

SULIT



BAHAGIAN PENGURUSAN SEKOLAH
BERASRAMA PENUH DAN SEKOLAH KECEMERLANGAN
KEMENTERIAN PELAJARAN MALAYSIA

PEPERIKSAAN PERCUBAAN SPM TAHUN 2011

6355/2

ENGLISH FOR SCIENCE AND TECHNOLOGY

Kertas 2

Tingkatan 5

Ogos 2011

1 jam

Satu jam

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

Arahan

1. *Kertas soalan ini mengandungi 30 soalan.*
2. *Jawab semua soalan.*
3. *Tiap-tiap soalan diikuti oleh empat pilihan jawapan iaitu A,B,C dan D. Bagi setiap soalan, pilih satu jawapan sahaja. **Hitamkan** semua jawapan anda pada kertas jawapan objektif yang disediakan.*

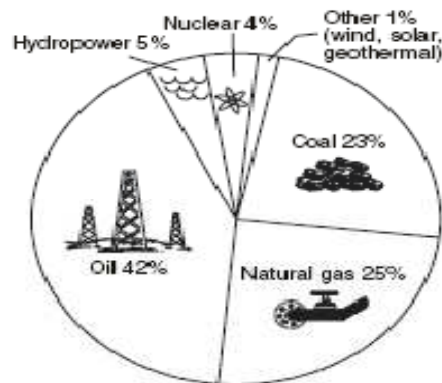
Kertas soalan ini mengandungi 14 halaman bercetak
<http://cikguadura.wordpress.com/>

Questions 1 – 25 are based on the given stimuli. Study the information carefully and choose the **best** answer.

Sunlight seems to be colourless to us. In actual fact, it is not. Some of the colours are red, orange, yellow, green and blue. However, when these colours are combined, we cannot see any colour in sunlight. What happens is that surrounding the Earth is a layer of air. Sunlight has to pass through this layer of air before it reaches the Earth. When it does, the air separates and spreads out the colours of sunlight. The blue colour of the sunlight is spread out the most, making the sky blue.

- 1 The information in the text tells us that sunlight
- A surrounds the Earth
 - B is a source of energy
 - C is actually colourless
 - D is made up of many colours

The pie chart below shows the amount of energy from different sources in Malaysia each year.



- 2 Which two energy sources provide more than 50% of the energy in Malaysia ?
- A oil and coal
 - B hydropower and oil
 - C natural gas and coal
 - D nuclear and natural gas

[Lihat sebelah

It can be a pretty shocking sight: one moment, the nose feels a little runny, and the next thing there's blood gushing out of it! Most nosebleeds come from the front of your nose, where there are capillaries, or tiny blood vessels, that can break or bleed pretty easily. The most common trigger for this bleeding is when you breathe dry or heated indoor air. This air can irritate and dry out your nasal membranes, creating a crusty lining that'll itch and bleed when picked. Instead of just going with the flow during a nosebleed, quickly grab some tissues to soak up the blood and sit or stand so that your head is above your heart. Then tilt your head forward and pinch your nostrils together just below the bony middle portion of your nose. Steady pressure will help stop the rush of blood and, after about ten minutes, will halt the nosebleed all together. Finally, apply ice wrapped in a cloth or paper towel around the affected area. And don't forget to relax; after all that you and your nose deserve to breathe a little easier.

3 Choose the correct sequence to treat nosebleeds

A
 Soak up blood
 ↓
 Sit upright
 ↓
 Pinch your nostrils together
 ↓
 Tilt your head forward
 ↓
 Apply ice around the affected area

B
 Soak up blood
 ↓
 Sit upright
 ↓
 Tilt your head forward
 ↓
 Pinch your nostrils together
 ↓
 Apply ice around the affected area

C
 Sit upright
 ↓
 Soak up blood
 ↓
 Tilt your head forward
 ↓
 Pinch your nostrils together
 ↓
 Apply ice around the affected area

D
 Tilt your head forward
 ↓
 Pinch your nostrils together
 ↓
 Sit upright
 ↓
 Soak up blood
 ↓
 Apply ice around the affected area

[Lihat sebelah

A virus in the human body usually reproduces very fast. Eventually, there are many viruses in the cell. This may cause the cell to burst and the viruses are free to move on to other cells. This can be very harmful to the body by causing diseases such as the common cold, flu and AIDS. In some cases it can cause death.

- 4 Viruses do damage to the body by
- A causing it to be sick
 - B causing the cells to die
 - C moving freely around the cells
 - D reproducing new harmful cells

Since flowers are immobile, they need to be able to attract pollinators or have features that enable the wind to pollinate them. Flowers attract pollinators like bees, butterflies, insects and birds with sweet nectar, bright colours, shapes and structures. Some flowers open at special times to attract pollinators such as night blooming plants that are pollinated by bats.

- 5 What do we know about bats based on the information given above
- A it sucks nectar
 - B it is a nocturnal animal
 - C it is a daytime pollinator
 - D it is attracted to bright coloured flowers

Earth – Monitoring satellites job is to spot pollution in the air and in the ocean or detect forest fires. These even help to track wild animals such as polar bears to see how they are being affected by reading changes in their habitat.

- 6 The function of Earth-Monitoring satellite is as follows **except** ...
- A. spot forest fires
 - B. detect wild animals
 - C. stop air and ocean pollution
 - D. identify changes in wild animals habitat

[Lihat sebelah

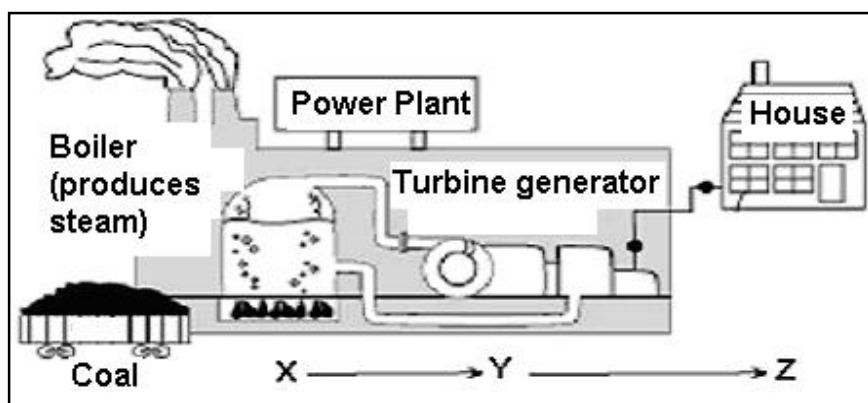
Fat in Snack Foods

Candy bar	12g
Frozen pizza	30g
Ice cream	8g
Potato chips	10g

7. Which snack would be the healthiest choice based on its fat content?
- Ice cream
 - Candy bar
 - Potato chips
 - Frozen pizza

Sounds that reach our ears are transferred through the air, through solids and through liquids.

8. What happens when a guitar string is plucked?
- It expands and contracts.
 - It makes a sound and breaks
 - It vibrates to produce a sound
 - It shakes and there is a sound



[Lihat sebelah

9. Based on the diagram above, what processes do **X**, **Y** and **Z** refer to?

	X	Y	Z
A	Combustion of fuel	Generation of energy	Utilisation of energy
B	Combustion of fuel	Utilisation of energy	Generation of energy
C	Generation of energy	Combustion of fuel	Utilisation of energy
D	Generation of energy	Utilisation of energy	Combustion of energy

NUTRITION INFORMATION per 100g of cereal	
ENERGY	1403 kJ 331 kcal
PROTEIN	10.2 g
CARBOHYDRATES	67.1 g
of which sugars	17.2 g
starch	49.9 g
FAT	
of which saturates	2.4 g
SODIUM	0.5 g
FIBRE	0.6 g
VITAMINS	
Niacin	18 g
Vitamin B ₆	2 g
Riboflavin	1.6 g
Thiamin	1.4 g
Vitamin D	5 µg
Vitamin B ₁₂	1 µg
IRON	14 mg

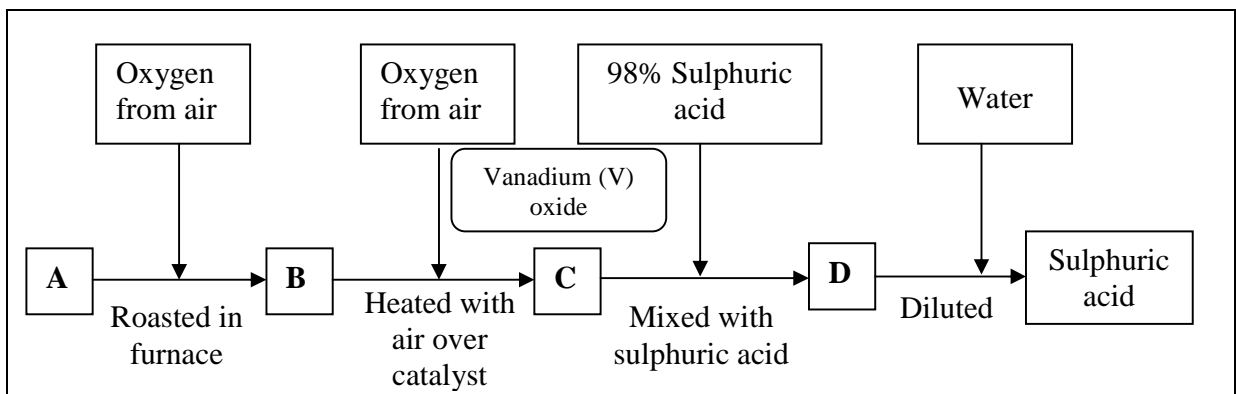
10. How many vitamins are there in cereals?

- A. 3
- B. 4
- C. 6
- D. 7

Lihat sebelah

One method of making sulphuric acid is called the Contact Process. It begins with the heating of sulphur, or sulphur ore, to form sulphur dioxide. Heating the sulphur with a catalyst, such as vanadium (V) oxide, turns it into sulphur trioxide. The sulphur trioxide is dissolved in concentrated sulphuric acid solution to form a substance called oleum. Diluting the oleum with water causes the sulphur trioxide to combine with the added water and form sulphuric acid.

11. The following diagram shows the Contact Process. Which of these is oleum?



Muscle comprises about 70 per cent water, whereas fat is made up of less than 25 per cent water. One of the many benefits of exercise is that you maintain and even add muscle weight, which in turn burns fat. As you gain muscle, you require more water and need to replace more of it daily. So, water becomes more important the more active you are.

12. From the text, we can conclude that

- A water is easily stored in fat, compared to muscle
- B the more active you are, the more water you need
- C water is stored more when you become more active
- D the more active you are, the less water is stored in your muscle

[Lihat sebelah

E.coli 0157 can wreak havoc because it secretes one of the most potent toxins ever described, second only to botulism bacteria. Known as shiga, this toxin is harmless to cattle. In humans, however, it sparks a cascade of symptoms that begin when the bacterium injects a sort of syringe into the cells of the intestinal wall.

First, the bacteria secrete a protein that helps them adhere to the gut epithelium. Then, they shoot out shiga toxin, which can reach the bloodstream after destroying intestinal cells. As it circulates, the toxin can attack the kidneys, invade the brain, and in most extreme cases- bring on multiple organs failure and death. Those who survive may suffer paralysis, blindness or chronic kidney failure. Antibiotics are worse, because they break up bacterial cells, they can trigger the release of yet more toxins.

13. When does *E.Coli* bacteria get into our blood circulation system?
- A. After destroying intestinal cells.
 - B. After shooting out shiga toxin.
 - C. After secreting a protein.
 - D. After invading the brain.

Stem cells are important to us for many reasons. In the 3 – 5 days old embryo, stem cells in developing tissues give rise to the several specialized cell types that make up the heart, lung and skin tissues. In some adult tissues such as bone marrow, muscle, and brain, *discrete* population of adult stem cells generate replacement for cells that are lost through normal wear and tear, injury or disease.

14. Based on the text above, what does the term *discrete* means?
- A quiet
 - B large
 - C various
 - D isolated

[Lihat sebelah

The fossil fuels of coal, oil or gas may be used to fuel a power station. When the fuel is burned, chemical energy is *converted* into heat energy. The heat energy is used to heat water until it becomes a gas-steam. The steam turns a turbine, converting the heat energy into kinetic energy. A generator converts the kinetic energy into electrical energy. The electrical energy is carried along wires to homes and factories.

15. Which one of the following best replaces the word *converted*?

- A. charged
- B. released
- C. powered
- D. transformed

I found out how to set my icons background at desktop to transparent. I went to “System properties” under the “Advanced tab” and on the “Visual effects tab”, checked the “Use drop shadows for icon labels on the desktop” box. I checked mine and it was in that ugly background. I unchecked the box, and then checked it again, defragmented the system, and restarted but it didn’t do any good. My present ugly icon background is still there. Please advise.

16. What does the computer user want to do?

- A To defrag and restart the system.
- B To find out icon background at desktop.
- C To get rid of icon background at desktop.
- D To check the use drop shadows for icon labels on the desktop.

Modern communication satellites receive, amplify and retransmit information back to Earth, providing television, fax, telephone, radio, and digital data links around the world. Syncom 4 follows a geosynchronous orbit – that is, it orbits at the same speed as the Earth spins, keeping the satellite in a fixed position above the Earth. This type of orbit enables uninterrupted communication links between ground stations.

[Lihat sebelah

17. What is the advantage of the geosynchronous orbit?
- A It keeps the satellite in a fixed position
 - B It orbits at the same speed as the earth
 - C It provides communication and digital data links worldwide
 - D It enables continuous communication between ground stations

Armadillos are nocturnal animals. They are active only at night. At daybreak, they retire to their comfortable burrows, which consist of one or more tunnels. Armadillos are built to dig. They have short, strong legs with strong claws, which are well - suited for rapid digging. They dig for shelter as well as for food. Armadillos eat small invertebrates, including ants, beetles and grubs; they also eat plants. Their teeth are peg-shaped, and do not have the hard, white enamel coating that protects the teeth of other mammals.

- 18 Based on the text above, which of the following statements is **true**?
- A Nocturnal animals eat small invertebrates and plants.
 - B Nocturnal animals are only active during day break.
 - C Armadillos have teeth that protect other mammals.
 - D Armadillos are completely blind.

Questions 19 – 20

Read the text below and answer the questions that follow.

Male and female babies who produce high levels of the male hormone testosterone in the womb are more likely to show autistic symptoms early in life. Autism is characterized by poor communication skills and ability to relate to others. The autistic child is less willing to make eye contact with others – one of the key indicators used to diagnose autism.

19. Which of the following statements is **true**?
- A Autism affects both genders.
 - B Autism causes poor eyesight.
 - C Autism occurs during childbirth.
 - D Autism improves communication skill.

[Lihat sebelah

20 We can deduce that the autistic child would **most likely** have?

- A no friends
- B no enemies
- C few friends
- D many friends

Crude oil has to be refined. The first stage in this process is fractional distillation in a fractionating column. Those fractions, such as petrol and kerosene, which are lighter and more volatile, move towards the top of the column before condensing. The heavy residual fuel at the base of the column is extremely impure. This is called bitumen.

21. The following statements are false **except**?

- A Bitumen is light and can condense.
- B Crude oil can be used without being refined.
- C Petrol and kerosene remain at the base of the column.
- D Petrol and kerosene are the products of oil distillation.

Smog refers to a noxious mixture of air pollutants that can often be seen as a haze in the air. The two main ingredients in smog detrimental to our health are ground-level ozone and fine airborne particles. Ground-level ozone is a colourless and highly irritating gas that forms just above the Earth's surface. It is called a "secondary" pollutant because it is produced when two primary pollutants, nitrogen oxide and volatile organic compounds, react in sunlight and stagnant air. Airborne particles include microscopic particles and remain suspended in the air for some time.

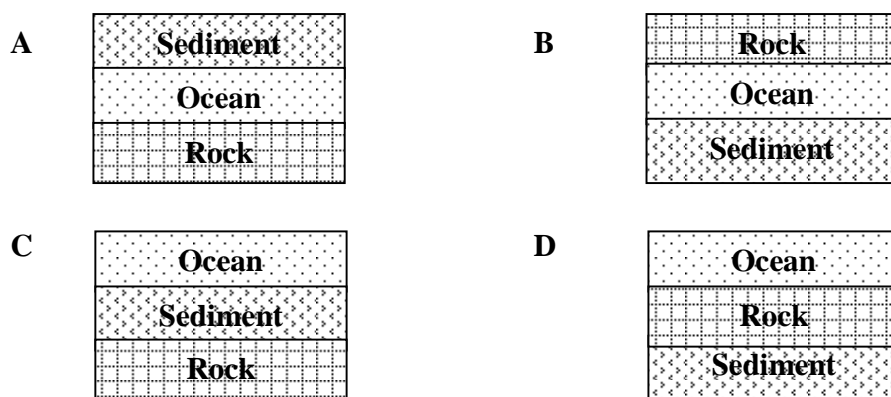
22. The pollutants in smog are

- A gas and airborne particles.
- B ground-level ozone and haze.
- C nitrogen oxides and microscopic particles.
- D ground-level ozone and airborne particles.

[Lihat sebelah

The rocks that form Earth's surface beneath the oceans are usually covered with a thick layer made up of sand or dirt and the skeletons of tiny ocean creatures called plankton. Planktons are microscopic organisms that spend their lives drifting in the ocean. When they die, their skeletons sink to the sea floor. Some parts of the oceans contain abundant plankton, and their skeletons can eventually form a very thick layer on the ocean floor called sediment.

23. Which of the following cross-sections is correct?



Sanitary landfill is the cheapest satisfactory means of disposal, but only if suitable land within economic range of the source of the wastes. In a modern landfill, refuse is spread in thin layers, each of which is compacted by a bulldozer before the next is spread. When about three meters of refuse has been laid down, it is covered by a thin layer of clean soil, which also is compacted. Pollution of surface and groundwater is minimized by lining and contouring the fill, compacting and planting the cover, selecting proper soil, diverting upland drainage and placing wastes in sites not subject to flooding or high groundwater levels.

24. Which of the following should be done in order to avoid sanitary landfill pollution?

- A Planting the cover before the refuse is spread in thin layers
- B Selecting soil that is economical for compression
- C Placing refuse in low groundwater levels
- D Redirecting upland drainage

[Lihat sebelah

Many chronic liver diseases are associated with malnutrition. One of this is cirrhosis. It refers to the replacement of damaged liver cells by fibrous scar tissue disrupting the liver's functions. Cirrhosis occurs as a result of excessive alcohol intake in most cases. People with cirrhosis often experience loss of appetite, nausea, vomiting and weight loss, given them a haggard appearance.

25. Which group of people would cirrhosis likely affect?

- A people who drink occasionally
- B people who gain a lot of weight
- C people who drink alcohol excessively
- D people who experience loss of appetite

Questions 26 – 30 are based on the following passage. Choose the *most appropriate answer from the options given.*

The body of a mammal is protected by an immune response. This has two parts – a humoral response which depends on the release of protein molecules 26 antibodies, and a cell-mediated response controlled by a number of T-lymphocytes. The plasma cells are one type of B-lymphocyte, activated 27 another cell called a macrophage “presents” a piece of the invading organism to it. The plasma cells secrete antibodies which may remove the invading antigens by several methods, including agglutination and precipitation. The cell-mediated response 28 a number of interactions, controlled by chemicals called cytokines. These chemicals 29 by T-helper cells which may, for example, “instruct” T-cytotoxic cells to attack body cells 30 with a virus or bacterium.

- 26 A call
- B called
- C name
- D namely

- 29 A are releasing
- B are released
- C released
- D releases

- 27 **A** where
 B which
 C when
 D by
- 28 **A** evolves
 B is involved
 C involves
 D is evolved
- 30 **A** invested
 B infected
 C inflicted
 D infested

KERTAS SOALAN TAMAT