

SULIT  
1511/1  
Sains  
Kertas 1  
2018  
1 ¼ jam



**PEPERIKSAAN PERCUBAAN BERSAMA SPM TAHUN 2018  
JABATAN PENDIDIKAN NEGERI KEDAH  
MAJLIS PENGETUA SEKOLAH MALAYSIA (KEDAH)**

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**SAINS  
KERTAS 1  
(1511/1)**

**Satu jam lima belas minit**

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**JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU**

1. *Kertas soalan ini mengandungi 50 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 jawapan anda pada kertas jawapan objektif yang disediakan.*
4. *Jika anda hendak menukarkan jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baharu.*
5. *Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.*
6. *Anda dibenarkan menggunakan kalkulator saintifik.*

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Kertas soalan ini mengandungi 32 halaman bercetak

- 1 Diagram 1 shows a reflex arc.  
Rajah 1 menunjukkan satu arka refleks.

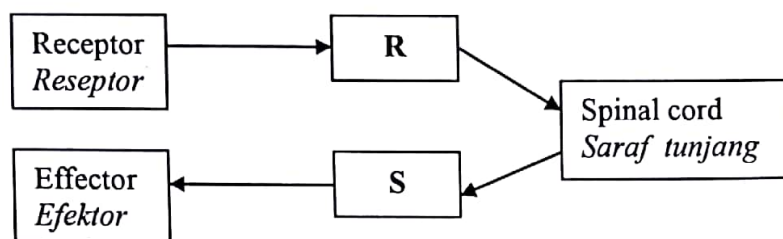


Diagram 1  
Rajah 1

What are R and S?  
Apakah R dan S?

	R	S
A	Sensory neurone <i>Neuron deria</i>	Motor neurone <i>Neuron motor</i>
B	Sensory neurone <i>Neuron deria</i>	Relay neurone <i>Neuron perantaraan</i>
C	Motor neuron <i>Neuron motor</i>	Sensory neurone <i>Neuron deria</i>
D	Relay neurone <i>Neuron perantaraan</i>	Sensory neurone <i>Neuron deria</i>

- 2 Diagram 2 shows the structure of a human brain. Which part of the brain controls peristalsis process?  
Rajah 2 menunjukkan struktur otak manusia. Bahagian otak yang manakah mengawal proses peristalsis?

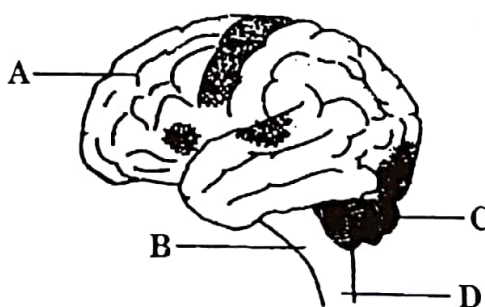


Diagram 2  
Rajah 2

- 3 During a medical examination on a male, the doctor found that his blood glucose level is high. This situation occurs because lack of the hormone secreted by  
*Sewaktu menjalani pemeriksaan kesihatan ke atas seorang lelaki, doktor mendapati aras glukosa dalam darahnya adalah tinggi.*  
*Keadaan ini berlaku disebabkan kekurangan hormon yang dirembeskan oleh*
- A ovary.  
*ovari.*
  - B thyroid.  
*tiroid.*
  - C adrenal.  
*adrenal.*
  - D pancreas.  
*pankreas.*
- 4 Which of the following drug is used to relieve pain in medical field?  
*Antara yang berikut, dadah yang manakah digunakan dalam bidang perubatan untuk mengurangkan kesakitan?*
- A Morphine  
*Morfina*
  - B Nicotine  
*Nikotina*
  - C Marijuana  
*Ganja*
  - D Amphetamine  
*Amfetamina*
- 5 The basic hereditary unit which carries genetic material is  
*Unit asas pewarisan yang membawa bahan genetik ialah*
- A chromosome.  
*kromosom.*
  - B gamete.  
*gamet.*
  - C DNA.  
*DNA.*
  - D gene.  
*gen.*

6 Which of the following is true about meiosis?

*Antara pernyataan berikut, yang manakah benar mengenai meiosis?*

- A Active in cell growth  
*Aktif dalam pertumbuhan sel*
- B Presents in all kind of cells  
*Terdapat dalam semua jenis sel*
- C Daughter cells are same genetically with the parent cell  
*Sel-sel anak adalah sama secara genetik dengan sel induk*
- D Daughter cells contain half of chromosomes of parent cell  
*Sel-sel anak mengandungi separuh daripada kromosom sel induk*

7 A male frog has 24+XY chromosomes.

How many chromosomes in a tadpole?

*Seekor katak jantan mempunyai 24+XY kromosom.*

*Berapakah bilangan kromosom dalam seekor berudu?*

- A 13
- B 26
- C 28
- D 52

8 Diagram 3 shows the arrangement of particles which undergo process X.

*Rajah 3 menunjukkan susunan zarah-zarah yang melalui proses X.*

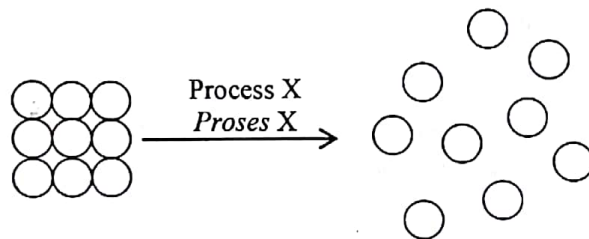


Diagram 3  
*Rajah 3*

Which is process X?

*Apakah proses X?*

- A Boiling  
*Pendidihan*
- B Melting  
*Peleburan*
- C Sublimation  
*Pemejalwapan*
- D Condensation  
*Kondensasi*

- 9 Diagram 4 shows the structure of an atom.  
Rajah 4 menunjukkan struktur suatu atom.

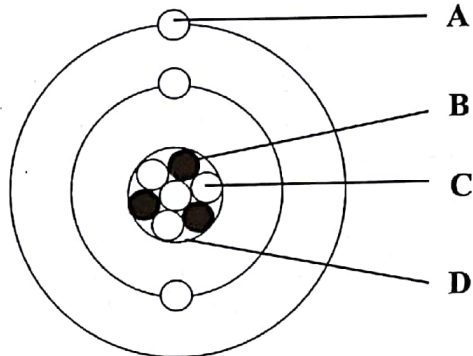


Diagram 4  
Rajah 4

Which of A, B, C or D, is an electron?  
Antara A, B, C dan D, yang manakah elektron?

- 10 Table 1 shows the proton number and the number of neutrons of an atom.  
Jadual 1 menunjukkan nombor proton dan bilangan neutron bagi suatu atom.

Proton number <i>Nombor proton</i>	Number of neutrons <i>Bilangan neutron</i>
8	9

Table 1  
Jadual 1

What is the nucleon number of the atom?  
Berapakah nombor nukleon bagi atom itu?

- A 8
- B 9
- C 17
- D 72

- 11 Diagram 5 shows the stages in the crystallisation process.  
Rajah 5 menunjukkan peringkat-peringkat dalam proses penghabluran.

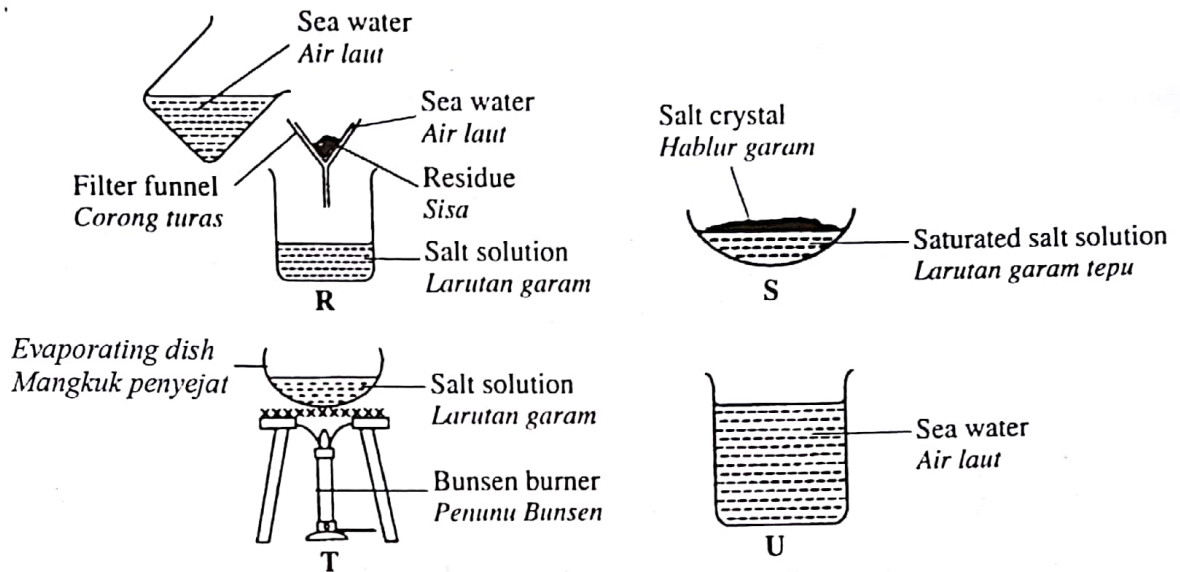


Diagram 5  
Rajah 5

Which sequence is correct?  
Urutan manakah yang betul?

- A R, S, T, U  
B S, T, R, U  
C U, R, T, S  
D T, U, S, R
- 12 Which statement described a chemical change?  
Pernyataan manakah menerangkan perubahan kimia?
- A Reversible  
Berbalik  
B Involved low heat energy  
Melibatkan tenaga haba yang rendah  
C No new substance produced  
Tiada penghasilan bahan baharu  
D Change in the chemical properties of a substance  
Perubahan pada sifat kimia sesuatu bahan

- 13 Table 2 shows the observations obtained when three types of metal powder react with oxygen.  
*Jadual 2 menunjukkan pemerhatian yang diperolehi apabila tiga jenis serbuk logam bertindak dengan oksigen.*

<b>Metal powder</b> <i>Serbuk logam</i>	<b>Observation</b> <i>Pemerhatian</i>
P	Dim glow <i>Baraan malap</i>
Q	Bright glow <i>Baraan terang</i>
R	No change <i>Tiada perubahan</i>

Table 2  
*Jadual 2*

Choose the correct sequence of the reactivity of the metals in ascending order.  
*Pilih urutan yang betul bagi kereaktifan logam itu dalam tertib menaik.*

- A P,Q,R
- B Q,R,P
- C R,P,Q
- D R,Q,P

- 14 Diagram 6 shows the electroplating of an iron ring.  
Rajah 6 menunjukkan penyaduran cincin besi.

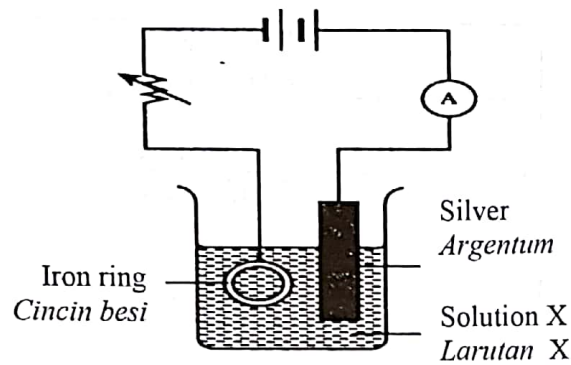


Diagram 6  
Rajah 6

- What is solution X?  
Apakah larutan X?
- A Silver nitrate  
*Argentum nitrat*
- B Aluminium nitrate  
*Aluminium nitrat*
- C Ferum(II) sulphate  
*Ferum(II) sulfat*
- D Copper(II) sulphate  
*Kuprum(II) sulfat*
- 15 What is the advantage of a dry cell compared to an acid-lead accumulator?  
Apakah kelebihan sel kering berbanding akumulator asid-plumbum?
- A The voltage is higher  
*Voltan lebih besar*
- B It has longer life span  
*Jangka hayatnya lebih lama*
- C The current is more stable  
*Arusnyanya lebih stabil*
- D Its electrolyte does not spill  
*Elektrolitnya tidak tumpah*



- 16 Diagram 7 shows the penetrating power of gamma ray that can be blocked by substance X.  
*Rajah 7 menunjukkan kuasa penembusan bagi sinar gama yang dapat dihalang oleh bahan X.*

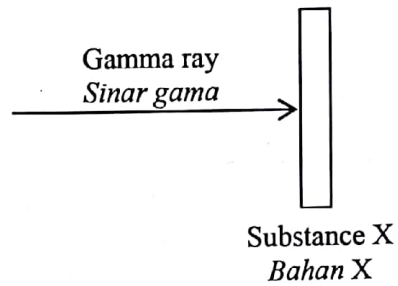


Diagram 7  
*Rajah 7*

What is substance X?  
*Apakah bahan X?*

- A Lead block  
*Blok plumbum*
- B A sheet of paper  
*Sekeping kertas*
- C A layer of plastic  
*Sehelai plastik*
- D Aluminium plate  
*Kepingan aluminium*

- 17 Diagram 8 shows a nuclear power station.  
Rajah 8 menunjukkan suatu stesen tenaga nuklear.

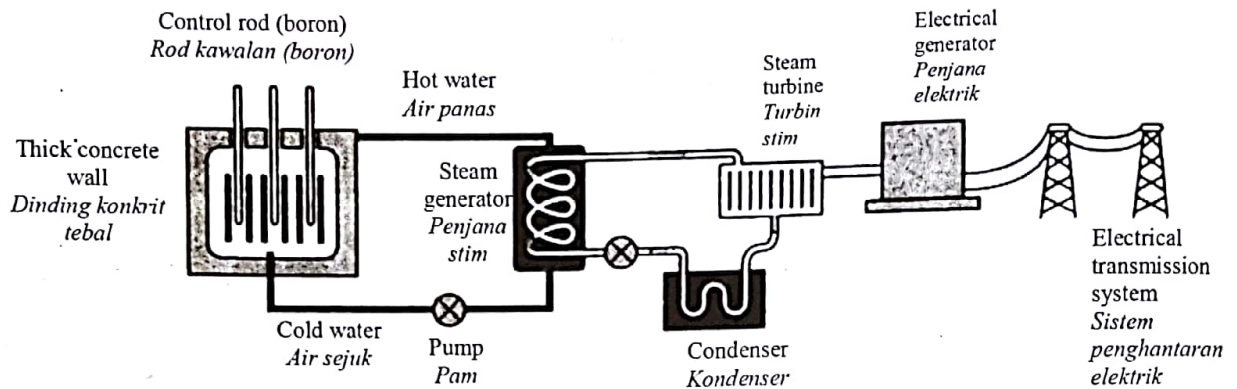


Diagram 8  
Rajah 8

Nuclear energy is used to produce electrical energy in a nuclear reactor.

What is the energy change at the steam turbine?

Tenaga nuklear digunakan untuk menghasilkan tenaga elektrik dalam reaktor nuklear.

Apakah perubahan tenaga pada turbin stim?

- |   |                                  |   |                                      |
|---|----------------------------------|---|--------------------------------------|
| A | Nuclear energy<br>Tenaga nuklear | → | Heat energy<br>Tenaga haba           |
| B | Heat energy<br>Tenaga haba       | → | Kinetic energy<br>Tenaga kinetik     |
| C | Kinetic energy<br>Tenaga kinetik | → | Electrical energy<br>Tenaga elektrik |
| D | Nuclear energy<br>Tenaga nuklear | → | Electrical energy<br>Tenaga elektrik |

- 18 Diagram 9 shows a hazard symbol of a substance U.  
*Rajah 9 menunjukkan suatu simbol amaran bagi suatu bahan U.*

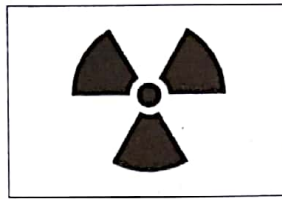


Diagram 9  
*Rajah 9*

Where the substance U should be kept?  
*Dimanakah bahan U perlu disimpan?*

- A Dark room  
*Bilik gelap*
- B Paraffin oil  
*Minyak parafin*
- C Fume chamber  
*Kebuk wasap*
- D Thick lead container  
*Bekas plumbum tebal*
- 19 Which of the following optical instrument uses plane mirror?  
*Antara alatan optik berikut yang manakah menggunakan cermin satah?*
- A Camera  
*Kamera*
- B Periscope  
*Periskop*
- C Telescope  
*Teleskop*
- D Microscope  
*Mikroskop*
- 20 What causes sunlight travel through the earth's atmosphere undergoes light scattering process?  
*Apakah yang menyebabkan sinar cahaya matahari yang melalui atmosfera bumi mengalami proses penyerakan cahaya?*
- A Light travels very fast  
*Cahaya bergerak sangat laju*
- B Light travels in straight line  
*Cahaya bergerak lurus*
- C Each colour components have different wavelength  
*Setiap jujuk warna mempunyai panjang gelombang yang berbeza*
- D All the colour components in white light have the same wavelength  
*Semua jujuk warna dalam cahaya putih mempunyai panjang gelombang yang sama*

- 21 Diagram 10 shows a flower in a pot.  
Rajah 10 menunjukkan sekuntum bunga di dalam pasu.

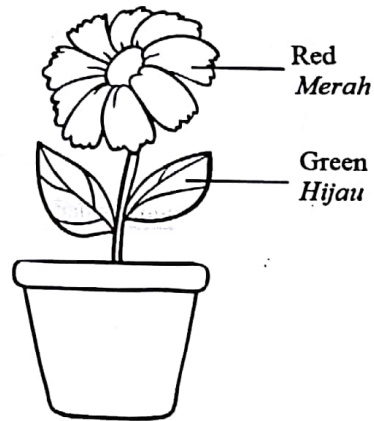


Diagram 10  
Rajah 10

What is the colour of the flower and leaf seen under yellow light?  
Apakah warna bunga dan daun yang kelihatan dibawah cahaya kuning?

	Flower <i>Bunga</i>	Leaf <i>Daun</i>
A	Yellow <i>Kuning</i>	Green <i>Hijau</i>
B	Red <i>Merah</i>	Black <i>Hitam</i>
C	Red <i>Merah</i>	Green <i>Hijau</i>
D	Green <i>Hijau</i>	Yellow <i>Kuning</i>

- 22 Diagram 11 shows a papaya tree.  
*Rajah 11 menunjukkan sebatang pokok betik.*

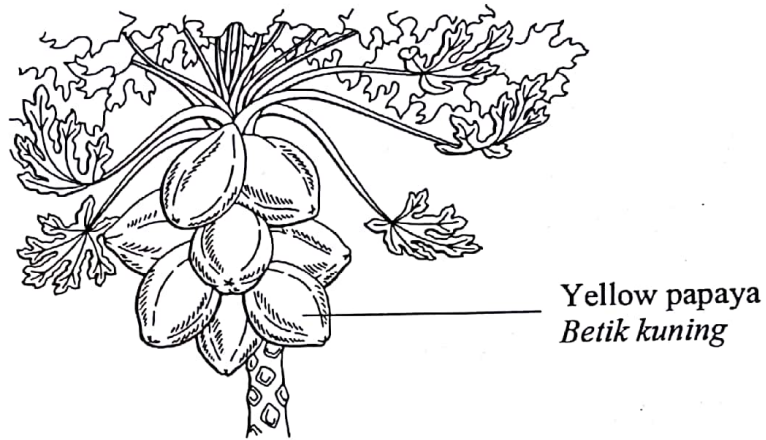


Diagram 11  
*Rajah 11*

What is the importance of colour to the fruit?  
*Apakah kepentingan warna pada buah tersebut?*

- A Warning  
*Amaran*
- B Pollination  
*Pendebungaan*
- C Camouflaging  
*Penyamaran*
- D Dispersion of seeds  
*Penyebaran biji benih*

- 23 Diagram 12 shows the arrangement of atoms in an alloy.  
Rajah 12 menunjukkan susunan atom-atom dalam suatu aloi.

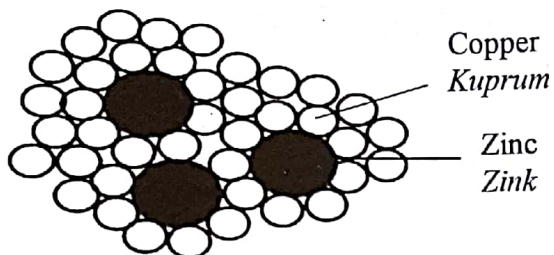
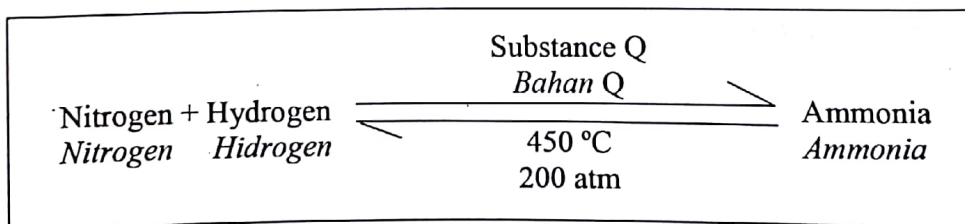


Diagram 12  
Rajah 12

What is the alloy?  
Apakah aloi itu?

- A Pewter  
Piuter
- B Bronze  
Gangsa
- C Brass  
Loyang
- D Steel  
Keluli
- 24 The following word equation shows a chemical reaction.  
Persamaan perkataan berikut menunjukkan suatu tindak balas kimia.



What is substance Q?  
Apakah bahan Q?

- A Tin  
Timah
- B Iron  
Besi
- C Copper  
Kuprum
- D Aluminium  
Aluminium

- 25 Diagram 13 shows a bar chart which represents the percentage of carbon dioxide released from three different cities.  
*Rajah 13 menunjukkan carta palang mewakili peratus pembebasan gas karbon dioksida dari tiga buah bandar yang berbeza.*

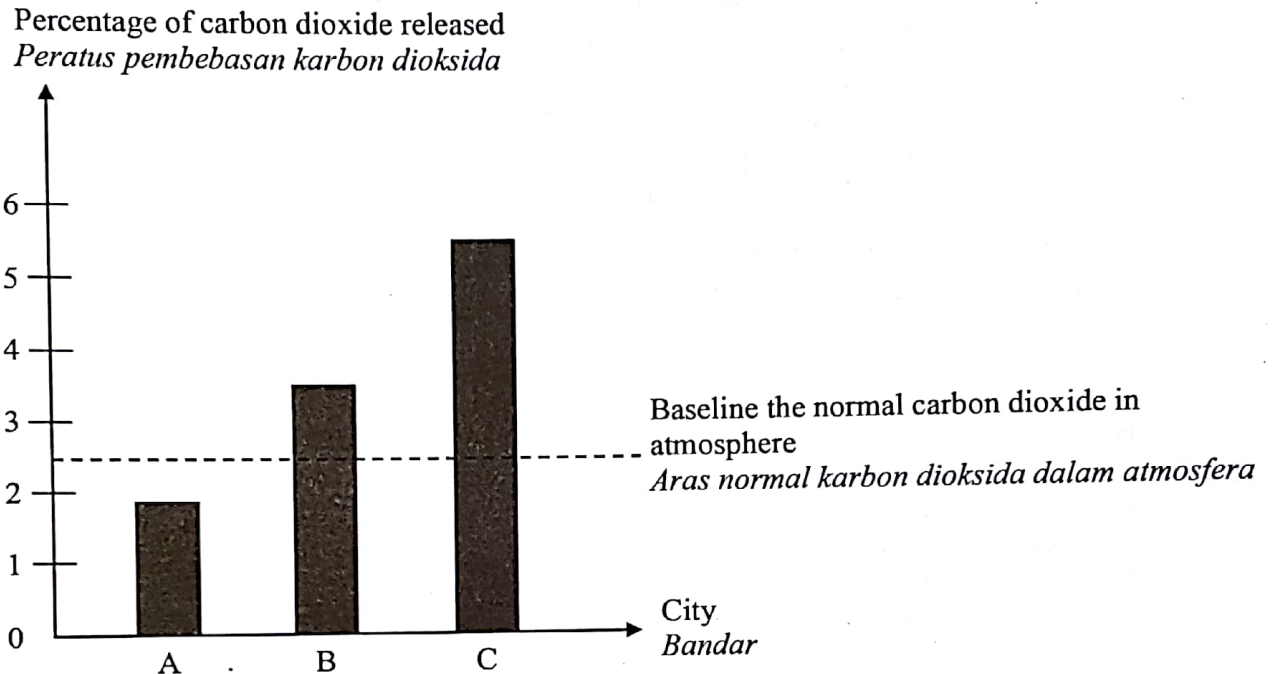


Diagram 13  
*Rajah 13*

Carbon dioxide released from burning of fossil fuel causes greenhouse effect.

What is the best practice at City A?

*Pembebasan karbon dioksida daripada pembakaran bahan api fosil menyebabkan kesan rumah hijau.*

*Apakah amalan terbaik di Bandar A?*

- A Plant more trees  
*Menanam lebih banyak pokok*
- B Use HCFC products  
*Guna produk HCFC*
- C Build more factories  
*Bina lebih banyak kilang*
- D Bury domestic wastes  
*Tanam sisa-sisa domestik*

- 26 Diagram 15 shows a reproduction process of bacteria.  
*Rajah 15 menunjukkan proses pembiakan oleh bakteria.*

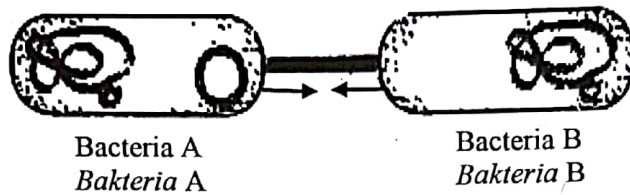


Diagram 15  
*Rajah 15*

Name the reproduction process.  
*Namakan kaedah pembiakan itu.*

- A Budding  
*Pertunasan*
- B Replication  
*Replikasi*
- C Conjugation  
*Konjugasi*
- D Binary fission  
*Belahan dedua*



- 27 Diagram 16 shows an experiment to study a factor that affect the growth of bacteria.  
*Rajah 16 menunjukkan eksperimen untuk mengkaji satu faktor yang mempengaruhi pertumbuhan bakteria.*

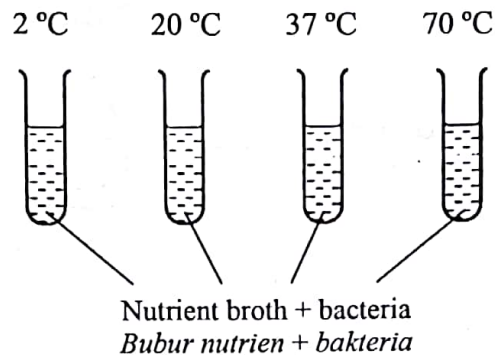


Diagram 16  
*Rajah 16*

What is the factor?  
*Apakah faktor tersebut?*

- A Nutrient  
*Nutrien*
  - B pH value  
*Nilai pH*
  - C Humidity  
*Kelembapan*
  - D Temperature  
*Suhu*
- 28 Which of the following disease is spreaded by water droplets in the air?  
*Antara penyakit berikut, yang manakah disebarakan oleh titisan air dalam udara?*
- A AIDS  
AIDS
  - B Cholera  
*Kolera*
  - C Hepatitis A  
*Hepatitis A*
  - D Common cold  
*Selesema*

- 29 Diagram 17 shows a man suffers from a disease.  
*Rajah 17 menunjukkan seorang lelaki menghidap suatu penyakit.*

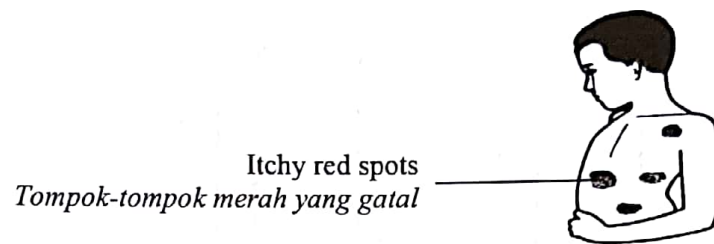


Diagram 17  
*Rajah 17*

What is the best method to prevent the disease?  
*Apakah kaedah terbaik bagi mencegah penyakit itu?*

- A Sleep under a mosquito net  
*Tidur dalam kelambu*
  - B Maintain personal hygiene  
*Menjaga kebersihan diri*
  - C Enhance physical activity  
*Tingkatkan aktiviti fizikal*
  - D Take a balance diet  
*Mengambil diet seimbang*
- 30 The energy needed by our body can be obtained from  
*Tenaga yang diperlukan oleh badan kita boleh didapati daripada*
- A water.  
*air.*
  - B protein.  
*protein.*
  - C vitamin.  
*vitamin.*
  - D mineral salt.  
*garam mineral.*

- 31 Diagram 18 shows an orchid plant.  
*Rajah 18 menunjukkan sejenis tumbuhan orkid.*

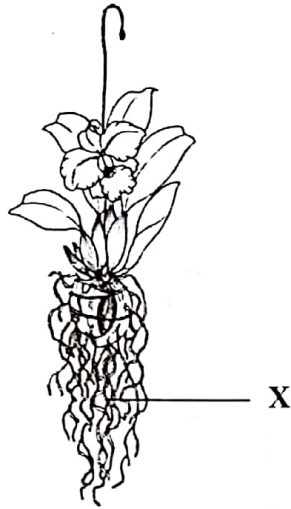


Diagram 18  
*Rajah 18*

Which nutrient is needed for the healthy growth of part X?  
*Nutrien manakah diperlukan untuk tumbesaran yang sihat bagi bahagian X?*

- A Carbon  
*Karbon*
- B Nitrogen  
*Nitrogen*
- C Potassium  
*Kalium*
- D Phosphorus  
*Fosforus*
- 32 Hamzah finds that the soil fertility decreases after planting maize.  
 Which plant can regain the fertility of the soil?  
*Hamzah mendapati kesuburan tanah berkurang selepas menanam pokok jagung.  
 Tumbuhan yang manakah boleh mengembalikan kesuburan tanah?*
- A Banana plant  
*Pokok pisang*
- B Mustard plant  
*Pokok sawi*
- C Pineapple plant  
*Pokok nanas*
- D Long bean plant  
*Pokok kacang panjang*

- 33 Diagram 19 shows a part of a water cycle.  
*Rajah 19 menunjukkan sebahagian daripada kitar air.*

Water vapour in atmosphere  
*Wap air di atmosfera*

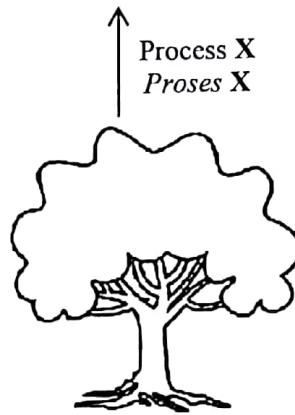


Diagram 19  
*Rajah 19*

What is process X?  
*Apakah proses X?*

- A Decaying  
*Pereputan*
- B Transpiration  
*Transpirasi*
- C Condensation  
*Kondensasi*
- D Photosynthesis  
*Fotosintesis*

- 34 The following information shows the effect of pollutions of the environment.  
*Maklumat berikut menunjukkan kesan pencemaran alam sekitar.*

- Sea level increases  
*Peningkatan aras laut*
- Melting of ice in the Arctic  
*Peleburan ais di Artik*
- World temperature increases  
*Peningkatan suhu dunia*

What causes these effects?

*Apakah yang menyebabkan kesan ini?*

- A Acid rain  
*Hujan asid*
- B Soil erosion  
*Hakisan tanah*
- C Global warming  
*Pemanasan global*
- D Thinning of ozone layer  
*Penipisan lapisan ozon*

- 35 Diagram 20 shows the depletion of ozone layer in the atmosphere.  
*Rajah 20 menunjukkan penipisan lapisan ozon di atmosfera.*

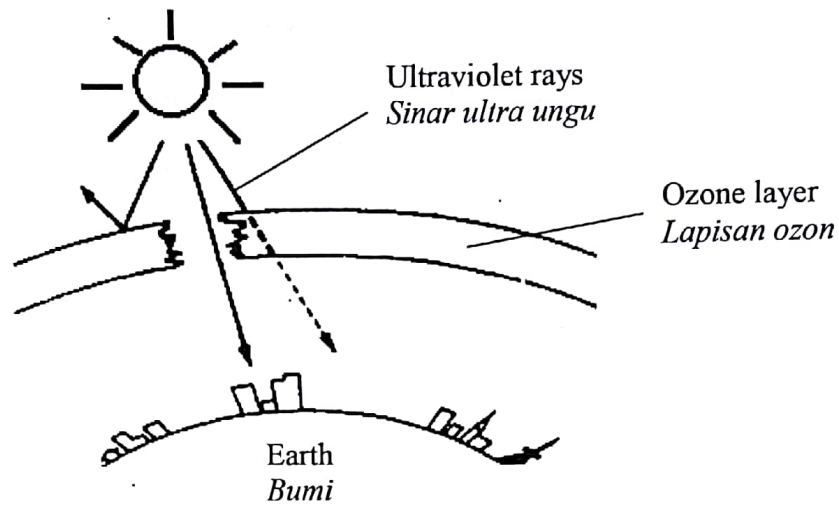


Diagram 20  
*Rajah 20*

What is the long term effect of the phenomenon?  
*Apakah kesan jangka masa panjang fenomena tersebut?*

- I Skin cancer  
*Kanser kulit*
  - II Increase the crop yield  
*Meningkatkan hasil tanaman*
  - III Reduce body immunity  
*Mengurangkan keimunan badan*
- A I and II  
*I dan II*
  - B I and III  
*I dan III*
  - C II and III  
*II dan III*
  - D I, II and III  
*I, II dan III*

- 36 Diagram 21 shows processes P and Q.  
Rajah 21 menunjukkan proses P dan Q.

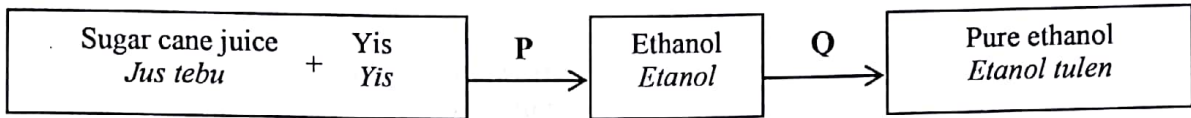


Diagram 21  
Rajah 21

What are processes P and Q?  
Apakah proses P dan Q?

	P	Q
A	Fermentation <i>Penapaian</i>	Distillation <i>Penyulingan</i>
B	Distillation <i>Penyulingan</i>	Fermentation <i>Penapaian</i>
C	Fermentation <i>Penapaian</i>	Combustion <i>Pembakaran</i>
D	Combustion <i>Pembakaran</i>	Fermentation <i>Penapaian</i>

- 37 The following information shows the characteristics of fat Z.  
Maklumat berikut menunjukkan ciri-ciri lemak Z.

- The main source is from animals  
*Sumber utama daripada haiwan*
- Higher melting point  
*Takat lebur yang tinggi*

Which of the following is true about fat Z?  
Antara yang berikut, yang manakah benar tentang lemak Z?

- A Liquid at room temperature  
*Cecair pada suhu bilik*
- B Coconut oil is the example of this fat  
*Minyak kelapa adalah contoh bagi lemak ini*
- C Causes cholesterol level in the blood increased  
*Menyebabkan aras kolesterol dalam darah meningkat*
- D Have double bonds between the carbon atoms in their carbon chain  
*Mempunyai ikatan ganda dua antara karbon dalam rantai karbon*

- 38 Diagram 22 shows the extraction process of palm oil during purification phase.  
*Rajah 22 menunjukkan proses pengekstrakan minyak kelapa sawit semasa fasa penulenan.*

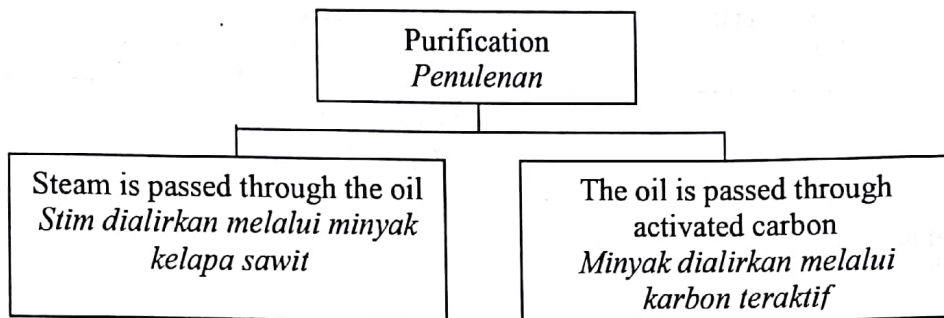


Diagram 22  
*Rajah 22*

What is the purpose of flowing oil palm through activated carbon?  
*Apakah tujuan mengalirkan minyak kelapa sawit melalui karbon teraktif?*

- A Improve taste  
*Memperbaiki rasa*
- B Sterilise the oil  
*Mensterilkan minyak*
- C Remove its colour  
*Menyingkirkan warnanya*
- D Remove any odour  
*Menyingkirkan sebarang bau*



- 39 Diagram 23 shows an example of vulcanised rubber product.  
*Rajah 23 menunjukkan suatu contoh produk getah ter Vulkan.*



Diagram 23  
*Rajah 23*

What is the element that makes this product more resistant to heat?  
*Apakah unsur yang menyebabkan produk ini lebih tahan haba?*

- A Sulphur  
*Sulfur*
- B Hydrogen  
*Hidrogen*
- C Vanadium  
*Vanadium*
- D Magnesium  
*Magnesium*

- 40 Table 3 shows the time taken and the velocity of a moving trolley.  
*Jadual 3 menunjukkan masa yang diambil dan halaju bagi sebuah troli yang bergerak.*

Time/s <i>Masa/s</i>	Velocity/m s <sup>-1</sup> <i>Halaju/m s<sup>-1</sup></i>
0	0
10	20
20	40

Table 3  
*Jadual 3*

What is the acceleration of the trolley?

$$\left[ \text{Acceleration} = \frac{\text{Final velocity} - \text{Initial velocity}}{\text{Time}} \right]$$

*Berapakah pecutan troli itu?*

$$\left[ \text{Pecutan} = \frac{\text{Halaju akhir} - \text{Halaju awal}}{\text{Masa}} \right]$$

- A 2 m s<sup>-2</sup>  
 B 5 m s<sup>-2</sup>  
 C 10 m s<sup>-2</sup>  
 D 30 m s<sup>-2</sup>
- 41 Which of the following has the maximum momentum?  
 [Momentum = Mass X Velocity]

*Antara yang berikut, yang manakah yang mempunyai nilai momentum yang maksimum?*  
 [Momentum = Jisim X Halaju]

	Mass/kg <i>Jisim/kg</i>	Velocity/m s <sup>-1</sup> <i>Halaju/m s<sup>-1</sup></i>
A	20	5
B	35	4
C	50	2.8
D	55	3.6

42. Diagram 42 shows the operational principle of an aeroplane.  
*Rajah 42 menunjukkan prinsip operasi bagi sebuah kapal terbang.*

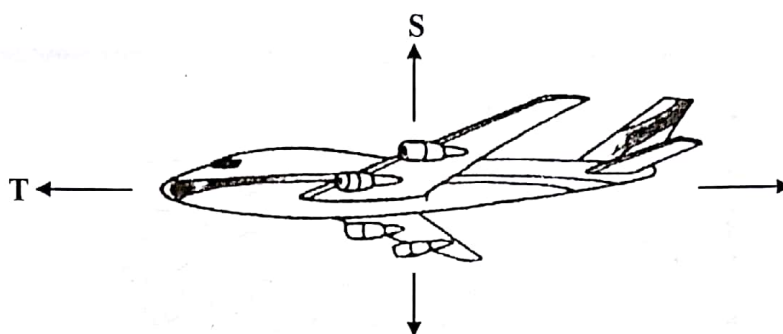


Diagram 42  
*Rajah 42*

What is represented by S and T?  
*Apakah yang diwakili oleh S dan T?*

	S	T
A	Upthrust <i>Daya angkat</i>	Thrust <i>Daya tujah</i>
B	Weight <i>Berat</i>	Drag <i>Daya seretan</i>
C	Thrust <i>Daya tujah</i>	Upthrust <i>Daya angkat</i>
D	Drag <i>Daya seretan</i>	Upthrust <i>Daya angkat</i>

43. Which of the following food **does not** have to be kept in the refrigerator for household consumption?  
*Antara makanan berikut, yang manakah **tidak** perlu disimpan di dalam peti sejuk untuk kegunaan isi rumah?*

- A Apple  
*Epal*
- B Onion  
*Bawang*
- C Cabbage  
*Kubis*
- D Fresh milk  
*Susu segar*

44. Diagram 25 shows a type of an agricultural method.  
*Rajah 25 menunjukkan sejenis kaedah pertanian.*



Diagram 25  
*Rajah 25*

What is the method?  
*Apakah kaedah tersebut?*

- A Mixed crop  
*Tanaman campuran*
- B Crop rotation  
*Tanaman bergilir*
- C Terrace cropping  
*Tanaman teres*
- D Integrated farming system  
*Sistem pertanian bersepadu*

45. Diagram 26 shows a label on a chocolate bar wrapper.  
*Rajah 26 menunjukkan label pada sekeping pembalut coklat.*

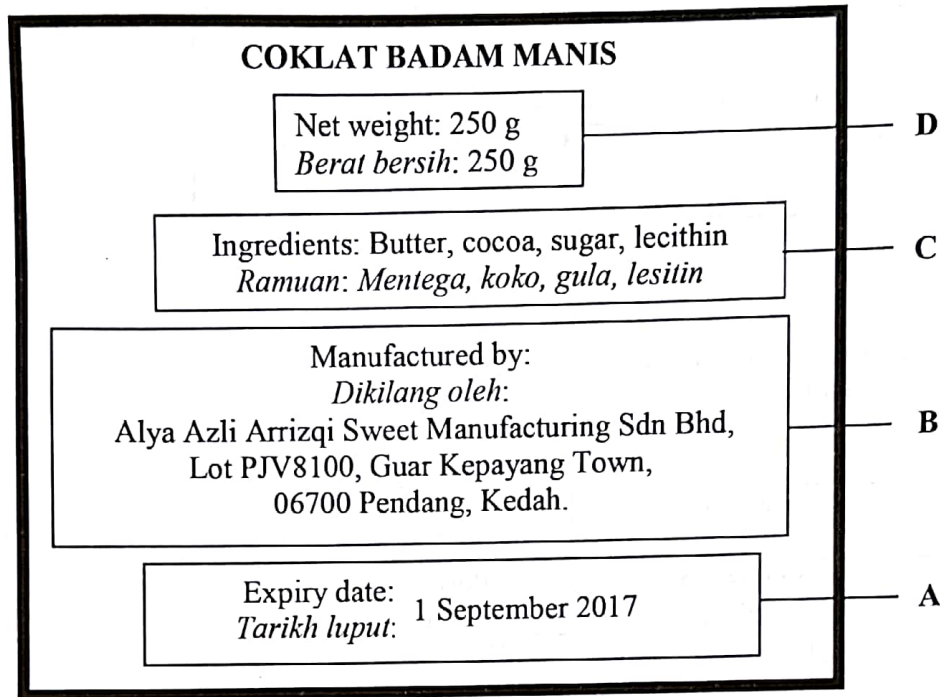


Diagram 26  
*Rajah 26*

Haziq bought the chocolate in August 2018.  
 Which label A, B, C or D on the wrapper has he overlooked?  
*Haziq telah membeli coklat itu pada Ogos 2018.*  
*Antara label A, B, C dan D pada pembalut itu, yang manakah beliau terlepas pandang?*

- 46 Diagram 27 shows a chemical change.  
Rajah 27 menunjukkan satu perubahan kimia.

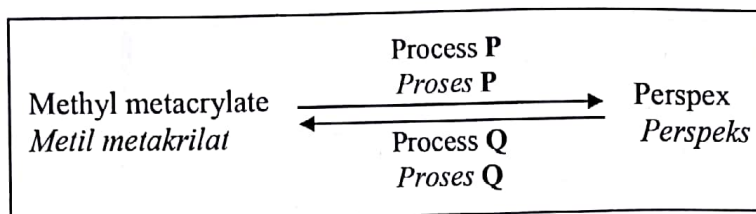


Diagram 27  
Rajah 27

What are processes P and Q?  
Apakah proses P dan Q?

	Process P <i>Proses P</i>	Process Q <i>Proses Q</i>
A	Combustion <i>Pembakaran</i>	Polymerisation <i>Pempolimeran</i>
B	Polymerisation <i>Pempolimeran</i>	Depolymerisation <i>Penyahpolimeran</i>
C	Depolymerisation <i>Penyahpolimeran</i>	Polymerisation <i>Pempolimeran</i>
D	Depolymerisation <i>Penyahpolimeran</i>	Combustion <i>Pembakaran</i>

- 47 Plastic causes environmental pollution because  
*Plastik menyebabkan pencemaran alam sekitar kerana*

- I it is non-biodegradable.  
*ia adalah tidak terbiodegradasi.*
- II it blocks the drainage system.  
*ia menyekat sistem perparitan.*
- III the burning of it produces toxic gases.  
*pembakarannya menghasilkan gas toksik.*

- A I and II  
*I dan II*
- B I and III  
*I dan III*
- C II and III  
*II dan III*
- D I, II and III  
*I, II dan III*

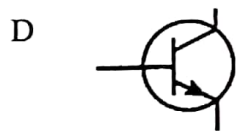
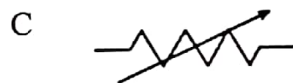
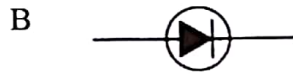
- 48 A radio wave with a frequency of 500 Hz has a wavelength of 2.5 m.  
What is its velocity?

[Velocity = Frequency X Wavelength]

*Satu gelombang radio berfrekuensi 500 Hz mempunyai panjang gelombang 2.5 m.  
Berapakah halajunya?*

[Halaju = Frekuensi X Panjang gelombang]

- A 2500 m s<sup>-1</sup>  
 B 1250 m s<sup>-1</sup>  
 C 400 m s<sup>-1</sup>  
 D 200 m s<sup>-1</sup>
- 49 Which of the following symbols of the electronic components control the size of the current in the circuit?  
*Antara simbol komponen elektronik berikut, yang manakah mengawal saiz arus dalam litar?*



- 50 Diagram 28 shows the location of satellites in an orbit.  
*Rajah 28 menunjukkan kedudukan satelit pada suatu orbit.*

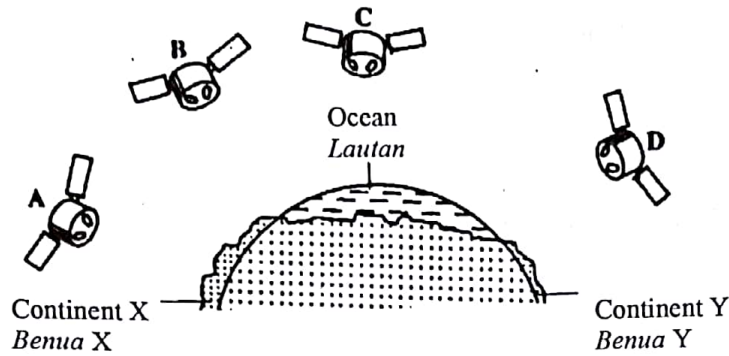


Diagram 28  
*Rajah 28*

Which location A, B, C or D, is the best for communication between continent X and continent Y?

*Antara lokasi A, B, C dan D, yang manakah terbaik bagi komunikasi antara benua X dan benua Y?*

**END OF QUESTION PAPER**  
**KERTAS SOALAN TAMAT**