

SULIT
55/1
Science
Paper 1
August
2009
1 hour

55/1



**ANJURAN
PERSIDANGAN KEBANGSAAN PENGETUA-PENGETUA
SEKOLAH MENENGAH MALAYSIA
CAWANGAN PERLIS**

**PEPERIKSAAN PERCUBAAN BERSAMA
PENILAIAN MENENGAH RENDAH (PMR)
TAHUN 2009**

SAINS

Kertas 1

Satu jam

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini adalah dalam dwibahasa.*
2. *Soalan dalam Bahasa Inggeris mendahului soalan yang sepadan dalam Bahasa Melayu.*
3. *Calon dikehendaki membaca maklumat di halaman 2.*

Kertas soalan ini mengandungi 26 halaman bercetak

[Lihat sebelah

INFORMATION FOR CANDIDATES

1. This question paper consists of 40 questions.
Kertas soalan ini mengandungi 40 soalan.

2. Answer **all** questions.
*Jawab **semua** soalan.*

3. Answer each question by blackening the correct space on the answer sheet.
Jawab setiap soalan dengan menghitamkan ruangan yang betul dalam kertas jawapan.

4. Blacken only one space for each question.
Hitamkan hanya satu ruangan bagi setiap jawapan

5. If you wish to change your answer, erase the blackened mark that you have made.
Then blacken the space for your new answer.

Jika anda ingin menukarkan jawapan, padamkan jawapan yang anda tandakan dan hitamkan ruangan jawapan anda yang baru

6. The diagrams in the questions provided are not drawn to scale unless stated.
Rajah yang terdapat dalam soalan adalah tidak mengikut skala sebenar kecuali dinyatakan.

7. You may use a non – programmable scientific calculator.
Anda boleh menggunakan kalkulator saintifik yang tidak diprogramkan.

- 1 Diagram 1 shows a measuring cylinder filled with sodium chloride solution.
Rajah 1 menunjukkan silinder penyukat yang berisi larutan sodium klorida.

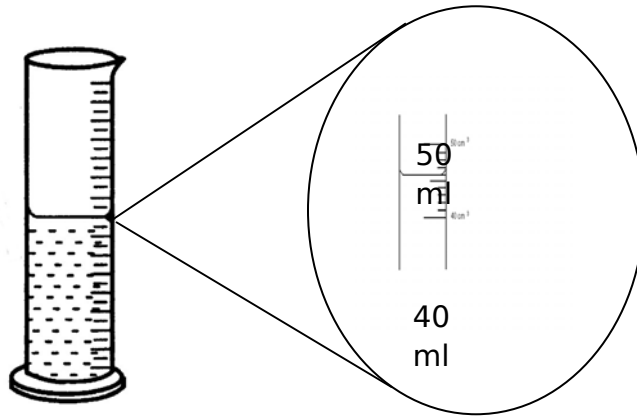


Diagram 1
Rajah 1

State the correct measurement shown in Diagram 1.
Nyatakan bacaan yang betul yang ditunjukkan dalam Rajah 1.

- A** 44 ml
B 45 ml
C 46 ml
D 47 ml
- 2 Diagram 2 shows some hazard warning symbols.
Rajah 2 menunjukkan simbol-simbol tanda amaran bahaya.

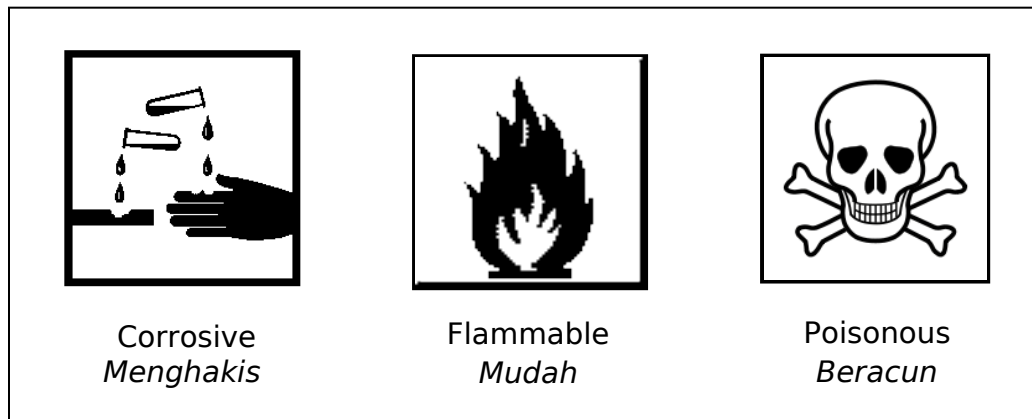


Diagram 2
Rajah 2

Which of these symbols are **correctly** matched?

Manakah antara symbol berikut adalah padanan yang **betul**?

| | Corrosive Menghakis | Flammable Mudah Terbakar | Poisonous Beracun |
|----------|---|---|------------------------------------|
| A | Ethanol <i>Etanol</i> | Concentrated sulphuric acid <i>Asid sulfurik pekat</i> | Mercury <i>Merkuri</i> |
| B | Concentrated sulphuric acid <i>Asid sulfurik pekat</i> | Mercury <i>Merkuri</i> | Ethanol <i>Etanol</i> |
| C | Concentrated sulphuric acid <i>Asid sulfurik pekat</i> | Ethanol <i>Etanol</i> | Mercury <i>Merkuri</i> |
| D | Mercury <i>Merkuri</i> | Concentrated sulphuric acid <i>Asid sulfurik pekat</i> | Ethanol <i>Etanol</i> |

- 3** Diagram 3 shows a plant cell.
Rajah 3 menunjukkan sel tumbuhan.

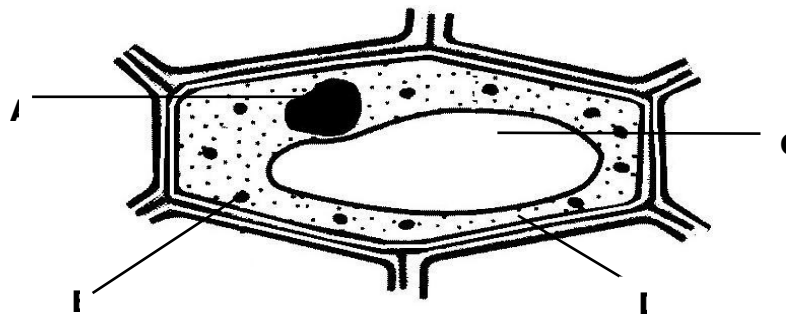


Diagram 3
Rajah 3

Which of the structure **A, B, C** or **D** contain chlorophyll?

Manakah antara struktur **A, B, C** atau **D** mengandungi klorofil?

- 4** Why does ice float on the lake surface during winter?
Mengapakah ais timbul pada permukaan tasik pada musim sejuk?
- A** Ice is less dense than water
Ais kurang tumpat daripada air
- B** Water changes its form from liquid to solid
Air berubah keadaannya daripada cecair ke pepejal

- C** The volume of ice decreases when water freezes into ice
Isipadu air berkurangan apabila air membeku kepada ais
- D** The distance between the water molecules become closer
Jarak antara molekul air semakin rapat
- 5** Diagram 4 shows a classification of matter.
Rajah 4 menunjukkan pengelasan jirim.

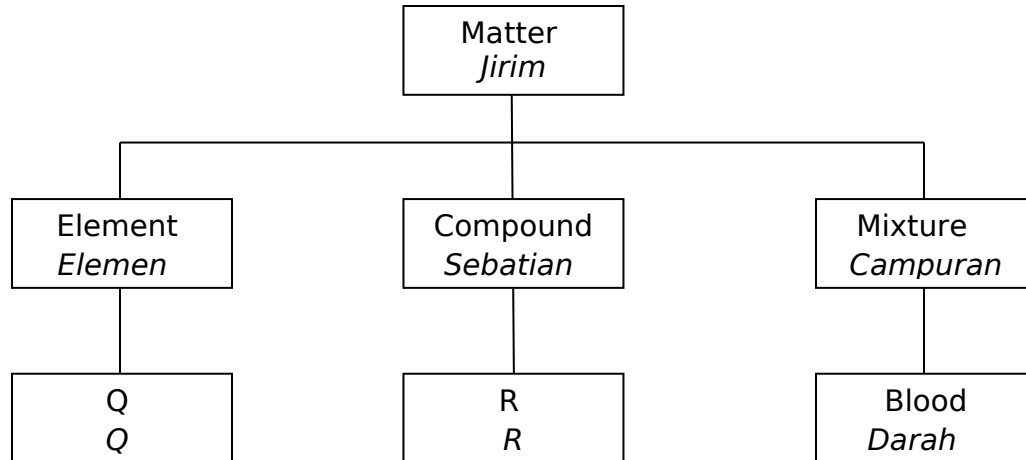


Diagram 4
Rajah 4

Which of the following represent Q and R?
Manakah antara berikut mewakili Q dan R?

| | Q | R |
|----------|--|-------------------------------|
| A | Carbon dioxide <i>Karbon dioksida</i> | Salt <i>Garam</i> |
| B | Iron <i>Besi</i> | Sugar <i>Gula</i> |
| C | Air <i>Udara</i> | Water <i>Air</i> |
| D | Mercury <i>Merkuri</i> | Petroleum <i>Petroleum</i> |

- 6** Diagram 5 shows an apparatus set-up to study a gas released during respiration.
Rajah 5 menunjukkan susunan radas untuk mengkaji gas yang dibebaskan semasa respirasi.

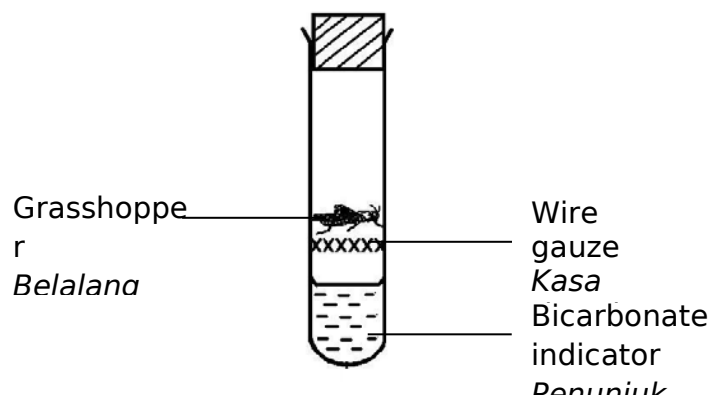


Diagram 5
Rajah 5

The colour of bicarbonate indicator in the boiling tube turns from red to yellow.
What kind of gas is released during respiration?

Warna penunjuk bikarbonat di dalam tabung uji bertukar daripada merah ke kuning. Apakah jenis gas yang dibebaskan semasa respirasi?

- A** Oxygen
Oksigen
- B** Nitrogen
Nitrogen
- C** Carbon dioxide
Carbon dioksida
- D** Hydrogen
Hidrogen
- 7** Which of the following activities **does not** caused air pollution?
A The using of biological control to control crop pest
Penggunaan kawalan biologi untuk mengawal perosak tanaman
- B** Open burning
Pembakaran terbuka
- C** The burning of leaded petrol
Pembakaran petrol berplumbum
- D** The using of chlorofluorocarbon (CFC) in air conditioners
Penggunaan klorofluorokarbon (CFC) dalam penghawa dingin
- 8** Diagram 6 shows a classification of energy sources.
Diagram 6 menunjukkan pengelasan sumber tenaga.

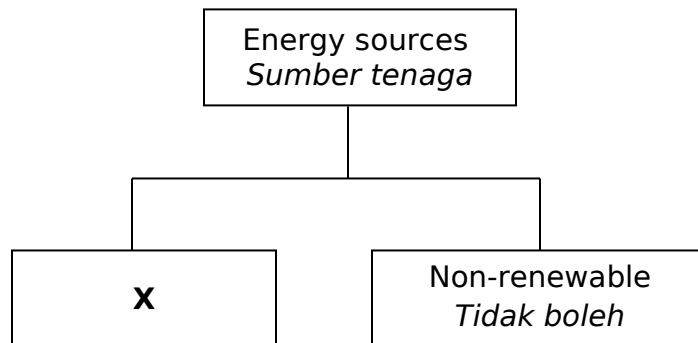


Diagram 6
Rajah 6

Which of the following is an example of X?

Antara yang berikut, yang manakah merupakan contoh X?

- A** Petrol
Petrol
- B** Natural gas
Gas asli
- C** Geothermal
Geoterma
- D** Radioactive substances
Bahan radioaktif

- 9** Diagram 7 shows two thumbtacks are placed on surfaces X and Y, using a candle wax.

Rajah 7 menunjukkan dua paku tekan dilekatkan menggunakan lilin kepada permukaan X dan Y.

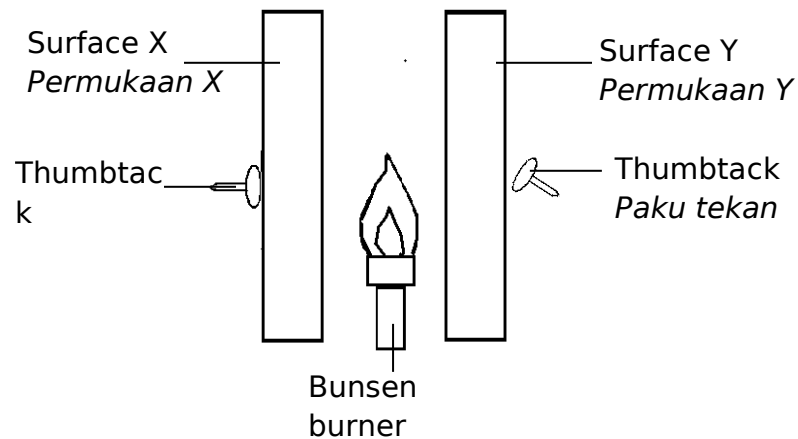


Diagram 7
Rajah 7

After a while, it is found that the thumbtack on surface Y falls first. Which of the following are probably surface of X and Y?

Selepas seketika, didapati paku tekan pada permukaan Y jatuh dahulu. Antara berikut, yang manakah kemungkinan permukaan X dan Y?

| | X | Y |
|----------|-----------------------|---------------------------|
| A | Black <i>Hitam</i> | White <i>Putih</i> |
| B | Black <i>Hitam</i> | Shinny <i>Berkilat</i> |
| C | White <i>Putih</i> | Shinny <i>Berkilat</i> |
| D | White <i>Putih</i> | Black <i>Hitam</i> |

- 1** Diagram 8 shows an effect of heat on liquid.
0 *Rajah 8 menunjukkan kesan haba ke atas cecair.*

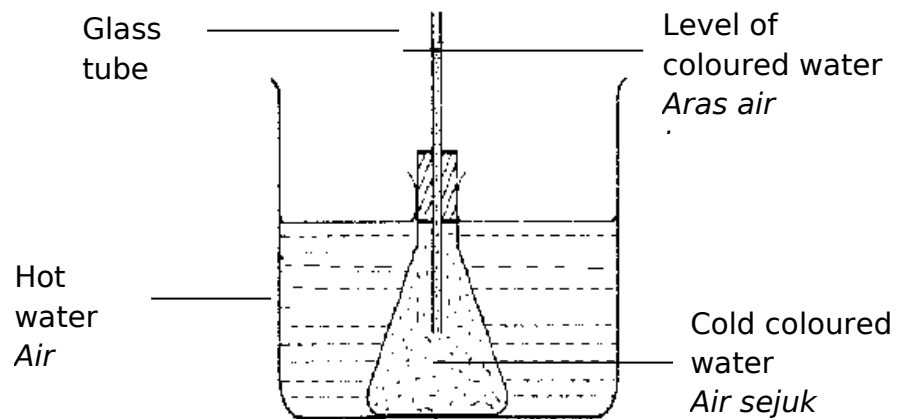
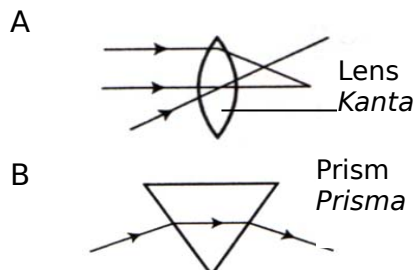
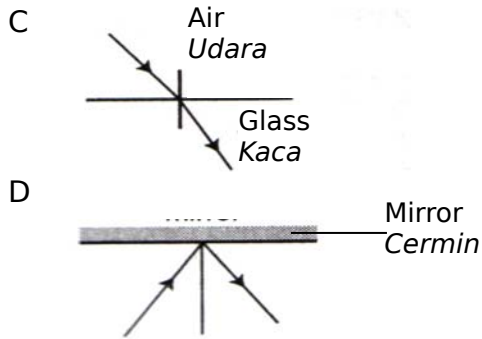


Diagram 8
Rajah 8

The level of coloured water in the glass tube is seen to rise after the apparatus is left for a while. This shows that
Aras air berwarna dalam tiub kaca kelihatan menaik apabila radas dibiarkan sementara waktu. Ini menunjukkan bahawa

- A** the glass tube expands
tiub kaca mengembang
B the coloured water expands
air berwarna mengembang
C heat from the hot water pushes the coloured water upwards
haba daripada air panas menolak air berwarna ke atas
D the glass tube becomes narrow
tiub kaca menjadi sempit
- 1** Which of the following shows the reflection of light?
1 *Manakah antara berikut menunjukkan pantulan cahaya?*





- 1 Diagram 9 shows the limitation of sight.
- 2 *Rajah 9 menunjukkan satu had penglihatan.*

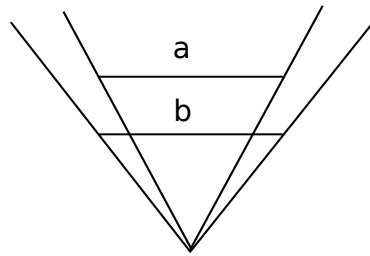


Diagram 9
Rajah 9

This limitation of sight is called
Had penglihatan ini dipanggil

- A blind spot
titik buta
- B optical illusion
ilusi optik
- C stereoscopic vision
penglihatan steroeskopik
- D monocular vision
penglihatan monokular

- 1 Diagram 10 shows a type of response in plant.
- 3 *Rajah 10 menunjukkan sejenis gerak balas tumbuhan.*



Diagram 10
Rajah 10

The type of tropism shown by the plant is
Jenis tropisma yang ditunjukkan itu ialah

- A** Phototropism
Fototropisme
- B** Hydrotropism
Hidrotropisme
- C** Thigmotropism
Tigmotropisme
- D** Nastic movement
Pergerakan nastik

- 1** The information shows a menu in Restaurant X.
4 *Maklumat di bawah menunjukkan menu di Restoran X.*

- A cup of coffee with sugar
Secawan kopi bersama gula
- Two slices of bread
Dua keping roti
- Butter
Mentega
- Two half boiled eggs
Dua biji telur separuh masak

This menu is **not** a balanced diet because it lacks in
*Menu itu **tidak** memberikan diet seimbang kerana kekurangan*

- A** Iron
Besi
- B** Protein
Protein
- C** Vitamin C
Vitamin C
- D** Carbohydrates
Karbohidrat

- 1** Where does the reabsorption of water take place when food passes through the alimentary canal?
Di manakah penyerapan semula air berlaku semasa makanan melalui salur pencernaan?
- A** Mouth
Mulut
 - B** Stomach
Perut
 - C** Small intestine
Usus kecil

D Large intestine
Usus besar

- 1** The information shows a list of animals which have common characteristics.
6 *Maklumat berikut menunjukkan senarai haiwan yang mempunyai ciri-ciri sepunya.*

- | |
|---|
| <ul style="list-style-type: none"> ○ Snake <i>Ular</i> ○ Bird <i>Burung</i> ○ Whale <i>Ikan paus</i> |
|---|

What are the common characteristics?
Apakah ciri-ciri sepunya?

- A** Lays eggs
Bertelur
 - B** Cold-blooded
Berdarah sejuk
 - C** Have backbones
Bertulang belakang
 - D** External fertilisation
Persenyawaan luar
- 1** Diagram 11 shows an interaction between two organisms.
7 *Rajah 11 menunjukkan interaksi antara dua organisma*



Diagram 11
Rajah 11

Which of the following interaction is similar to the diagram ?
Manakah antara interaksi berikut yang sama dengan rajah di atas?

- A** Algae and fungi
Alga dan kulat
- b** Remora fish and sharks
Ikan remora dan ikan yu

- C Parasites in human intestines
Parasit dalam usus manusia
- D Bacteria in termite intestines
Bakteria dalam usus anai-anai

- 1 Diagram 12 shows a pyramid of numbers.
8 *Rajah 12 menunjukkan pyramid nombor.*

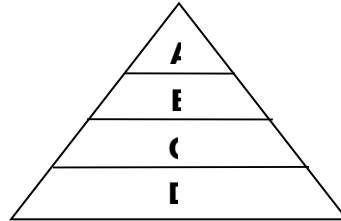


Diagram 12
Rajah 12

Which of **A**, **B**, **C** and **D** represents secondary consumers?
*Antara **A**, **B**, **C** dan **D** manakah yang mewakili pengguna sekunder?*

- 1 Diagram 13 shows how water temperature changes with heating time.
9 *Rajah 13 menunjukkan bagaimana suhu air berubah dengan masa pemanasan.*

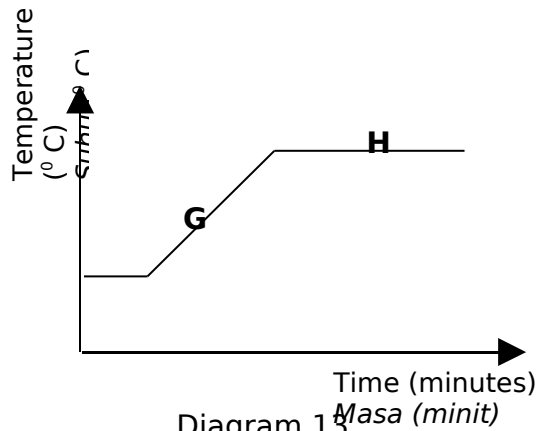


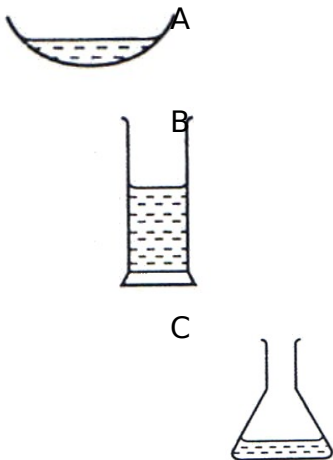
Diagram 13
Rajah 13

What do parts **G** and **H** represent?
*Apakah yang diwakili oleh bahagian **G** dan **H**?*

| | <i>G</i> | <i>H</i> |
|---|-------------------------------|------------------------------|
| A | Melting <i>Pencairan</i> | Boiling <i>Pendidihan</i> |
| B | Boiling <i>Pendidihan</i> | Freezing <i>Pembekuan</i> |
| C | Evaporation <i>Sejatan</i> | Boiling <i>Pendidihan</i> |
| D | Melting <i>Pencairan</i> | Freezing <i>Pembekuan</i> |

2 15 ml of water is filled in each container A, B, C and D. They are left under the sunlight for a while. In which container the water would dry up first?

0 15 ml air dimasukkan ke dalam setiap bekas A, B, C dan D . Bekas-bekas tersebut diletakkan di bawah cahaya matahari seketika. Air dalam bekas manakah yang akan kering dahulu?





2 Diagram 14 shows an insecticide sprayer.

1 *Rajah 14 menunjukkan sebuah penyembur racun serangga.*

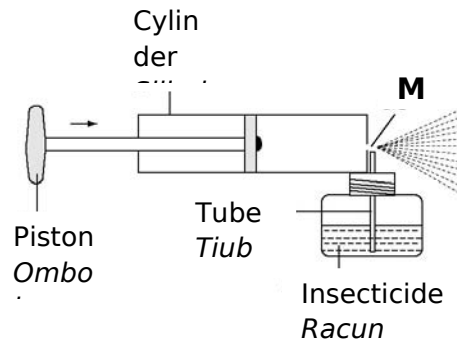


Diagram 14
Rajah 14

When the piston is pushed, the pressure at point M becomes
Bila umbohnya ditolak, tekanan pada titik M akan menjadi

- A low
rendah
- B high
tinggi
- C not consistence
tidak tetap
- d remain the same
kekai sama

2 Diagram 15 shows a list of materials.

2

Rajah menunjukkan senarai bahan-bahan.

Grease
Gris



Ball bearing
Alas bebola



Trolley
Troli



Diagam 15
Rajah 15

These materials are used to
Bahan-bahan ini digunakan untuk

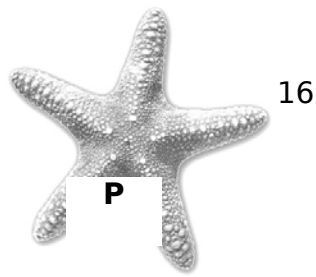
- A** sustain friction
mengekalkan geseran
- B** reduce friction
mengurangkan geseran
- C** increase friction
meningkatkan geseran
- D** prevent friction
menghalang geseran

- 2** Energy used to push the cupboard through a distance of 5 m is 75 J. What is the force exerted?

3 *Tenaga yang digunakan untuk menolak almari sejauh 5 m adalah 75 J. Berapakah daya yang telah dikenakan?*

- A** 5 N
- B** 10 N
- C** 15 N
- D** 20 N

- 2** Diagram 16 shows the animals commonly found in the sea.
4 *Rajah menunjukkan haiwan yang sering ditemui di laut.*



16



Diagram 16

Rajah 16

What is the support system for these animals?
 Apakah sistem sokongan bagi haiwan-haiwan tersebut?

| | Animal P | Animal Q |
|----------|--|---|
| A | Endoskeleton <i>Rangka dalam</i> | Endoskeleton <i>Rangka dalam</i> |
| B | Hydrostatic skeleton <i>Rangka hirostatik</i> | Endoskeleton <i>Rangka dalam</i> |
| C | Exoskeleton <i>Rangka luar</i> | Hydrostatic skeleton <i>Rangka hidrostatik</i> |
| D | Hydrostatic skeleton <i>Rangka hirostatik</i> | Endoskeleton <i>Rangka dalam</i> |

- 2 Diagram 17 shows a rhinoceros
 5 *Rajah 17 menunjukkan seekor badak.*

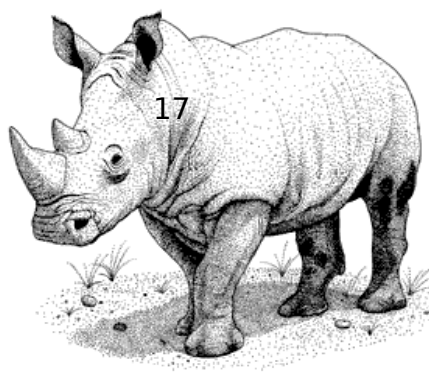


Diagram 17

Rajah 17

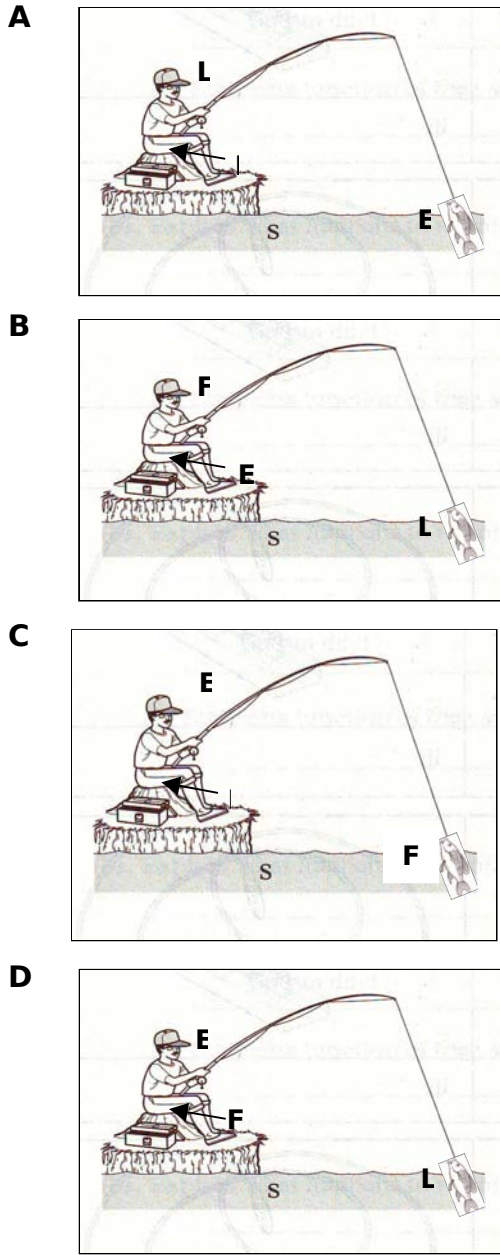
A rhinoceros has a short legs to

Badak sumbu mempunyai kaki yang pendek untuk

- A** support its body
menyokong badan
- B** increase base area
menambahkan keluasan tapak
- C** reduce its weight
mengurangkan berat badan
- D** lower its centre of gravity
merendahkan pusat gravity

2 Which of the following A , B , C and D shows the correct position of effort (E) ,
6 fulcrum (F) and load (L)?

Manakah antara A , B , C dan D menunjukkan kedudukan yang tepat bagi daya (E) , fulkrum (F) dan beban (L)



2 Diagram 18 shows a structure of hu
 7 Rajah18 menunjukkan struktur siste



ystem.
 inusia.

Diagram 18
Rajah 18

What happened to **X** during inhalation?
Apakah yang berlaku pada **X** semasa menarik nafas?

- A** Contract and flatten
Mengecut dan mendatar
- B** Relax and flatten
Mengendur dan mendatar
- C** Relax and curves upward
Mengendur dan melengkung ke atas
- D** Contract and curves upward
Mengecut dan melengkung ke atas

- 2** Diagram 19 shows three types of blood vessels.
8 *Rajah 19 menunjukkan tiga jenis salur darah.*

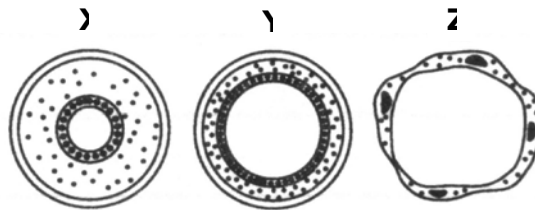


Diagram 19
Rajah 19

Which of the following matches them correctly?
Antara berikut yang manakah dipadankan dengan betul?

| | X | Y | Z |
|----------|------------------------------|------------------------------|------------------------------|
| A | Vein <i>Vena</i> | Artery <i>Arteri</i> | Capillary <i>Kapilari</i> |
| B | Artery <i>Arteri</i> | Capillary <i>Kapilari</i> | Vein <i>Vena</i> |
| C | Capillary <i>Kapilari</i> | Vein <i>Vena</i> | Artery <i>Arteri</i> |
| D | Artery <i>Arteri</i> | Vein <i>Vena</i> | Capillary <i>Kapilari</i> |

- 2 Diagram 20 shows a longitudinal section of the human kidney.
 9 *Rajah 20 menunjukkan keratan memanjang ginjal manusia*

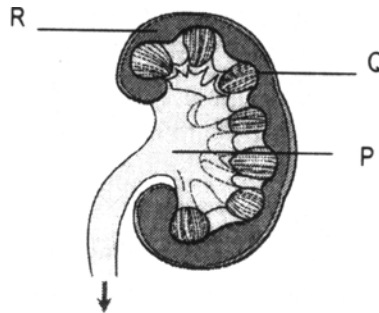


Diagram 20
Rajah 20

Which of the following parts are correctly labelled?
Di antara berikut, bahagian manakah yang dilabelkan dengan betul?

| | P | Q | R |
|----------|--------------------------|--------------------------|--------------------------|
| A | Cortex <i>Korteks</i> | Pelvis <i>Pelvis</i> | Medulla <i>Medula</i> |
| B | Pelvis <i>Pelvis</i> | Medulla <i>Medula</i> | Cortex <i>Korteks</i> |
| C | Medulla <i>Medula</i> | Cortex <i>Korteks</i> | Pelvis <i>Pelvis</i> |
| D | Cortex <i>Korteks</i> | Medulla <i>Medula</i> | Pelvis <i>Pelvis</i> |

- 3** Diagram 21 shows the condition of uterine wall during a menstrual cycle with the stages labeled W, X, and Z.

0 *Rajah 21 menunjukkan keadaan lapisan uterus semasa fasa kitar haid yang dilabelkan W, X, Y dan Z.*

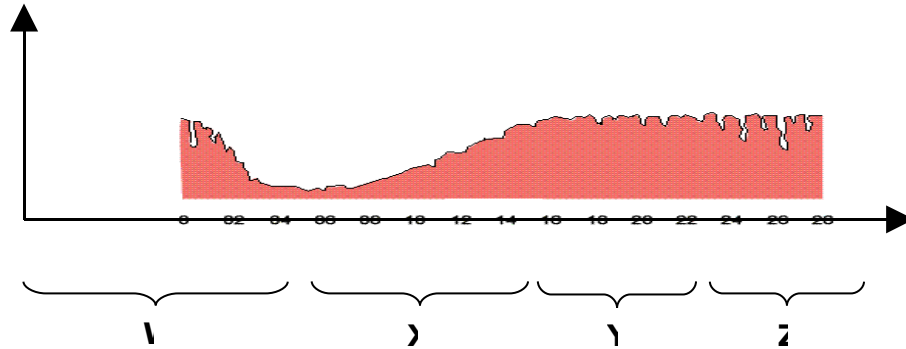


Diagram 21
Rajah 21

Which of the following is the fertile period of the women?

Manakah antara fasa berikut menunjukkan tempoh waktu subur bagi seorang wanita?

- A** W
- B** X
- C** Y
- D** Z

- 3** Diagram 22 shows the 'Flame of the forest' flower.

1 *Rajah 22 menunjukkan keratan rentas bunga semarak api.*

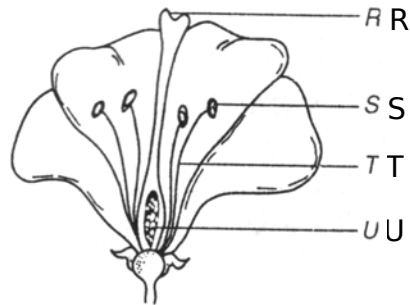
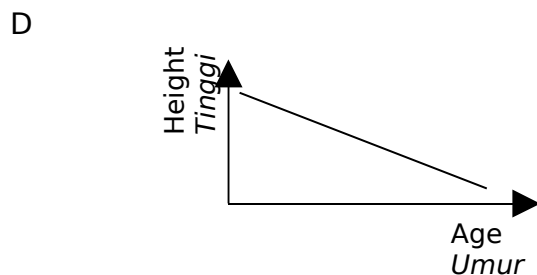
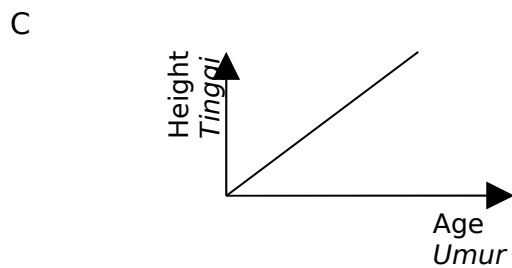
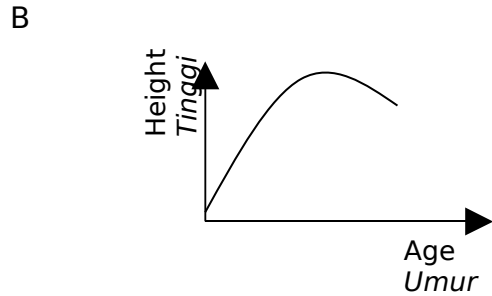
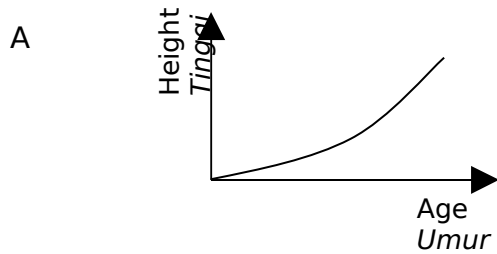


Diagram 22
Rajah 22

Which parts labelled R, S, T and U are the female reproductive organs?
Di antara bagian-bagian yang dilabelkan R, S, T dan U, yang manakah merupakan bagian pembiakan betina?

- A R and U
R dan U
- B R and S
R dan S
- C S and U
S dan U
- D S and T
S dan T

- 3** Which of the following is the correct human growth curve?
2 *Manakah yang menunjukkan lengkung pertumbuhan manusia?*



- 3** Diagram 23 shows zinc powder is being heated.
3 *Rajah 23 menunjukkan serbuk zink sedang dipanaskan.*

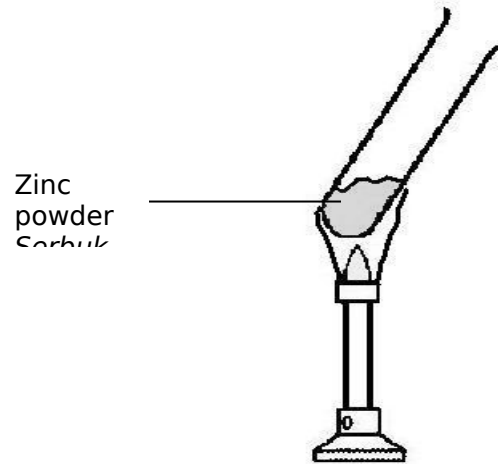


Diagram 23
Rajah 23

What is the product of this activity
Apakah hasil daripada aktiviti ini ?

- A** Zinc oxide and carbon dioxide
Zink oksida dan karbon dioksida
- B** Zinc carbonate
Zink karbonat
- C** Zinc oxide
Zink oksida
- D** Copper sulphide and oxygen
Kuprum sulfida dan oksigen

- 3 Diagram 24 shows fractional distillation.
 4 Rajah 24 menunjukkan proses penyulingan berperingkat

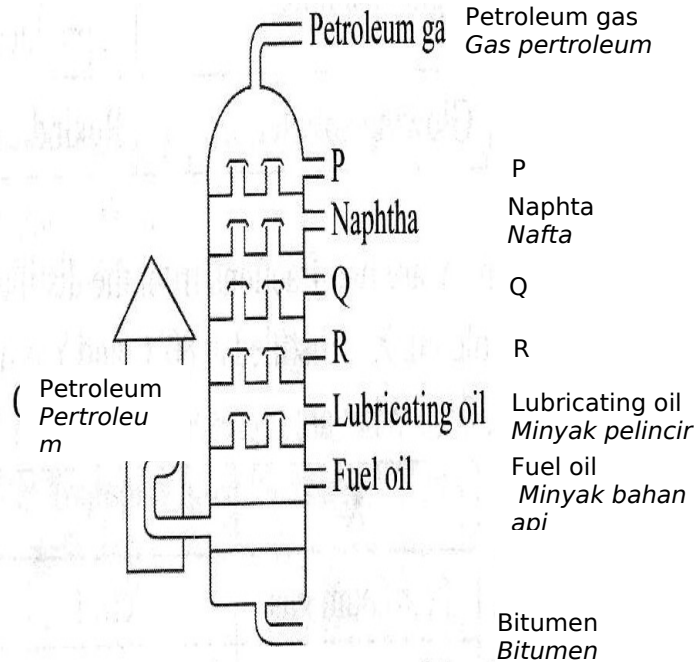
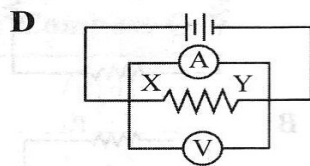
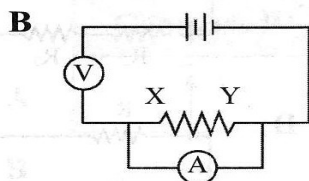
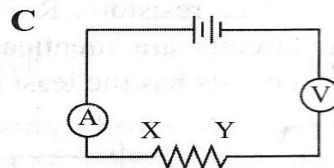
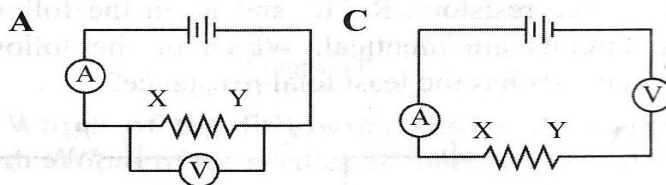


Diagram 24
Rajah 24

What are the products represented by P, Q and R.
 Apakah hasil yang ditunjukkan oleh P, Q dan R

| | P | Q | R |
|---|----------|----------|----------|
| A | Petrol | Diesel | Kerosene |
| B | Petrol | Kerosene | Diesel |
| C | Petrol | Kerosene | Bitumen |
| D | Kerosene | Diesel | Bitumen |

- 3 Which of the following shows correct arrangement of voltmeter and ammeter that are used to measure the voltage and current flowing through resistor XY?
 5 Litar manakah antara berikut yang menunjukkan susunan ammeter dan voltmeter yang betul untuk mengukur voltan dan arus yang melalui perintang XY?



3 Dia

each with voltage of 1.5 V

- 6 Rajah 25 menunjukkan susunan 4 buah sel kering, setiap satu bervoltan 1.5 V

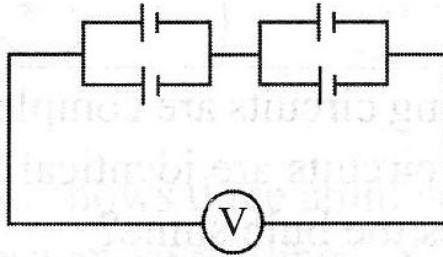


Diagram 25
Rajah 25

What is the reading of voltmeter?

Apakah bacaan voltmeter ?

- A 1.5 V
- B 3.0 V
- C 4.5 V
- D 6.0V

- 3 Which of electrical devise installed in a household circuit, will cut off the electrical supply because of overloading?

7 Alat elektrik yang manakah dipasang didalam litar rumah, akan memutuskan bekalan elektrik disebabkan lebih bebanan?

- I Fuse
Fius
 - II Earth wire
Wayar bumi
 - III Miniature circuit breaker
I Pemetus litar kecil
 - IV Earth leakage circuit breaker
V Pemetus litar kebocoran bumi
- A I and II only
 - B I, II and III only
 - C I, III and IV only
 - D II, III and IV only

- 3 Diagram 26 shows a transformer.

8 Rajah 26 menunjukkan sebuah transformer

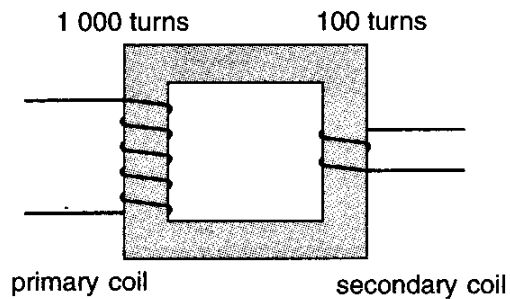


Diagram 26
Rajah 26

Which statement about the transformer is true?
Kenyataan manakah benar tentang transformer itu?

- A** It is step-up transformer
Ia adalah transformer injak naik
- B** The input current is less than input current
Arus masuk kurang dari arus keluar
- C** The output voltage is less than input voltage
Voltan output kurang dari voltab input
- D** The output power is higher than input power
Kuasa output lebih tinggi dari kuasa input

- 3** The information below shows the sequence of the death of star.
9 *Maklumat berikut menunjukkan urutan kematian bintang.*

| |
|--|
| <p>P – Supernova <i>Supernova</i></p> <p>Q – Formation of black hole <i>Pembentukan lohong hitam</i></p> <p>R – Super giant stars <i>Bintang raksasa besar</i></p> <p>S – Red giant stars <i>Bintang raksasa merah</i></p> |
|--|

Based on the above information, arrange the sequence that occurs when a star

dies.

Berdasarkan maklumat di atas, susun urutan yang berlaku bila sebuah bintang mati.

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

4 Space shuttle is a spaceship that...

0 *Space shuttle adalah kapal angkasa yang*

- A** can be reuse repeatedly
boleh digunakan kembali secara berulang kali
- B** does not need astronaut
tidak memerlukan angkasawan
- C** used to orbit a particular planet
menggunakan untuk mengorbit planet tertentu
- D** used to carry out experiments in outer space
digunakan untuk menjalankan eksperimen di angkasa lepas

END OF QUESTION PAPER

KERTAS SOALAN TAMAT