



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2017/2018**

COURSE NAME : ENVIRONMENTAL ECONOMICS
COURSE CODE : BWJ 31003
PROGRAMME CODE : BWW
EXAMINATION DATE : JUNE / JULY 2018
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

- Q1**
- (a) Define the term economics according to Adam Smith (1776). (1 marks)
 - (b) Describe **THREE (3)** causes of environmental degradation with example. (3 marks)
 - (c) Explain the difference between macroeconomics and microeconomics. (6 marks)
 - (d) (a) Energy shortage would hinder economic growth especially for developing country like Malaysia. Today, our country is fully dependent on coal power plant as a main source of energy. However, they are one of the highest producer of greenhouse gases domestically which contribute to the worsening of climate change. In contrast, nuclear energy is a more reliable and cleaner candidate to substitute the conventional energy power plant, able to produce huge outputs of energy with little to no emission of greenhouse gases. The downside to nuclear energy, however, is the massive cost of building one, not to mention the risk of a nuclear meltdown as evident in Chernobyl as well as being susceptible to nuclear fallout like the case of Fukushima.
 - (i) If you are a government body responsible for energy policymaking, which of these two options will you choose to build to cope with the rising energy demand? (1 marks)
 - (ii) Reflect on your decision with examples from current issues on energy. (9 marks)
- Q2**
- (a) List **FOUR (4)** types of function in pollution damage. (2 marks)
 - (b) Describe the differences between productive and dynamic efficiency. (4 marks)
 - (c) Consider a perfectly competitive market for a given good. Assume that the market demand is given by $Q_d = 210 - 3p$, where Q_d is the quantity demanded and p is the price. The market supply is $Q_s = -10 + 2p$, where Q_s is the quantity supplied.
 - (i) Calculate the equilibrium price and quantity in the market. (3 marks)
 - (ii) Show the equilibrium in a graph by plotting the inverse demand and supply functions. (3 marks)

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- (d) “For the firm producing bad outputs or generating pollution, the traditional output-based measure of productive efficiency is not meaningful. Whether the proportional expansion of both good and bad outputs results in welfare loss or gain depends on the benefits from the expansion of goods outputs being lower or higher than the damages from the expansion of bad outputs” (Murty et al. 2006).

Determine **FOUR (4)** mitigation measures that should be proposed in order to reduce pollution by the sugar industry firms.

(8 marks)

Q3

- (a) Define:

- (i) Production.
- (ii) Consumption.
- (iii) Externalities.
- (iv) Pigovian Taxes.

(4 marks)

- (b) ‘A steel producing firm might pump pollutants into the air. The individuals living around the factory will pay for the pollution since it will cause them to have higher medical expenses, poorer quality of life, reduced aesthetic appeal of the air’.

According to this situation:

- (i) What type of externality occurred in this situation? Deduce your answer using relevant illustration.

(10 marks)

- (ii) Propose your action plan that should be taken by the government in order to reduce the impact affecting third party.

(6 marks)

Q4

- (a) Describe **FOUR (4)** steps of assessing magnitude of damage when we decided to evaluate our environment.

(4 marks)

- (b) Explain briefly types of value of environment evaluation.

- (i) Use value.
- (ii) Non-use value.

(4 marks)

(c) Environment is an invaluable element that is crucial to the survival of humankind. Ironically, currently our environment has become degraded due to anthropogenic impact. Based on this situation, infer whether or not humans are supposed to put a value to the environment.

(6 marks)

(d) Performs steps of zonal travel cost approach of travel cost method if an economist is trying to evaluate Air Terjun Sekayu recreational park.

(6 marks)

Q5 (a) Describe **TWO (2)** limitations of cost-benefit analysis.

(4 marks)

(b) Determine **THREE (3)** applications of Cost-Benefit Analysis.

(6 marks)

(c) Using a proper example, perform a cost-benefit analysis in orderly steps.

(10 marks)

– END OF QUESTIONS –

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