Angka Giliran:..... No. Tempat Duduk: .....

UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Kedua
Sidang Akademik 2007/2008

April 2008

LSP 300 – Bahasa Inggeris Akademik
(Academic English)

Masa: 2 jam

INSTRUCTIONS TO CANDIDATES:

1. Please note that this question paper contains **2 (TWO)** questions on **13 (THIRTEEN)** printed pages. Check that the paper is complete.

2. Answer **BOTH** questions in this booklet.

UNTUK KEGUNAAN PEMERIKSA SAHAJA		
SOALAN	**MARKAH PENUH**	**MARKAH DIPEROLEH**
1	**70**	
2	**30**	
JUMLAH	**100**	

...2/-

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QUESTION 1 (70 marks)
Read the text below and answer the questions that follow.

Saving salt-loving shrubs

by Arin Greenwood

Many think of mangroves as trees or shrubs which grow in muddy, tropical, coastal swamps and have tangled roots that grow above the ground. But the word "mangrove" can describe the mangrove tree or the watery ecosystem that the mangrove tree is a part of. The difficulty in determining exactly what mangroves are has caused mangrove ecosystems to be frequently unregulated by governments because no one can figure out if **they** should be looked after by the forestry departments, fishery agencies, wildlife organizations or some other governing body.

Mangroves are such complicated subjects that the few mangrove researchers dotted at universities around the world all work within different departments – a few in forestry, some in zoology, others in botany and **the rest** in marine biology. Dr. Brad Walters, a professor at Canada's Mount Allison University who studies mangroves in the Philippines, happens to be in his university's geography department, **which** suits him fine. "Geographers are open-minded!" he says.

Mangrove trees are the only ones in the world that grow in salt water as they have internal desalination systems. These astonishing trees are part of dense, lush, enormously diverse ecosystems that are found in muddy, rough coastal areas in tropical and subtropical parts of the world, from 30^0 north of the equator to 30^0 south, says Dr Yuk-Shan Wong, a mangrove researcher and professor at the Hong Kong University of Science and Technology.

Mangrove forests are made up of mangrove trees, low-lying with tough leaves and hard wood. There are about 50 to 70 species of mangrove trees – 12 or 13 are common species – and many other plants that grow in mangrove forests alongside the trees, says Dr Wong. "The natural vegetation system is very

robust," he adds. The forests are also filled with animals such as birds, crabs, snakes, a diversity of fishes including the air-breathing mudskippers, flying foxes, monkeys and the occasional crocodile.

The world's largest mangrove forest and what is said to be the oldest mangrove forest in Southeast Asia is the Sundarbans, which lies on the delta of the Ganges and is spread across areas of Bangladesh and West Bengal, India. Named after the Sundari tree, Sundarbans is also a tiger reserve and one of the last strongholds of the endangered Bengal tigers.

Mangrove ecosystems serve well-known and important ecological functions. The tangled, deep-growing mangrove tree roots prevent soil erosion. The areas are a habitat for crabs, birds and other animals. The ecosystem is also like a nursery for baby fish, crustaceans and other sea creatures. They provide protection from **predators** for tiny creatures. Rotting mangrove tree leaves provide food for animals living in mangrove ecosystems. They are a rest stop for migratory birds. They are important natural filtration systems as they filter out land-based pollutants that have seeped into the water.

Dr Wong discovered that mangroves can also filter human waste in places that do not have the resources for waste treatment facilities. Sadly, mangroves are fast depleting. According to a study by the Food and Agriculture Organization of the United Nations, there were 18.8 million hectares of mangroves worldwide in 1986. Now, there are 15 million hectares. Mangroves are being lost at a rate of 185,000 hectares per year, according to the United Nations study.

Dr Walters estimates that the Philippines has lost 70 percent of its mangroves. In Asia, mangroves are destroyed by aquaculture. Shrimp farms and other large-scale aquaculture pollute mangrove ecosystems, change flow of water in and out of mangrove ecosystems and introduce exotic species into delicate mangrove ecosystems. The Environmental Justice Foundation – a London-based non-profit organization is dedicated to creating, implementing and building environmental solutions. **It** estimates that 38 percent of worldwide mangrove decline is due to shrimp farming, almost entirely in Asia.

As mangroves occupy valuable coastal areas, they often had to make way for real estate development. Says Dr Wong: "Hong Kong used to have a lot of mangroves but they were destroyed for real estate." One of the biggest causes of mangrove destruction has come from mismanagement by well-meaning government agencies, says Dr Vaithilingam Selvam, Chairman of India's M.S.Swaminathan Research Foundation, a non-profit centre for research on sustainable agriculture and rural development. India, for example, is thought to have lost two-thirds of its mangroves through such mismanagement. India's mangroves were administered first by the British colonialists. In 1947, India's forestry department took over that role, says Dr Selvam. "Unfortunately, the managers and administrators of the government agencies are not **well-versed** in mangrove management," he explains. They followed unscientific practices which led to massive mangrove destruction – destruction which was blamed on local communities living near the mangroves.

As government agencies ineptly took over the managing of the mangroves, local communities were alienated from the mangroves. "Communities gradually lost their traditional knowledge on the management of mangroves and their interest in protecting mangroves declined," adds Dr Selvam. About 15 years ago, governments in Asian countries, including China, Thailand, Cambodia and Vietnam, began various mangrove protection programmes, says Dr Wong. Hong Kong, for example, set up 41 mangrove ecosystem preserves around its coastline.

After the tsunami hit Asia in 2004, interest in mangroves grew when Dr Selvam co-authored a study indicating that areas with mangroves suffered significantly less tsunami-related damage than areas without them. The study found that mangroves **buffered** coasts by absorbing some of the tsunami's energy and mangrove ecosystems absorbed water into their canals. Dr J.S. Samra, Deputy Director General of the Indian Council of Agricultural Research (ICAR) in New Delhi agrees and points out that the magnitude of the tsunami in Andaman and Nicobar Islands could have been mitigated if the ecosystem had not been tampered with. In an interview with the *The Sunday Tribune* in April last year, he explained how mangroves can help mitigate disasters like tsunamis: "A mangrove

is an ideal natural speed-breaker that can **dissipate** the energy of the waves. Waves get killed gradually in a mangrove. Mangrove forests reduced the impact of the super cyclone that struck Orissa in October 1999. They can grow in saline conditions without oxygen. The seeds of a mangrove germinate on the tree and then fall on the ground. They are better than a concrete sea wall."

After Dr Selvam's study came out, governments around Asia pledged resources for mangrove conservation. Thailand, for example, pledged to restore its mangroves in order to reduce the impact of future typhoons. People in mangrove areas have always known that mangroves are good for storm protection, says Dr Walters. When he conducted his research on community uses of mangroves in the Philippines, he found that while mangroves were used for wood and fishing, their greatest value was for storm protection. He explains, "When I went around interviewing people, the single most common answer to the "Why did you plant these mangroves?" question was 'storm protection'. It was common knowledge that mangroves were good for storm protection."

Alas, recent reports show that interest in mangroves is already declining. Indonesia is reported to have given land set aside for mangroves back to shrimp farmers. Mangroves planted in the last two years are not growing well either, says Dr Walters, because in **their** zeal to restore mangroves, governments have not always paid attention to where mangroves thrived.

But Dr Selvam is hopeful. He is heartened to see interest in mangroves, not just from government agencies, but from local community groups that had not previously been interested in mangrove restoration. He says, "The fishing community, which is normally reluctant to participate in restoring, conserving and raising mangrove and other coastal vegetation programmes, now show a lot of interest in restoring degraded coastal vegetation as well as raising plantations in new areas."

Mangroves may be complicated and mangrove restoration "is not a very sexy topic," as Dr Wong puts it. But for the protection of mankind, it is very important, he asserts.

Source: Asian Geographic, 2006

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Section A (10 marks)

Give the meanings of the following words as they are used in the passage.

1. robust (line 26) _____
2. predators (line 38) _____
3. well-versed (line 66) _____
4. buffered (line 80) _____
5. dissipate (line 87) _____

Section B (10 marks)

State what the following words or phrase refer to in the passage.

1. they (line 6) _____
2. the rest (line 11) _____
3. which (line 14) _____
4. It (line 54) _____
5. their (line 105) _____

Section C (10 marks)

Indicate whether the following statements are **TRUE** or **FALSE**. Write **'TRUE'** if the statement is **TRUE** and **'FALSE'** if the statement is **FALSE** in the spaces provided.

1. In the Philippines, mangroves were used for wood, fishing and storm protection. _____
2. Mangrove destruction has caused the extinction of Bengal tigers. _____
3. Government agencies took over the managing of mangroves because local communities have neither the knowledge nor interest in mangrove conservation. _____
4. The most common reason for planting mangroves is for protection against storms. _____
5. Interest in mangroves is declining due to insufficient funds in implementing mangrove restoration programmes. _____

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Section D (16 marks)

Circle the letter corresponding to the correct answer, e.g. (A) if A is the correct answer.

1. Mangrove trees are able to grow in salt water because of their

   A. natural vegetation systems.
   B. internal desalination systems.
   C. various ecological functions.
   D. special filtration systems.

2. The Asian tsunami of 2004 has resulted in **all of the following except**

   A. better mangrove management among government agencies.
   B. more resources being channeled into mangrove conservation.
   C. less damage in areas with mangroves.
   D. better scientific practices in mangrove protection programmes.

3. Dr Wong is of the opinion that...

   A. mangroves can lessen the impact of tsunamis.
   B. governments around Asia must pledge to restore mangroves.
   C. governments must concentrate on areas where mangroves thrive.
   D. mangrove restoration must not be neglected.

4. Based on lines 102-113, which of the following statements below supports the view that interest in mangroves is declining?

   A. Local communities do not support the idea of mangrove restoration.
   B. Government agencies lack the expertise to restore mangroves.
   C. Governments have given priority to other projects.
   D. Mangroves are more suitable for shrimp farming.

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Section E (9 marks)

1. India's forestry department took over the administration of mangroves in 1947. State two ways how the local communities were negatively affected?

(i) _____

_____

(ii) _____

_____

(3 marks)

2. State three Asian countries and the mangrove protection programmes that they have implemented.

Country	Programme
(i)	
(ii)	
(iii)	

(6 marks)

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Section F (15 marks)

Using the information in the passage, complete the diagram below:

Mangrove Restoration

MANGROVES

Definitions

1. _____
2. _____

(3 marks)

Functions

1. Ecological

a. Prevent soil erosion
b. _____
c. _____
d. Rest-stops for migratory birds
e. _____
f. _____
g. _____

(5 marks)

2. Others

a. _____
b. Storm protection
c. _____
d. _____

(3 marks)

Destruction of mangroves by:

1. _____
2. Real estate development
3. _____

(2 marks)

Recommendations

Encouragement of mangrove restoration among:

1. _____
2. _____

(2 marks)

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QUESTION 2 (30 marks)

In about 300 words, write an essay on **ONE** of the following:

1. Children today face a lot of dangers. Discuss some of these dangers and suggest ways to protect the children.

OR

2. Online learning has been gaining popularity worldwide. Discuss some of its advantages and disadvantages.

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