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PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Final Examination : Semester II

Academic Year : 2008

Date : 25 February , 2009

Time : 9:00-12:00

Subject : 225-349:Safety and Environmental Engineering Room : R 300
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ทฤษฎีในการสอบ โทษขั้นต่ำคือ ปรับตกในรายวิชาที่ทฤษฎี และพักการเรียน 1 ภาคการศึกษา

Instruction:

1. Answer all questions.
2. All materials are allowed.

Questions:

Part I: (Assist. prof. Kamron Pitaks 80 points)

1. list the hazards and preventions in the business/industries as the following: (20 points)

1.1 machine shop in IE department

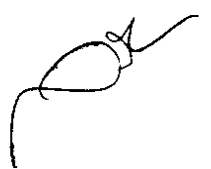
1.2 rubber latex industry

NameCode.....

1.3 rice mill

1.4 restaurant

2. Explain Maslow's viewpoint toward human needs and describe how those needs affect safety management. (10 points)



NameCode.....

3. What are the advantages and disadvantages of dry chemical as a fire extinguishment medium? (10 points)

4. What is Pyramid of fire? How does The Principles of Pyramid of fire prevent fire and fire extinguishing? (10 points)

NameCode.....

5. What laws or regulations should be considered in establishing safety management system in frozen seafood factory? Detail explanation must be given. (10 points)

6. List personal protective equipments that are suitable for these following works : (10 points)

6.1 gas welding

6.2 construction



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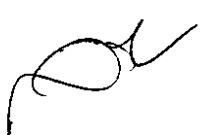
6.3 wood industry

6.4 fire fighting

7. What are the sources of these following hazardous chemical substances and how to prevent and control them? (10 points)

7.1 carbon monoxide

7.2 Sulfur dioxide



NameCode.....

7.3 ammonia

7.4 lead

7.5 chromium



NameCode.....

Part 2 (Dr. Klangduen Pochana 20 points)

Question 1. Answer all questions. Determine whether these following sentences are correct or not. One point (1 point) will be given for the right answer. Minus half point (-0.5 point) will be given for the wrong answer. (Total 10 points)

Question no.	Correct ✓	Incorrect ✘	Question
1			Waste water treatment system is divided into two types which are biological treatment and chemical treatment.
2			Recycling is a process of waste reclaim from domestic use and disposal.
3			Grit removal is used to remove all biology substance from the waste water.
4			Primary sedimentation is one of the physical treatments.
5			The world's water table can be contaminated from fertilizers.
6			Fume is a solid particle which is a result of incomplete combustion of carbon materials.
7			The particle size of spray is bigger than smoke.
8			High concentration of Hydrogen sulfide is extremely high toxic as it is odorless.
9			Carbon monoxide is a gas that produces Sulfuric acid which causes acid rain.
10			Spray tower is normally the most economical, and effective equipment of controlling particulates.

NameCode.....

Question 2. Answer questions in table "B" by using the words in table "A" only. Some words can be used more than once. Some words may not be used. (1 point each, total 10 points)

Table "A"

AB	Environmental aspect
CB	Environmental objective
EML	Environmental policy
EIA	Environmental impact
EMR	surveillance
EMS	Significant impact
EM	Environmental review
Plan	Corrective action
Do	Preventive action
Check	End of pipe
Act	All of pipe
EMP	Calibration
ISO	ERM
PP	มอก.
PM	มพช.
IQA	สมอ.

Table "B"

No	Question	Answer
1	The program shows activities and responsibility to fulfill environmental objectives.	
2	The establishment of policy is a step of in PDCA process of EMS.	
3	The organization has a right to assess the conformity and effectiveness of EMS of any organization.	
4	The yearly visit of the audit organization.	
5	The statement announced by top management gives direction of the organization's environmental development.	
6	The organization shall assess environmental aspects to determine whether these aspects have significant impacts to the environment.	
7	The new concept of pollution management	
8	The person responsible for ensuring that the EMS is effectively established in the organization.	
9	The Thai industrial is issued by	
10	The environmental management review is a step of in PDCA process of EMS.	

GOOD LUCK

Dr. Klangduen Pochana