
UNIVERSITI SAINS MALAYSIA

First Semester Examination
Academic Session 2002/2003

September 2002

KEN 200 – Environmental Quality Management

Time : 3 hours

Answer any FIVE questions.

All questions are of equal value (20 marks for each question).

This paper contains SEVEN questions (3 pages).

1. Discuss the consequences of deforestation and measures for prevention.
(20 marks)
2. Explain the Greenhouse Effect. What are the causes and consequences of this effect?
(20 marks)
3.
 - (a) Discuss the possible reasons for the observation that water quality indices serve a more limited audience than air pollution indices.
(6 marks)
 - (b) What is the environmental indicator for coastal waters? Explain the rationale behind the choice of the parameter.
(7 marks)
 - (c) Describe how the Malaysian air pollution index (API) is derived.
(7 marks)

4. (a) Describe the hazard identification stage of risk assessment as it might apply to a hazardous waste landfill.

(8 marks)

- (b) The following hazardous chemicals have been found migrating from a hazardous waste landfill :

Chemical	Leachate Concentration (mg/L)	Air Concentration ($\mu\text{g}/\text{m}^3$)
A	240	8
B	320	22
C	0.080	Non-detectable
D	0.002	Non-detectable
E	16	1
F	102	11
G	205	5
H	76	3

Using both water and air data, determine the least number of surrogate chemicals that will account for 99% of the non-carcinogenic health risk at the site.

Useful information :

Chemical	Oral RfD	Inhalation RfD
A	0.1	-
B	0.6	0.286
C	0.007	-
D	0.00005	-
E	0.2	-
F	0.009	-
G	-	0.000286
H	0.004	-

(12 marks)

5. (a) Give a brief description on the impact of the Environmental Quality Act, 1974 to the efforts of the Malaysian Government in the protection of the environment.
(10 marks)
- (b) Briefly describe the considerations for landuse planning process in writing the Environmental Impact Assessment (EIA) Report.
(10 marks)
6. (a) Briefly explain as to how the implementation of the ENVIRONMENTAL MANAGEMENT PLAN (EMP) complements an EIA Study.
(10 marks)
- (b) Describe the role of Social Economic Assessment as a complementary requirement to the EIA Study.
(10 marks)
7. (a) Even though ISO 14000 has many advantages, many companies do not wish to implement it. Why?
(10 marks)
- (b) What is the difference between 'compliance' and 'non-conformance' ?
(10 marks)

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