

ชื่อ-สกุล.....

PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Final Examination: Semester 2

Academic Year: 2009

Date: February 20, 2010

Time: 13:30-16:30

Subject: 225-466 Quality Management

Room: R300

ทุจริตในการสอบ โทษที่เท่าปรับตกในรายวิชาในและพักการเรียน 1 ภาคการศึกษา

Instructions:

1. There are 80 points (40%).
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	10	
3	10	
4	10	
5	10	
6	10	
7	5	
8	5	
9	5	
10	5	
Total	80	

Asst. Prof. Dr. Runchana Sinthavalai: Instructor ;)

AS

1. (10 Points) Clarify your understanding for the following statement. **“The ultimate goal of quality improvement is to reduce the variation in product and process”**. (ข้อสอบ กว)



2. (10 Points) Complete all steps for developing **Process Decision Program Chart (PDPC)**;

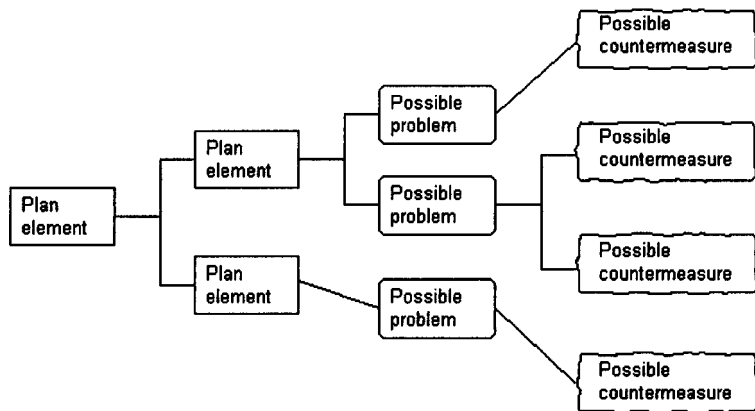
Step 1: Identify main activities in completing **the senior projects**

(โครงการนัศึกษ)

Step 2: Identify the possible problems affecting to the failure to complete the senior project

Step 3: Identify the possible countermeasures for each possible problem

Developing PDPC
in this format



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3. (10 Points) Complete all steps for an initial **FMEA**;

Step 1: Developing the flowchart to cook (i) instant noodle (บะหมี่กึ่งสำเร็จรูป)
or (ii) omelet (ไข่เจียว) เลือกเพียง 1 อย่าง

Step 2: Identify at least 4 failure modes that affecting to lose your food
(cannot eat)

Step 3: Develop the Severity level (scale 1-5) (in the following page)

Step 4: Give Severity level to all failure modes from Step 2

Flowchart (Step 1)	Failure Modes (Step 2)	Severity Level (Step 4)

Continue next page

Continue Question 3- Step 3

Severity Level	Explanation
5	
4	
3	
2	
1	

4. (10 Points) Complete all steps for a simple **HOO**;

Step 1: Identify 5 requirements for a pen (Whats) and give the important score for each requirement (Rating from 1 to 10)

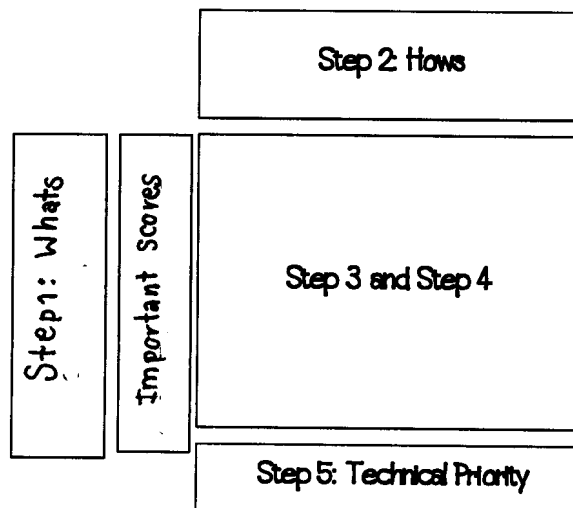
Step 2: Identify technical descriptions (or design attributes) of a pen (Hows) that can response to the requirements in step 1.

Step 3: Identify the symbols and scores using in clarifying the relationship between Whats and Hows.

Step 4: Clarify the relationship between Whats and Hows

Step 5: Calculate for the technical priority.

Developing in this format



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AL

Continue Question 4

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5. (10 Points) Compare and contrast **Six Sigma** and **Kaizen** for three issues.
 Discuss about the advantages and disadvantages.

Issue	Six Sigma (Discuss Advantages & Disadvantages)	Kaizen (Discuss Advantages & Disadvantages)

6. (10 Points) Discuss your idea and give examples for the following statement.
"Lean system tends to achieve (1) greater productivity, (2) lower cost, and (3) shorter cycle times than non-lean systems."



7. (5 Points) A catering manager has been asked to organize a banquet. Table I shows the key activities and precedence. **Draw the arrow diagram as the Activity-on-Arrow (AOA).**

Table I: Banquet activities

<i>Activity</i>		<i>Preceding activities</i>
A	Prepare ingredients	-
B	Clear/ clean room	-
C	Prepare room and lay tables	B
D	Prepare dressings and cold dishes	A
E	Prepare main, to oven	D
F	Meet and seat guests	C
G	Plate, dress and serve starter	E, F
H	Cook vegetables	G
I	Plate up puddings	G
J	Clear starter, serve main course	H
K	Clear main, serve pudding and coffee	I, J
L	Clear tables	K

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8. (5 Points) Discuss your idea for the following statement. **“MBNQA enables continuous improvement”**

9. (5 Points) Discuss your idea and give examples for the following statement. **“QFD is a way of reducing the uncertainty involved in product and process design”**.

10. (5 Points) Discuss your idea for the similarity between DMAIC and PDCA.
(ข้อสอบ กว)

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