UNIVERSITI KUALA LUMPUR
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

FINAL EXAMINATION

OCTOBER 2025 SEMESTER

COURSE CODE	:	HGB30803
COURSE TITLE	:	WASTE MANAGEMENT
PROGRAMME NAME	:	BACHELOR OF ENVIRONMENTAL HEALTH (HONS)
DATE	:	29 JANUARY 2026
TIME	:	9:00AM - 12:00PM
DURATION	:	3 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consist of ONE sections.
4. Section A consist of five questions. Answer FOUR (4) questions only.
5. Please write your answer on the answer booklet provided.
6. Please answer all questions in English only.
7. Refer to the attached Formula/ Appendies. ☐ *Tick if applicable*

THERE ARE 5 PAGES OF QUESTIONS INCLUDING THIS PAGE

SECTION A (Total: 100 marks)

Answer FOUR (4) questions.

Please use the answer booklet provided.

Question 1

A private industrial estate accommodates several factories, including food processing, metal finishing, and automotive workshops. The estate management is responsible for coordinating solid waste collection, public cleansing services, and environmental compliance. However, recent inspections revealed improper disposal of scheduled waste, discharge of untreated industrial effluents into drains, and confusion among factory operators regarding which laws and policies apply to their activities.

(a) Analyse the role and objectives of the National Solid Waste Management Policy in improving waste management practices within the industrial estate.

(8 marks)

(b) Investigate four key provisions under the Solid Waste and Public Cleansing Management Act 2007 (Act 672) that are relevant to managing solid waste in this industrial estate.

(10 marks)

(c) Assess the role of the Environmental Quality Act 1974 (EQA 1974) and one subsidiary regulation in controlling pollution from scheduled waste or industrial effluent in the estate.

(7 marks)

Question 2

A district hospital in Malaysia generates large quantities of general waste, clinical waste, chemical waste from laboratories, and wastewater from cleaning and sanitation activities. Due to limited staff training, all wastes are frequently mixed and disposed of together. The hospital has also been warned by authorities for failing to comply with environmental regulations related to waste handling and effluent discharge.

(a) Examine the definition of waste and four classifications of waste generated in hospitals based on their characteristics.

(15 marks)

(b) Discuss five major waste management issues and challenges faced by the hospital as described in the case.

(10 marks)

Question 3

Solid waste management begins from generation until final disposal. Poor handling and collection practices can pose serious occupational and environmental health risks.

(a) Analyse solid waste generation by including four major sources and types of solid waste commonly found in urban areas in your discussion.

(15 marks)

(c) Discuss onsite handling and waste storage practices, including three occupational and environmental health hazards associated with improper management.

(10 marks)

Question 4

A medium-scale electronics manufacturing factory generates various wastes, including spent solvents, heavy-metal-containing sludge, contaminated rags, and used chemical containers. The wastes are temporarily stored on-site before being transported to a licensed treatment facility. Recently, several issues were identified, such as faded labels on containers, incompatible wastes stored together, and limited staff awareness of hazardous waste regulations.

(a) Based on the case, analyse three types of hazardous waste generated by explaining their key hazardous characteristics.

(9 marks)

(b) Explain the hazardous waste generation process in industrial settings. You need to include two factors that may increase the quantity of hazardous waste generated in this factory in your explanation.

(8 marks)

(c) Discuss the regulatory requirements related to hazardous waste and explain three good practices for hazardous waste storage, packaging, and labelling that should be implemented at the facility.

(8 marks)

Question 5

A public university has rapidly upgraded its information technology facilities, resulting in a large volume of obsolete computers, printers, mobile phones, and electronic laboratory equipment. Most of the discarded items are stored in a warehouse, while some are disposed of together with general waste. Concerns have been raised regarding environmental pollution, worker exposure, and the absence of a proper e-waste management system.

(a) Discuss e-waste generation including the three sources of e-waste highlighted in the case study.

(11 marks)

(b) Discuss four environmental and occupational health effects of improper e-waste disposal.

(8 marks)

(d) Propose three appropriate e-waste management strategies that the university should implement.

(6 marks)

END OF EXAMINATION PAPER