Name..

PRINCE OF SONGKLA UNIVERSITY

FACULTY OF ENGINEERING

Final Examination: Semester 1   **Academic Year: 2007**

Date: 11 October, 2007   **Time: 9:00-12:00**

Subject: 225-467 Quality Improvement   **Room: A401**

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ทุจริตในการสอบ โทษขั้นต่ำปรับตกในรายวิชานั้นและ
พักการเรียน 1 ภาคการศึกษา

Instructions:

1. There are 50 points (50%).

2. Books and notes are allowed.

3. A calculator and a dictionary are allowed.

4. Borrowing things from other students is prohibited.

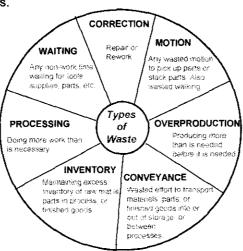| Question No.	Full Score	Score
1	10	
2	5	
3	10	
4	10	
5	10	
6	5	
Total	50	

Dr. Runchana Sinthavalai

Instructor

1. *(10 Points)* From your group assignment, DMAIC project, identify 4 tools that you used, identify the stage, and state the reasons for using those tools and their outputs.

You are in Group No...............

Applying DMAIC in the process of ....

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Tool No.1:...

In the stage of ☐ Define ☐Measure ☐Analyze ☐Improve ☐Control

Objective to use: ....

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Output: ....

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Tool No.2:...

In the stage of ☐ Define ☐Measure ☐Analyze ☐Improve ☐Control

Objective to use: ....

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Output: ....

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(Cont' Question 1)

Tool No.3:..

In the stage of   ☐ Define   ☐Measure   ☐Analyze   ☐Improve   ☐Control

Objective to use: ....

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Output: ....

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Tool No.4:..

In the stage of   ☐ Define   ☐Measure   ☐Analyze   ☐Improve   ☐Control

Objective to use: ....

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Output: ....

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3. *(10 Points)* Discuss two examples of **"visual control or visualization"** to eliminate two cases of wastes.

Case 1: Waste Type:...

How visualization can eliminate waste?

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Case 2: Waste Type...

How visualization can eliminate waste?

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4. *(10 Points)* Give 2 examples of Mistake proofing that <u>you can apply to your life</u>

<u>Mistake Proofing 1</u>

Your Mistake:...

Type of Mistake

☐ Forgetfulness

☐ Misunderstanding

☐ Wrong identification

☐ Lack of experience

☐ Willful (ignoring rules or procedure)

☐ Inadvertent or sloppiness

☐ Slowliness

☐ Lack of standardization

☐ Surprise (unexpected machine operation, etc.)

☐ Intentional (sabotage)

Mistake proofing 1: Method   ☐ Contact   ☐ Counting   ☐ Motion-Sequence

How does it work? :

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(Cont' Question 4)

Mistake Proofing 2

Your Mistake:..

Type of Mistake

☐ Forgetfulness

☐ Misunderstanding

☐ Wrong identification

☐ Lack of experience

☐ Willful (ignoring rules or procedure)

☐ Inadvertent or sloppiness

☐ Slowliness

☐ Lack of standardization

☐ Surprise (unexpected machine operation, etc.)

☐ Intentional (sabotage)

Mistake proofing 1: Method ☐ Contact ☐ Counting ☐ Motion-Sequence

How does it work? :

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5. *(10 Points)* Give 2 examples applying TRIZ Principles to <u>improve your space</u> (e.g. your bedroom, your workplace, your office) or to design some equipments using in your space.

<u>Case 1</u>: Which Principle has been employed? ....

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Current Situation...

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How does TRIZ principle can be applied?

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(Cont' Question 5)

Case 2: Which Principle has been employed? ....

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Current Situation..

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How does TRIZ principle can be applied?

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6. *(5 Points)* How to apply a technique of design of experimental to improve quality? Explain and give an example to support your explanation. <u>Case study of a frozen-seafood manufacturing.</u>