
UNIVERSITI SAINS MALAYSIA

First Semester Examination
Academic Session 2004/2005

October 2004

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. In your opinion, how has the Iraqi War affected the world's environment, if at all it has? What are the direct effects of the War on the environment in and around the region?
(20 marks)

2. (a) The Earth receives very harmful radiation from the sun. What shields these radiations from reaching the troposphere and damaging life on Earth? Explain how this shield is being destroyed by the activities of man.
(10 marks)
- (b) What is the greenhouse effect? Explain why it is important that the gases responsible for the greenhouse effect should be maintained within a limited range.
(10 marks)

3. (a) Compare and contrast the Malaysian water quality index and air pollution index.
(12 marks)
- (b) Discuss the rationale in the choice of faecal coliform bacteria count as the sole indicator for coastal water quality.
(8 marks)

4. (a) Explain what is meant by acceptable risk.
(4 marks)
- (b) Discuss the factors affecting the perception of risk.
(8 marks)

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

Chemical	Concentration in leachate (mg/L)	RfD (mg/kg d)
Acetone	240	0.1
1,2,4-Trichlorobenzene	2	0.01
Hexachlorocyclopentadiene	0.08	0.007
Cadmium	1	0.0005
Chromium (VI)	0.1	0.005
1,2-Dichlorobenzene	0.1	0.09
Toluene	100	0.2

Determine the least number of surrogate compounds that will account for 99% of the health risk at the site.

(8 marks)

5. (a) Briefly describe the implications and the provisions in Section 34A of the Malaysian Environmental Quality Act, 1974 on the physical development of the country and the conservation of the environment.
(10 marks)
- (b) Describe the role of Social Economic Assessment as a complementary requirement to the Environment Impact Assessment (EIA) study.
(10 marks)
6. (a) Describe the pertinent steps in the preparation of an Environment Impact Assessment (EIA) study by a project proponent.
(10 marks)
- (b) How does the implementation of the ENVIRONMENTAL MANAGEMENT PLAN (EMP) complements the EIA study?
(10 marks)
7. What are the elements in the environmental management system that must be fulfilled before certification can be awarded?
(20 marks)