

Angka Giliran:

No. Tempat Duduk:

UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Kedua
Sidang Akademik 2007/2008

April 2008

LSP 402 – Bahasa Inggeris Saintifik dan Perubatan
(Scientific and Medical English)

Masa: 2 jam

INSTRUCTIONS TO CANDIDATES:

1. Please note that this question paper contains **3 (THREE)** questions on **15 (FIFTEEN)** printed pages. Check that the paper is complete.
2. Answer **ALL** questions in this booklet.

UNTUK KEGUNAAN PEMERIKSA SAHAJA		
SOALAN	MARKAH PENUH	MARKAH DIPEROLEH
1	50	
2	20	
3	30	
JUMLAH	100	

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QUESTION 1 (50 marks)

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

ALIENS AMONG US

Do we share our planet with alternative forms of life?

By Carl Zimmer

Every living thing on Earth shares a long, colourful history. Our planet was born into a maelstrom 4.5 billion years ago, and for the next 600 million years a steady **bombardment** of primordial debris made the surface uninhabitable. The blitz finally tapered off 3.8 billion years ago. Then within about 50 million years later – practically an instant in geologic time – life irrevocably established itself. Since then, it has evolved into everything from bacteria to toadstools to mudskippers to humans. Outwardly these species vary wildly, but at the molecular level they are staggeringly uniform. They all use DNA to encode genetic information. They all use RNA molecules as messengers to transfer the information from DNA to cellular factories called ribosomes, which then build proteins, which in turn drive our metabolisms and form the structures of our cells. In short, every species seems descended from a common ancestor whose attributes define what scientists means when they say 'life as we know it'.

But what about life as we don't know it? What if other, completely distinct forms of biology also took root in early Earth? After all, the swiftness with which life appeared might mean that it could easily do so anytime, anywhere the conditions are right. If so, maybe life arose more than once at different locations on the early Earth. Those other organisms might have their own biochemistry and a separate evolutionary history. They might not even use DNA – they could be, in essence, alien beings that just happened to emerge on the same planet. Which leads to the big question: What if one (or more) of those alternative life forms of life is still around?