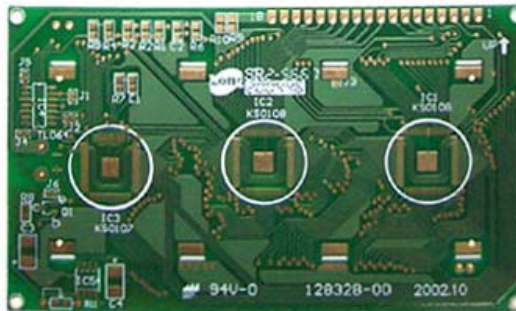
- 3) Mention the Characteristics of the material of the object needed for a good photographic image. (3 marks)

- 4) Draw the basic sequence diagram for Rapid Product Development of Mechanical Systems. (2 marks)

Question 3:

(12 marks)

- 1) Given the PCB shown below answer the following questions:



Show the steps how to manually reverse engineer this PCB and compare it to the process which can be done automatically using HDL? (4 marks)

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2) Explain how to reverse engineer a PCB using Rapid prototyping techniques. (4 Marks)

3) Show AVMG: Automatic Verilog HDL Model Generator, and explain briefly each step in it. [4 Marks]

Best of Luck