

06.12.11 Quiz, CAD/CAM Student num.: _____ Name: _____

Write your answers for each question.

[CAD]

1. Among the roles of CAD system in a product development cycle, which is the most important role and why?

2. List commercial CAE tools you know.

3. Describe the advantage of non-manifold modeling systems over conventional solid modeling systems.

4. Answer the following questions for a non-periodic B-spline curve of order 3 defined by control points, $\mathbf{P}_0, \mathbf{P}_1, \mathbf{P}_2, \mathbf{P}_3$.

(a) Determine the knot values.

(b) How many different curves is the B-spline curve composed of?

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[CAM]

5. For **injection molding**, describe potential change in original design from the view point of **Design for Manufacturing**. In other words, what would you consider in redesigning if the manufacturing process is decided to be injection molding.

6. Explain the following terminology in the **CAM (Computer-Aided Manufacturing)**.

- Face cut (or Facing):

- Rough cut (or roughing):

- Finish cut (or finishing):

7. Describe advantages and disadvantages of **Rapid Prototyping technology** compared with **conventional CNC machining (milling) technology**.