

SULIT
6355/2
English
For Science
And
Technology
Kertas 2
1jam

6355/2



JABATAN PELAJARAN

Dengan kerjasama

**PERSIDANGAN KEBANGSAAN PENGETUA - PENGETUA
SEKOLAH MENENGAH MALAYSIA
CAWANGAN MELAKA**

**PEPERIKSAAN PERCUBAAN SIJIL PELAJARAN MALAYSIA
TAHUN 2007**

ENGLISH FOR SCIENCE AND TECHNOLOGY

KERTAS 2

Satu jam

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

Maklumat untuk calon

1. *Kertas soalan ini mengandungi 30 soalan.*
2. *Jawab **semua** soalan.*
3. *Soalan – soalan yang dikemukakan dalam kertas soalan ini mungkin mempunyai **tiga** atau **empat** pilihan jawapan.*
4. *Hitamkan semua jawapan anda pada kertas jawapan objektif yang disediakan.*

Information for candidates

1. *This question paper consists of 30 questions.*
2. *Answer **all** questions.*
3. *Questions in this question paper may have either **three** or **four** options.*
4. *Shade all your answer on the objective answer sheet provided.*

Kertas soalan ini mengandungi 16 halaman bercetak

[Lihat sebelah
SULIT

Section A

Question 1

Read the text below and answer the question that follows.

Global warming could remake the world's climate zone's by 2100, with some polar and mountain climates disappearing altogether and formerly unknown ones emerging in the tropics. And when climate zones vanish, the animals and plants that live there will be at greater risk of extinction. Previous studies have raised the concern about species extinctions in specific areas.

1. Which of the following word explains the description above?
- A. Global warming
 - B. Climate zones
 - C. Pollution
 - D. Species extinctions

Question 2

Read the text below and answer the question that follows.

The first stage of Canada's controversial annual harp sea hunt is likely to be **scrapped** because the ice floes where pups are born have broken up and many animals have drowned, officials and animal rights activists said. Hunters move across the ice floes, shooting and clubbing to death young seals. The pups had been born as usual this year but the ice floes had then been blown far out to sea and started to break up before the seals learned how to swim properly.

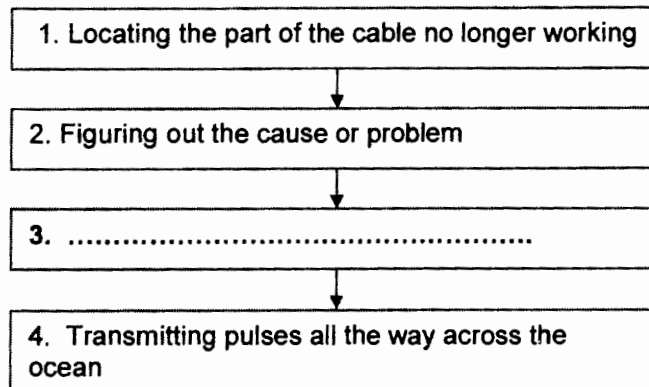
2. The word "scrapped" refers to
- A. focused
 - B. interrupted
 - C. killed
 - D. extinct

Question 3

Read the text below and answer the question that follows.

Powerful earthquakes near Taiwan shut off international phone and Internet service for the Far East just after Christmas. Five repair ships have been working on the damaged undersea cables. How do you repair a cable that's lying across the ocean floor? First, the telecom operator has to locate the part of the cable that's no longer working. Cable engineers can figure out the general neighborhood of the problem based on the reported phone or Internet service outages. From terminal stations on shore, they can zero in on more specific coordinates by sending light pulses along the fibers in the cable. A working cable will transmit those pulses all the way across the ocean, but a broken one will bounce it back from the site of the damage.

The following chart represents the process on how to fix an undersea cable.



3. Which of the following best completes Box 3 ?
- A measuring the reflection time taken to come back
 - B reporting phone or internet service outages
 - C sending light pulses along the fibers in the cable
 - D shutting off international phone

Question 4

Read the text below and answer the question that follows.

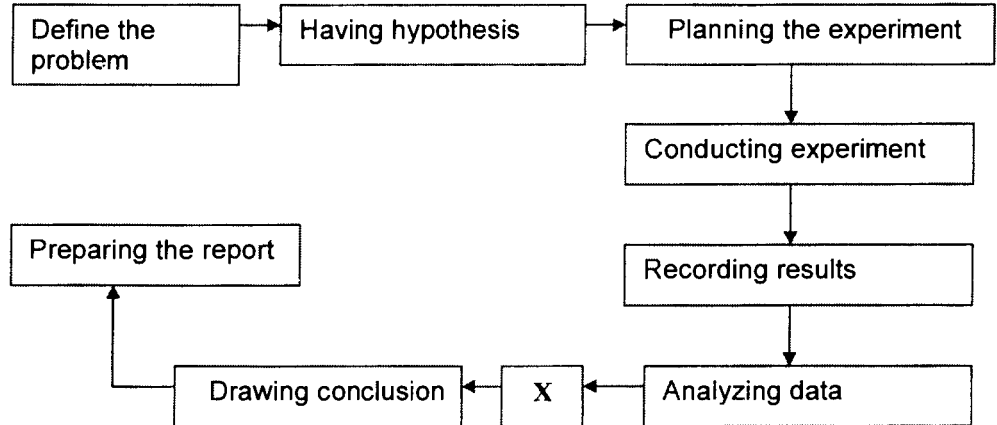
Earth day was started in the 1960's. It was one of the first attempts to make people aware of the earth as their environment and of their responsibility to take care of it. When Earth Day started, it focused on pollution, particularly of the air and water. Young people were often frustrated and sometimes frightened by pollution because they felt powerless to improve the situation. They heard so much about air and water pollution that they were afraid to breathe the air or drink the water.

4. According to the text, why do young people frightened by pollution?
Because
- A of the Earth day which started in the 1960's
 - B they cannot fight pollution themselves
 - C they felt powerless to improve the situation
 - D they were afraid to breathe the air or drink the water

Question 5

Study the figure below and answer the question that follows.

The figure below shows the process of science in terms of the scientific method



5. "X" probably represents
- A Interpreting data
 - B Describing data
 - C Recording data
 - D Justifying data

Question 6

Read the text below and answer the question that follows.

We dump all sorts of things into our waters, from sewage from our homes and heavy metals, oils and toxins from industries to rubbish that clogs up streams, drains and rivers. All of these slowly and surely deplete our fresh water resources and damage the eco-systems that support life on our planet.

- 6 The statements above lead to the main causes of water pollution. Choose one of the causes which you think is **not related** to the problem.
- A Chemical wastes and byproducts from factories
 - B Poorly treated or untreated sewage
 - C Contaminated water used for industrial purposes
 - D Increase our use of raw materials

Question 7

Read the text below and answer the question that follows.

The sun is recognized today to be a medium-sized star of average brightness **powered by** the nuclear fusion of the element hydrogen into helium. The sun is approximately 1,395,000 kilometers in diameter compared to the 12,756 km diameter of the earth. It is tilted about 7 % from the ecliptic (e.g., the path of earth's orbit) and rotates on its axis once in about 9 hours.

- 7 The term "powered by" refers to from
- A energized
 - B engineered
 - C experimented
 - D erupted

Question 8

Read the text below and answer the question that follows.

The cerebrum makes up 85% of the brain's weight, and it's easy to see why. The cerebrum is the thinking part of the brain and it controls your voluntary muscles – the ones that move when you want them to. So you can't dance – or kick a soccer ball – without your cerebrum. When you're thinking hard, you're using your cerebrum. You need it to solve math problems, figure out video games, and draw a picture.

- 8 According to the text, we may conclude that, cerebrum..
- A is the biggest part of the brain
 - B controls balance movement
 - C is to control involuntary muscles
 - D produce and release hormones

Questions No. 9 and 10 refer to the text below;

The term 'traditional medicine' refers to ways of protecting and restoring health that existed before the arrival of modern medicine. As the term implies, these approaches to health belong to the traditions of each country, and have been handed down from generation to generation. Traditional systems in general have had to meet the needs of the local communities for many centuries. China and India for example, have developed very sophisticated systems such as acupuncture and ayurvedic medicine.

- 9 The above text is mainly about
- A modern medicine
 - B traditional medicine
 - C acupuncture medicine
 - D ayurvedic medicine
- 10 The term 'restoring' refers to
- A bringing back
 - B taking away
 - C turning on
 - D putting in

Question 11

Read the text below and answer the question that follows.

Jupiter is the third- brightest object in our night sky after the Moon and Venus. And, apart from the Sun, Jupiter is the largest body in our entire solar system. Indeed, Jupiter is so massive that it is more twice as heavy as all the other planets put together. The planet's dimensions are simply staggering.

11 Which is the best to describe the article above?

Jupiter

- A as a big planet
- B as heavy as other planets
- C as giant of the solar system
- D as the largest planet's dimensions

Question 12

Read the text below and answer the question that follows.

Researchers have developed a malaria-resistant mosquito, a step that might one day help block the spread of an illness that has claimed millions of lives around the world. When they fed on malaria infected-mice, the resistant mosquitoes had a higher survival rate than non resistant ones, meaning they could eventually replace the ones that can carry the disease, according to a report.

12 From the text we know that

- A malaria-resistant mosquito can be found in any parts of the world
- B malaria infected-mice spread illness around the world
- C the non resistant mosquitoes had a higher survival rate than the resistant mosquitoes
- D malaria-resistant mosquito had a higher survival rate than non-resistant ones

Question 13.

Read the text and answer the following question.

The sad truth today is that our food is a 'commercial factory' that produces the maximum output with minimum input. As such, your food comes from farmers who are keen to get the most out of their lands with minimum investment and maximum fruits and vegetables.

13. Which of the following statements agrees with 'commercial factory'?
- A. Today's carrots are increasingly compromised in quality.
 - B. The food comes from farms that operate as a business in the most cost effective manner.
 - C. Take supplements with nutrients that could be missing in your compromised food chain.
 - D. A dietary supplement supplies nutrients that are missing or not consumed in sufficient quantity in a person's diet.

Question 14.

Read the text and answer the question that follows.

A type of bacteria lives symbiotically in the large intestines and manufactures vitamin K, an essential blood clotting factor. Other species give yogurt its tangy flavour. Another kind, found in the digestive system of ruminants (cows, sheep, goats) makes it possible to digest plant cellulose. One type converts nitrogen from the air spaces in the soil into more usable form for plants like soya bean, peas and alfalfa.

14. Based on the text above, where can bacteria which convert nitrogen to be found?

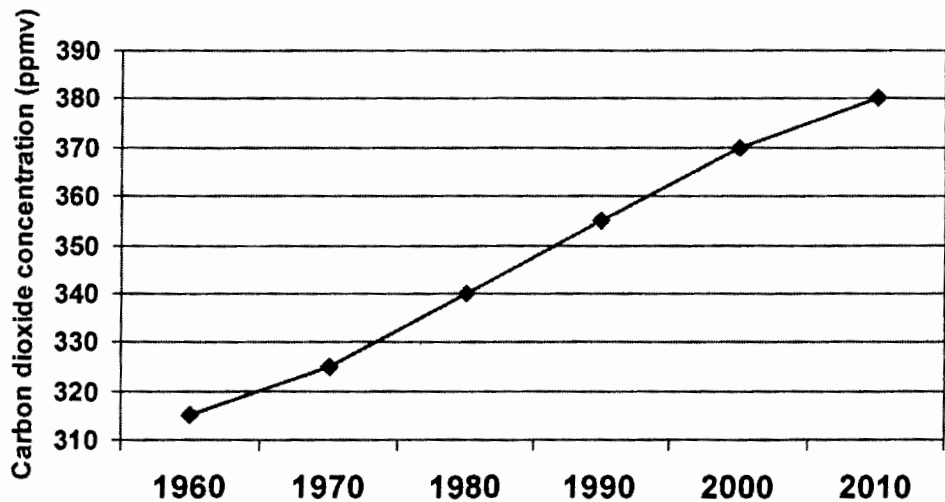
- I In the air
 - II In the soil
- A I
B II

- III In the digestive tracts of ruminants
 - IV In the digestive tracts of human
- C I,II,III
D I,II,III,IV

Question 15

Based from the graph, answer the following question.

Atmospheric Carbon Dioxide Measured At Mauna Loa, Hawaii



The atmospheric concentrations of CO₂ and CH₄ have increased by 31% and 149% respectively above pre-industrial levels since 1750. These levels are considerably higher than at any time during the last 650,000 years, the period for which reliable data has been extracted from ice cores. From less direct geological evidence it is believed that CO₂ values this high were last attained 20 million years ago. About three-quarters of the anthropogenic (man-made) emissions of CO₂ to the atmosphere during the past 20 years are due to fossil fuel burning. The rest of the anthropogenic emissions are predominantly due to land-use change, especially deforestation.

15. Which statement **best** describes the graph above
- A. The atmospheric emissions of carbon dioxide have been increasing during the past 20 years due to anthropogenic activities.
 - B. Fossil fuel burning is the major cause of global warming.
 - C. Carbon monoxide concentration have been increasing ever since the ice-period
 - D. The atmospheric concentration of gases are as a result of volcanic eruptions and industrial emissions.

Question 16.

Read the text and answer the question that follows.

Dynamic Random Access Memory (DRAM) is the most common kind of random access memory (RAM) for personal computers and workstations. The network of electrically-charged points in which a computer stores quickly accessible data in the form of 0s and 1s is called memory. DRAM is dynamic in that, unlike static RAM (SRAM), it needs to have its storage cells refreshed or given a new electronic charge every few milliseconds.

16. Which of the following best explains the D in DRAM?
- A. It speeds up access to data in files by using an inverted index.
 - B. The memory is refreshed only once a session upon shutdown.
 - C. The memory must constantly be refreshed.
 - D. It allows the retention of the same data throughout the execution of a program.

Question 17.

Read the text and answer the question that follows.

Neptune is the eight and outermost planet in our solar system. It is the fourth-largest planet by diameter and the third-largest by mass. Neptune is 17 times the mass of the Earth and is slightly more massive than its near twin Uranus which is 14 Earth masses, but slightly smaller due to its higher density.

17. Which of the following statements is **true**?
- A. Uranus is 17 times the mass of Earth.
 - B. Neptune is smaller in size compared to Uranus.
 - C. Uranus is smaller than Neptune because it has a higher density.
 - D. Neptune is fourth and outermost planet in our solar system.

Question 18.

Read the text and answer the question that follows.

Diagnostic ultrasound is used to diagnose in pregnancy. Unlike X-ray which requires ionizing radiation, a potential cancer-causing wave, diagnostic ultrasound uses low intensity wave to generate images. However, ultrasound energy delivered to the foetus cannot be regarded as completely innocuous.

18. We can infer that diagnostic ultrasound
- A. causes cancer
 - B. requires skills
 - C. helps in deliveries
 - D. poses some danger

Question 19


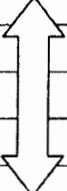
Read the text and answer the question that follows.

Tides are periodic rises and falls of large bodies of water. The gravitational attraction of the moon causes oceans to bulge out upwards. Another bulge occurs in the opposite side as the Earth pulled towards the moon and away from the water on the far side. While all this is happening, the Earth is rotating and that explains why there are two tides a day.

19. The word **periodic** means occurring
- A. at regular intervals
 - B. all the time
 - C. once in a while
 - D. during certain times

Question 20.

Study the information below and answer the question that follows.

Frequency	Types of electromagnetic radiation	Wavelength
Highest	gamma radiation	Shortest
	X-rays	
	ultraviolet	
	visible light	
	infrared radiation	
	microwaves	
Lowest	radio waves	Longest

20. Which of the following statements is true of electromagnetic radiation?
- The wavelength increases with frequency.
 - Gamma rays and radio waves are at opposite ends of the spectrum.
 - A low-frequency wave corresponds with a shorter wavelength.
 - Ultraviolet radiation has a higher frequency than X-rays.

Question 21

Read the text and answer the question that follows.

Falling water from the shower head forces air down and round the shower, creating a horizontal mini-tornado with low pressure at its centre. The air outside the shower remains at normal pressure so the curtain is forced inwards and sticks to us.

21. Why does the shower stick to us?
- The inner pressure is greater than the external pressure.
 - The creation of a mini-tornado causes low pressure.
 - The external pressure is greater than the inner pressure.

Question 22.

Read the text and answer the question that follows.

Satellite travels in many orbits. When a satellite is close to Earth at 320 – 800 km, we say it is in Low Earth Orbit or LEO. A satellite must be at height of 35 880 km to make a geostationary orbit. It circles the Earth at the same speed the Earth turns and therefore will appear stationary in the sky. In polar ice, the Earth turns as the satellite orbits and therefore it can cover the whole surface of the Earth

22. A satellite will look as if it is not moving when it
- A. moves round the Earth
 - B. moves in the opposite direction
 - C. travels at the same speed as the Earth
 - D. orbits and covers the whole surface of the Earth

Question 23.

Study the table below and answer the question that follows.

Wave feature	Speed	Wave period	Wave length
Wind-generated wave	(8 – 100) kph	(5 – 20) seconds	(100 – 200) m
Tsunami wave	(800 – 1000) kph	(10 mins – 2 hours)	(100 – 500) km

23. The tsunami wave
- A. is shorter than the wind-generated wave
 - B. is bigger than the wind-generated wave
 - C. moves slower than a wind-generated wave

Question 24.

Read the text and answer the question that follows.

Rich in vitamin A, blueberries alleviate eye strains caused by close work such as reading or sewing.

24. The word 'alleviate' means that blueberries help to _____ eye strain.

- A. reduce
B. aggravate
C. avoid
D. cause

Question 25.

Read the text and answer the question that follows.

Butanol or butyl alcohol is an alcohol with a 4 carbon structure and the molecular formula of $C_4H_{10}O$. It is primarily used as a solvent, as an intermediate in chemical synthesis and as a fuel.

25. Which of the following would complete the statement below?

" Butanol has 4 carbon atoms and _____ hydrogen atoms."

- A. 4
B. 10
C. 1
D. None

[25 marks]

Section B

[5 marks]

You are advised to spend 10 minutes on this section.

Questions 26 - 30

Read the following passage and then choose the **best** answer.

The orbits of comets are (26)_____. An orbit by a comet takes it very close to the sun and then far away again. The time to complete an orbit (27) _____; some comets take a few years while others take millions of years to complete an orbit. The speed of a comet increases as it gets closest to the sun, and is greatest when the comet is nearest to the sun. Comets are often visible from Earth when they get close to the sun; because the sun's (28) _____ vanishes material from the (29) _____ to form a tail. As a comet moves away from the sun, its speed decreases. It is at its (30) _____ when it is furthest away from the sun.

26. A. atmospheric
B. cryptic
C. elliptical
27. A. differ
B. different
C. varies
D. variety
28. A. heat
B. rays
C. energy
D. temperature
29. A. outside
B. surface
C. platform
D. external
30. A. closest
B. lowest
C. slowest

KERTAS SOALAN TAMAT

[5 marks]