



**FINAL EXAMINATION / PEPERIKSAAN AKHIR  
SEMESTER 2 – SESSION 2015 / 2016  
PROGRAM KERJASAMA**

COURSE CODE : ULAB 1022  
KOD KURSUS

COURSE NAME : ENGLISH FOR ACADEMIC STUDY  
NAMA KURSUS

YEAR / PROGRAMME : 1<sup>ST</sup> – ALL PROGRAMME / SATU – SEMUA PROGRAM  
TAHUN / PROGRAM

DURATION : 2 HOURS / 2 JAM  
TEMPOH

DATE : APRIL 2016  
TARIKH

INSTRUCTION/ARAHAN :

1. Answer **ALL** questions in the spaces provided in this question paper.  
*Jawab **SEMUA** soalan di ruang yang disediakan di dalam kertas soalan ini.*

( You are required to write your name and your lecturer's name on your question paper )  
( Pelajar dikehendaki menulis nama dan nama pensyarah pada kertas soalan )

NAME / NAMA	:	.....
I.C NO. / NO. K/PENGENALAN	:	.....
YEAR / COURSE TAHUN / KURSUS	:	.....
COLLEGE NAME NAMA KOLEJ	:	.....

**SECTION A (50 marks)**

**READING: TEXT I (30 marks)**

**Read the passage below and answer all the questions that follow.**

- I As developing countries undergo economic growth, industrialisation and extensive medical research activities, a large amount of hazardous waste is generated. As a consequence, proper management of hazardous waste

including labeling and identifications, on-site storage and management, transportation, treatment and disposal are clearly addressed in Malaysia. Severe penalties were imposed against both facilities and individuals for noncompliance. These include concerted actions leading to restrictions or cancellations of facility operating permits, fines and imprisonment.

- IV There are several strategies implemented by Malaysia for managing medical waste. One is to build a medical waste incineration treatment plant. The Bukit Nanas Integrated Waste Treatment Facility is the country's first comprehensive incineration treatment plant processing various wastes with high temperature, physical and chemical treatment. Since the privatisation of Malaysian medical waste management and hospital support services in 1995, regional and on-site medical waste incinerators were developed. These incinerators are capable of processing between 20 and 500 kg of waste per hour. The problem with building incinerators however is to find suitable locations and to face the resistance from local authorities. Another strategy used by Malaysia in managing medical waste is to collect the wastes directly from the source and recycled them. Medical waste is often placed in special bins which are then collected by privately assigned companies from hospital to hospital. Prior to disposal, the waste pickers would normally perform the recycling operation to recover any recyclables. Recycling not only reduces the volume of medical wastes to be disposed but also saves the country valuable foreign exchange which would otherwise be used to import raw materials.
- V Besides burning and recycling, another strategy used to manage medical waste is to dispose it through landfills. Most of the landfills are disused tin mines. The gas produced by the landfill is used to generate electricity. Sanitary landfills which was purposely built to receive hazardous waste in Malaysia has been developed to ensure high standards of operational and maintenance control. According to Consumer Association of Penang, between 1995 and 2000, the federal government had spent RM20.9 million to build nine sanitary landfills and upgrade 27 existing landfills in 34 local authorities. Although landfill is a promising disposal method of medical waste in the densely populated cities and towns of the states, land availability for landfill site is a major constraint.
- VI Although Malaysia has taken effective strategies in the handling of medical waste, there are some management issues. Firstly, the medical waste management is not standardised in private clinics as compared to government owned hospitals and clinics. Most of the clinical wastes in private clinics are usually dumped in drums labeled as 'domestic waste' without separation of needles and sharp objects from other waste. This is due to the high cost of analysing, processing, shipping, treating and disposing of medical waste. Another problem is lack of routine surveys or national reporting requirements for medical waste except for certain hazardous wastes regulated by Environment Quality Act 1974. Medical hazardous waste-generation data are not reported by facilities on an annual basis. Thus, it is difficult to determine the amount of wastes generated by the medical facilities since



all hazardous wastes are combined in reports. Another grave concern is the pollution caused by landfill. Besides attracting pests and other disease causing germs, landfill releases heavy metals and other toxic substances into the atmosphere. The poisons from dumping sites can leak and escape into the ground contaminating the underground water source.

VII In order to improve medical waste management, the Malaysian government should look into adopting a cleaner production programme in future which is more cost effective and feasible in handling waste. This includes the substitution of hazardous materials with less hazardous ones in medical research operations besides improving medical waste separation to maximise recovery of recyclables. All medical staff members should be aware of the need to minimise medical waste and be trained on minimisation methods applicable to their job duties and responsibilities. The government should also strengthen the regulation on the administration of medical waste, particularly at private clinics in the country. There should be strict regulatory policy related to separation of needles and sharp objects from general wastes at private clinics. There should also be a common biomedical waste treatment for healthcare units in the country to standardise waste treatment from medical sources.

VIII It can be concluded that the Malaysian government approaches the management of medical waste in an integrated manner involving various parties. Besides providing guidelines for the disposal of medical waste, private consortia were engaged to provide storage, collection, transportation, treatment and disposal services for medical waste from both clinics and hospitals. A reduction in the quantities of medical waste generated at source has been promoted through awareness among the staff. However, there are some policy issues highlighted which should be urgently addressed by the government. These include cost effectiveness of building and running incinerators as well as

A I Write the main ideas for paragraphs II, IV, V, VI and VII in the blank spaces provided.

4. State the issues that are associated with the management of medical waste?

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

(3m)

**A III** State in the brackets provided whether each of the statements given below is True (T) or False (F).

1. There were fewer dental clinics than regular clinics in 2012. [ ]

2. Some examples of medical waste are syringes and sharp surgical supplies. [ ]

3. The Hospital Waste Management Manual provides guidelines for treating medical waste from hospitals. [ ]

4. Recycling of medical waste encourages foreign exchange activities. [ ]

5. Most disused tin mines are converted into landfills. [ ]

6. The government needs to strengthen the existing laws on medical waste management in public clinics. [ ]

(6 x 1m = 6m)

A IV Choose the correct meaning of the words highlighted in the following sentences according to the context in which they are used. Circle the correct option.

1. As a consequence, **proper** management of hazardous waste becomes an area of increasing concern.  
A. suitable  
B. established  
C. behaving politely
  
2. Thus medical waste can be categorised as hazardous waste as it contains multiple types of hazardous materials such as combinations of toxic chemicals, radioactive materials and bio-hazardous **agents** which can have direct and indirect health impact on community and environment at large.  
A. companies that do business for others  
B. substances that have a particular effect  
C. individuals who work for a country's secret service
  
3. The Ministry of Health has also **produced** the "Hospital Waste Management Manual" which contains detailed guidelines for handling and disposing medical wastes in hospitals.  
A. to make something  
B. to show something  
C. to cause something to happen
  
4. Recycling not only reduces the volume of medical wastes to be disposed, but also saves the country valuable foreign exchange which would otherwise be used to import **raw** materials.  
A. untested  
B. untreated  
C. uncooked
  
5. According to Consumer Association of Penang, between 1995 and 2000, the federal government had spent RM20.9 million to build nine sanitary landfills and **upgrade** 27 existing landfills in 34 local authorities.  
A. to give a higher status  
B. to make something more powerful  
C. to improve the quality of service or product

(5 x 1m = 5m)



**Text II (20 marks)**

**Read the text below and then complete the tasks that follow.**

- I Malaysia is experiencing rapid industrialisation and urbanisation which result in the adverse effects on the environment from the increasing waste generated. One of the biggest challenges in urban areas is to manage its waste especially from industrial and housing areas. Malaysia, with its population of over 29 million in 2012 generates approximately 25,000 metric tonnes of waste per day. Environmental reports produced yearly by the Department of Environment (DOE) showed that lack of an effective and efficient waste management system has had a negative impact in the country. Currently, the waste management approach being employed is the landfill approach but due to rapid development and the lack of space for new landfills, authorities in most major cities in Malaysia are looking at other strategies in waste management approaches.
- II One of the strategies is understanding public behaviour which is critical in minimising waste. The public's willingness to cooperate and participate in waste management relies on factors such as awareness, attitude, socio-economic status, age, ethnicity and level of education. Lack of these factors among the society is often the significant obstacles that negatively affect waste management. Therefore, any education and awareness campaign planned should take these factors into account for maximum effectiveness. Moreover, in minimising waste, the decision of which approach and method to be implemented should be tailored to the target persons to ensure its effectiveness.
- III Implementation of recycling campaign is also a strategy to reduce waste disposal problem. However, besides lack of accessibility to recycling and waste management facilities, lack of regulations and guidelines often hinder the success of recycling programmes in Malaysia. To ensure the success of recycling, national, state and local authorities should formulate regulations, policies and programmes that would encourage people to recycle. Moreover, people should be informed on how to recycle and how to feel motivated to recycle by the relevant authorities. The recycling procedures should also be convenient, inexpensive and less problematic to the people.
- IV Sending wastes to landfill sites is still the cheapest strategy for many businesses. However, traditional landfills bring a lot of problems such as leachate and landfill gas. To reduce the environmental impacts caused by sending wastes to open landfill sites, open dumping landfills in Malaysia should be upgraded to engineered landfills and sanitary landfills; a landfill that incorporates a full set of measures to control gas and to collect and treat leachate. Moreover, the landfill operators should apply soil cover on the waste daily and implement after care measures after the landfill is closed.



- V Incineration has been proven as another effective approach in reducing the volume of waste and providing usable energy. This technology has been used increasingly over the last 50 years in highly industrialised countries and had reduced the volume of waste to be landfilled. Currently, incineration in Malaysia is mainly used to dispose clinical and hazardous waste where 100 per cent of the waste is incinerated. There is potential to build more incinerators but waste in Malaysia contains high moisture content. This characteristic brings a challenge to find an incineration technology that is able to handle waste with high moisture content at a low operating cost. Incineration would be a considerable choice because the system does give high returns while the energy consumed to treat the waste is relatively low. However, the most important issue in ensuring the successful outcome of a waste incineration project depends on the accurate estimation of the future waste quantities and characteristics. In-depth knowledge of the demographic, commercial and industrial structure of the waste collection area is required in estimating the future amount and composition of waste so that the use of incinerators is cost effective.
- VI The role of non-government organisations and the private sector is also important in waste management. This is because waste management cannot be handled by the government alone. Thus, there is a need for both government and non-government organisations to work in synergy to formulate and spread educational and user-friendly strategies in order to raise public environmental consciousness, convey environmental knowledge and inspire the public on the importance of environmentally friendly values. Another obstacle for the success of the partnership is the incapability of municipal administrators to write and enforce an effective contract. Hence, municipal administrators need to improve the enforcement and contract involving non-government organisations and the private sector to ensure the success of the partnership.
- VII Due to rapid industrialisation and urbanisation, Malaysia is facing one of the biggest challenges in managing its waste. Although landfilling is the most preferred method of waste treatment, it brings adverse impacts on the environment. Therefore, in order to develop a comprehensive waste management programme, all sectors should work in synergy to improve public environmental awareness. Sufficient funds must also be allocated for waste management because modern landfill often remains idle due to lack of trained operators, and insufficient funds for operation. Besides that, landfills effect on environment should be monitored and supervised regularly. In order to ensure a sustainable development of Malaysia towards achieving vision 2020 as a developed country, environmental awareness, continuous campaigns and programmes must be planned to ensure proper management of waste in Malaysia.

I. Based on Text B, fill in the blanks to complete the notes below.

Title : _____ (1m)			
	Strategy	Problem	Solution
1.	Understanding public behaviour	<ul style="list-style-type: none"> <li>• _____ _____ _____ _____ _____ (1m)</li> </ul>	<ul style="list-style-type: none"> <li>• Education and awareness campaign planned should consider these factors into account for maximum effectiveness.</li> <li>• _____ _____ _____ _____ (1m)</li> </ul>
2.	_____ (1m)	<ul style="list-style-type: none"> <li>• _____ _____ _____ _____ (1m)</li> <li>• Lack of regulations and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• People should be informed on how to recycle and how to feel motivated</li> <li>• _____ _____ _____ _____ (1m)</li> <li>• _____ _____ _____ _____ (1m)</li> </ul>
3.	_____ (1m)	<ul style="list-style-type: none"> <li>• Traditional landfills bring a lot of problems such as leachate and landfill gas</li> </ul>	<ul style="list-style-type: none"> <li>• Open dumping landfills should be upgraded to engineered landfills and sanitary landfills</li> <li>• _____ _____ _____ _____ (1m)</li> </ul>

4.	<hr/> <hr/> <p>(1m)</p>	<ul style="list-style-type: none"><li>• <hr/> <hr/> <hr/> <hr/><p>(1m)</p></li><li>• Inaccurate estimation of future waste quantities and characteristics</li></ul>	<ul style="list-style-type: none"><li>• Build more incinerators which can handle waste with high moisture content at low operating cost.</li><li>• <hr/> <hr/> <hr/> <hr/><p>(1m)</p></li></ul>
5.	Public-private partnership	<ul style="list-style-type: none"><li>• <hr/> <hr/> <hr/><p>(1m)</p></li><li>• Incapability of municipal administrators to write and enforce effective contract</li></ul>	<ul style="list-style-type: none"><li>• Government and non-government organisations should work together in formulating and spreading educational and user-friendly strategies.</li><li>• Municipal administrators need to improve the enforcement and contract.</li></ul>

(13x1m = 13m)

2. Name two ways on how Malaysia can be successful in waste management programme:

i. 

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ii. 

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(2m)



II. Match the bold words in the following sentences with the words that mean the same as in the text. Refer to the part of the text indicated in brackets. Write the word from the text in the spaces provided.

1. Over the past few months, there was a **fast** drop in the value of the Ringgit. (Paragraph I)

\_\_\_\_\_

2. He played the **main** role in setting up the organisation. (Paragraph II)

\_\_\_\_\_

3. There are a few **steps** to follow to conduct the experiment. ( Paragraph III)

\_\_\_\_\_

4. Leaving him immediately would be a good **option** if he keeps on troubling you. (Paragraph V)

\_\_\_\_\_

5. Giving him the promotion this year would **boost** his self-confidence and performance. ( Paragraph VII )

\_\_\_\_\_

(5x1m=5m)

**SECTION B (10 MARKS)**

Fill each blank with the correct word from the options given in the box.

remaining	hazardous	risks	amount	radioactive
generate	microorganisms	facilities	often	laboratories

Healthcare activities protect and restore health and save lives. However, these activities also (1) \_\_\_\_\_ waste and by-products. Of the total (2) \_\_\_\_\_ of the waste generated by healthcare activities, about 85 per cent is general, non-hazardous waste comparable to domestic waste. The (3) \_\_\_\_\_ 15 per cent is considered hazardous material that may be infectious, toxic or (4) \_\_\_\_\_. The major sources of healthcare waste are hospitals and other health (5) \_\_\_\_\_, laboratories and research centres, mortuary and autopsy centres, animal research and testing (6) \_\_\_\_\_, blood banks and collection services and nursing homes for the elderly. Hospitals in high-income countries generate on average up to 0.5 kg of (7) \_\_\_\_\_ waste per bed per day, while those in low-income countries generate on average 0.2 kg. However, healthcare waste is (8) \_\_\_\_\_ not separated into hazardous or non-hazardous wastes in low-income countries making the real quantity of hazardous much higher. Healthcare waste contains potentially harmful (9) \_\_\_\_\_ which can infect hospital patients, health workers and the general public. The health (10) \_\_\_\_\_ associated with waste and by-products include radiation burns, sharp object inflicted injuries, poisoning and pollution through the release of pharmaceutical products.

(10 x 1m = 10m)

**END OF PAPER**