

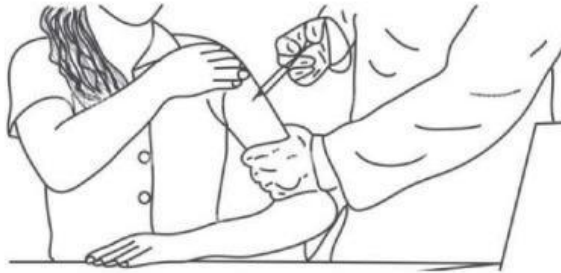
BAHAGIAN A

[20 markah]

[20 marks]

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

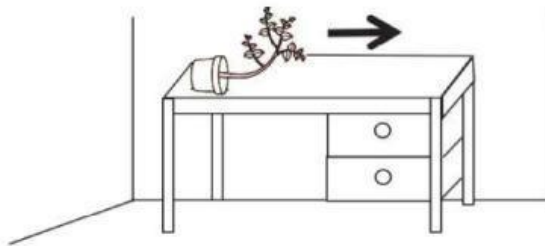
- 1 Rajah di bawah menunjukkan seorang doktor memberikan suntikan kepada pesakitnya.
Diagram below shows a doctor giving an injection to his patient.



Mengapakah doktor memberikan suntikan di kawasan tersebut?
Why does the doctor give an injection in that area?

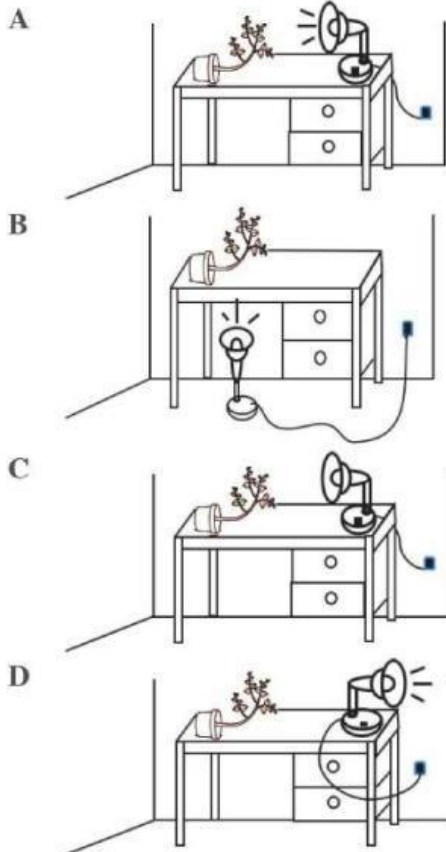
- A Lapisan lemak tebal
Thick layer of fat
- B Lapisan dermis tebal
Thick layer of dermis
- C Bilangan reseptor kurang
Small number of receptors
- D Bilangan reseptor banyak
Large number of receptors

- 2 Rajah di bawah menunjukkan tumbuhan berpasu di dalam sebuah bilik gelap.
Diagram below shows a potted plant in a dark room.



Antara berikut, manakah cara yang betul dilakukan supaya pucuk tumbuh mengikut arah anak panah?

Which of the following is the correct way to make shoots grow in the direction of the arrow?



- 3 Rajah bawah menunjukkan sebuah kenderaan bermotor membebaskan asap yang mengandungi gas K ke udara.

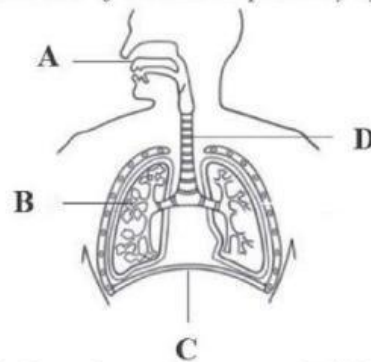
Diagram below shows a motor vehicle releasing fumes containing gas K into the air.



Antara berikut, yang manakah ciri gas K?

Which of the following is a characteristic of gas K?

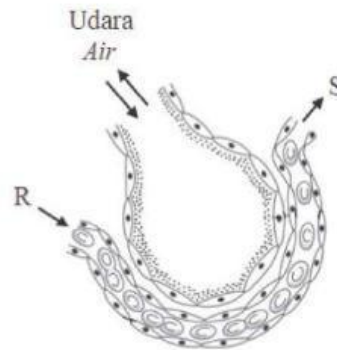
- A Merupakan gas bewarna kuning
It is a yellow gas
 - B Mudah terbakar pada suhu rendah
Flammable at low temperatures
 - C Mengeluarkan bau yang menyesakkan
Releases a suffocating smell
 - D Merosakkan hati jika meresap ke dalam sel badan
Damages the liver if absorbed into the body cells
- 4 Rajah di bawah menunjukkan struktur sistem respirasi manusia.
Diagram above shows the structure of human respiratory system.



Antara A, B, C dan D, manakah struktur yang mengubah isi padu rongga toraks?

Which of A, B, C or D is the structure that change the volume of the thoracic cavity?

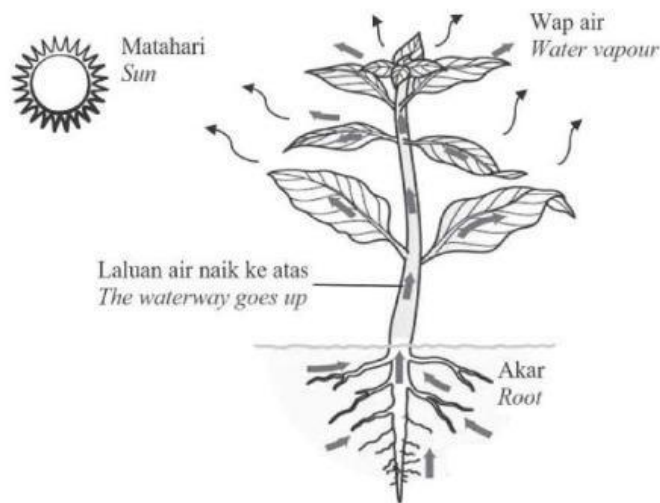
- 5 Rajah di bawah menunjukkan keratan rentas alveolus manusia.
Diagram below shows a cross-section of a human alveolus.



Antara berikut, yang manakah menerangkan rajah di atas?
Which of the following explains the diagram above?

- A Kepekatan oksigen di S lebih tinggi berbanding di R
The concentration of oxygen in S is higher than in R
- B Kepekatan oksigen di S lebih rendah berbanding di R
The concentration of oxygen in S is lower than in R
- C Kepekatan karbon dioksida di S lebih tinggi berbanding di R
The concentration of carbon dioxide in S is higher than in R
- D Kepekatan karbon dioksida di R lebih rendah berbanding di S
The concentration of carbon dioxide in R is lower than in S

- 6 Rajah di bawah menunjukkan proses P yang berlaku dalam tumbuhan.
Diagram below shows process P that occurs in a plant.



Antara berikut, yang manakah kepentingan proses P kepada tumbuhan?
Which of the following is the importance of the process P to the plants?

- A Membantu penyerapan cahaya matahari
Helps in absorption of sunlight
- B Penyerapan air oleh akar secara osmosis
Absorption of water through osmosis
- C Penghasilan makanan dalam bentuk glukosa
Production of food in the form of glucose
- D Penyerapan gas karbon dioksida dan membebaskan oksigen
Absorption of carbon dioxide gas and release of oxygen

- 7 Antara yang berikut, organisma manakah yang mempunyai sistem pengangkutan khusus?

Which of the following organisms has a specialised transport system?

A



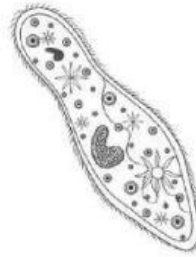
C



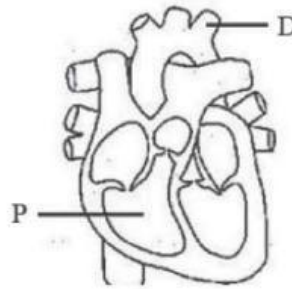
B



D



- 8 Rajah di bawah menunjukkan satu organ manusia.
Diagram below shows a human organ.

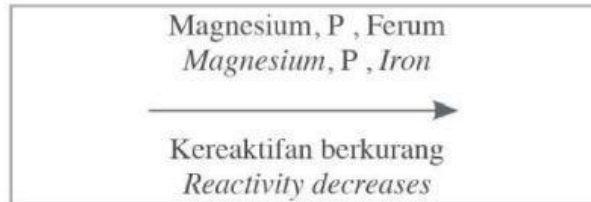


Antara berikut, manakah ciri yang betul bagi P dan Q?
Which is the correct characteristic of P and Q?

	P	Q
A	Mengepam darah terdeoksigen ke bahagian badan lain <i>Pumps deoxygenated blood to the other parts of the body</i>	Mengangkut darah beroksigen ke paru-paru <i>Transport oxygenated blood to the lungs</i>
B	Mengepam darah beroksigen ke paru-paru <i>Pumps oxygenated blood to the lungs</i>	Mengangkut darah terdeoksigen ke bahagian badan lain <i>Transports deoxygenated blood to the other parts of the body</i>
C	Mengepam darah terdeoksigen ke paru-paru <i>Pumps deoxygenated blood to the lungs</i>	Mengangkut darah beroksigen ke bahagian badan lain <i>Transport oxygenated blood to the other parts of the body</i>
D	Mengepam darah beroksigen ke bahagian badan lain <i>Pumps oxygenated blood to the other parts of the body</i>	Mengangkut darah terdeoksigen ke paru-paru <i>Transport deoxygenated blood to the lungs</i>

- 9 Maklumat di bawah menunjukkan susunan logam dalam siri kereaktifan logam terhadap oksigen.

Information below shows arrangement metals in the reactivity series of metal towards oxygen.

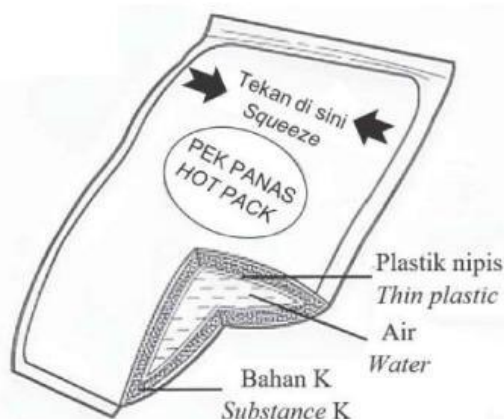


Apakah P?

What is P?

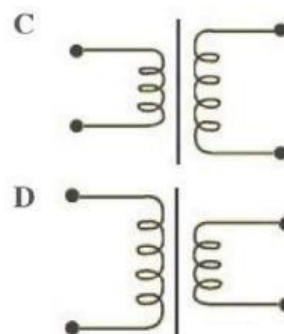
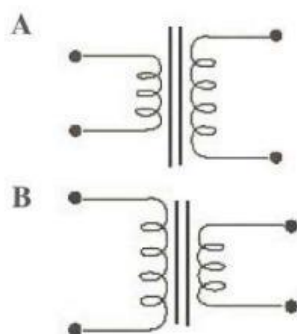
- A Aluminium
Aluminium
 - B Plumbum
Lead
 - C Kuprum
Copper
 - D Timah
Tin
- 10 Apakah nama saintifik bagi bauksit?
- What is the scientific name for bauxite?*
- A Aluminium oksida
Aluminium oxide
 - B Kalsium karbonat
Calcium carbonate
 - C Silikon dioksida
Silicone dioxide
 - D Ferum sulfida
Iron sulphide

- 11 Rajah di bawah menunjukkan satu aplikasi termokimia.
Diagram below shows an application of thermochemistry.

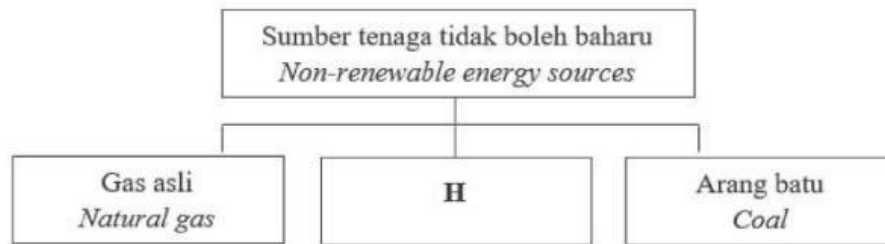


Antara yang berikut, pernyataan manakah yang betul tentang aplikasi di atas?
Which of the following is the correct statement about the above application?

- A Bahan K ialah ammonium klorida
Substance K is ammonium chloride
 - B Membantu mengecilkan saiz lumen kapilari darah
Helps reduce the size of lumen in the blood capillaries
 - C Melegakan kekejangan otot dengan membebaskan haba
Relieves muscle spasms by releasing heat
 - D Menyingkirkan haba untuk mengurangkan bengkak luka
Get rid of heat to reduce swelling of the wound
- 12 Antara berikut, yang manakah menunjukkan simbol transformer injak turun?
Which of the following shows the symbol of a step-down transformer?



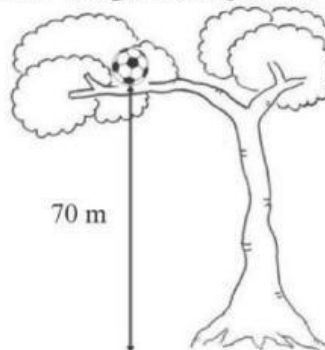
- 13 Rajah di bawah menunjukkan contoh-contoh sumber tenaga.
Diagram below shows examples of energy sources.



Apakah H?

What is H?

- A Tenaga biojisim
Biomass energy
 - B Tenaga ombak
Wave energy
 - C Tenaga nuklear
Nuclear energy
 - D Tenaga hidro
Hydro energy
- 14 Rajah di bawah menunjukkan bola berjisim 400 g yang berada di atas pokok.
Diagram below shows a ball with 400 g mass object that is on a tree.



Pecutan graviti dianggarkan 10 ms^{-2} . Berapakah tenaga keupayaan graviti bola tersebut?

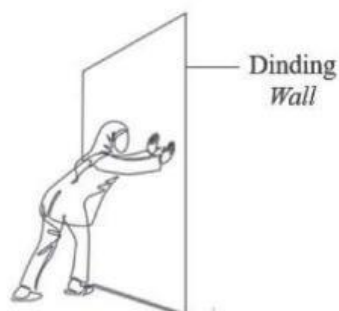
Gravitational acceleration estimated as 10 ms^{-2} . What is the gravitational potential energy of the ball?

Tenaga keupayaan graviti = mgh
Gravitational potential energy = mgh

- A 280 J
- B 2 800 J
- C 28 000 J
- D 280 000 J

- 15 Antara rajah berikut, yang manakah menunjukkan kerja dilakukan?
Which of the following diagrams show work is done?

A



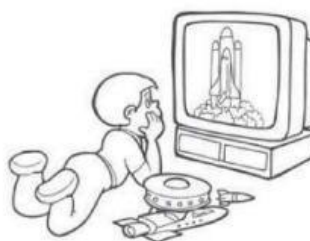
C



B



D



- 16 Rajah di bawah menunjukkan keadaan buah yang melalui suatu proses.
Diagram below shows the state of the fruit that goes through a process.

Hari pertama
First day



Hari kedua
Second day



Hari ketiga
Third day

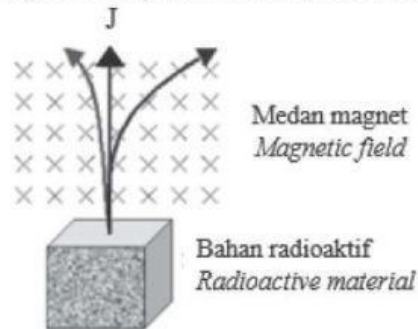


Antara sinaran radioaktif berikut, yang manakah boleh digunakan untuk melambatkan proses di atas?

Which of the following radioactive rays can be used to slow down the above process?

- A Sinar-X
X-ray
- B Sinar alfa
Alpha radiation
- C Sinar beta
Beta radiation
- D Sinar gama
Gamma ray

- 17 Rajah di bawah menunjukkan pemesanan sinaran radioaktif oleh medan magnet.
 Diagram below shows the deflection of radioactive radiation through a magnetic field.



Apakah sinar radioaktif J?

What is radioactive radiation J?

- A Sinar gama
Gamma ray
 - B Sinar beta
Beta radiation
 - C Sinar alfa
Alpha radiation
 - D Sinar-X
X-ray
- 18 Rajah di bawah menunjukkan sekeping gambar foto.
 Diagram below shows a piece of photograph.

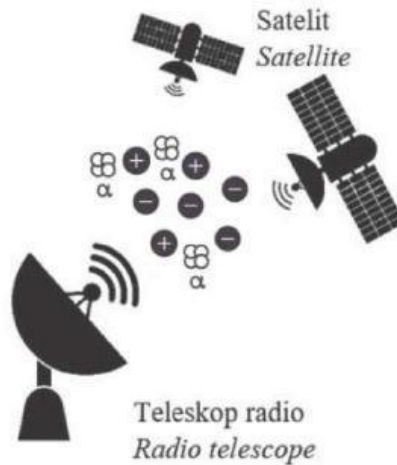


Siapakah yang menemui sinar radioaktif yang menghasilkan imej tersebut?

Who discovered the radioactive ray that produced the image?

- A Marie Curie
- B Pierre Curie
- C Antoine Henri Becquerel
- D Wilhelm Conrad Roentgen

- 19 Rajah di bawah menunjukkan suatu keadaan sistem telekomunikasi.
Diagram below shows a condition of telecommunications system.



Apakah fenomena di permukaan matahari yang menyebabkan keadaan ini berlaku?
What is the phenomenon on the surface of the sun that causes this situation?

- A Tompok Matahari
Sunspots
 - B Kitaran suria
Solar cycles
 - C Angin suria
Solar winds
 - D Granul
Granules
- 20 Antara berikut, yang manakah merupakan satelit pertama Malaysia?
Which of the following is the Malaysia's first satellite?
- A Innosat 2
 - B TiungSAT
 - C MEASAT 1
 - D RAZAKSAT

BAHAGIAN B

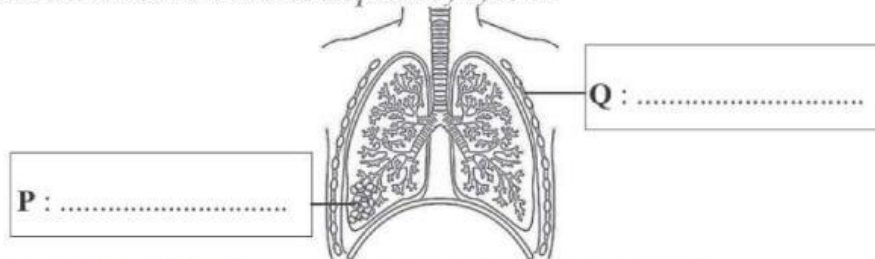
[20 markah]

[20 marks]

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

- 1 (a) Rajah di bawah menunjukkan sistem respirasi manusia.

Diagram below shows a human respiratory system.



Labelkan struktur P dan Q menggunakan perkataan yang diberi.

Label structure P and Q using the words given.

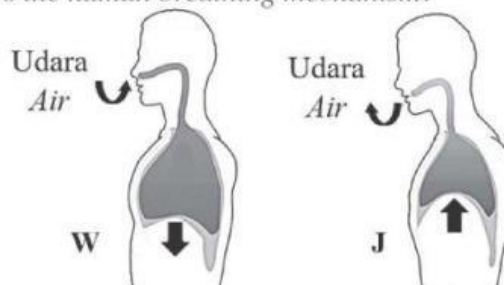
Bronkus	Alveolus	Otot interkostal
Bronchus	Alveolus	Intercostal muscle

[2 markah]

[2 marks]

- (b) Rajah di bawah menunjukkan mekanisme pernafasan manusia.

Diagram below shows the human breathing mechanism.

Tulis **BENAR** bagi pernyataan yang betul dan **PALSU** bagi pernyataan yang salah.Write **TRUE** for the correct statement and **FALSE** for the wrong statement.

Pernyataan Statements	BENAR/PALSU TRUE/FALSE
(i) Rongga toraks lebih besar ketika J berbanding W Thoracic cavity is bigger when J than W	
(ii) Diafragma mengecut ketika W dan mengendur ketika J Diaphragm contracts during W and relaxes during J	
(iii) Tekanan udara dalam peparu lebih tinggi ketika W berbanding J The air pressure in the lungs is higher during W than J	

[2 markah]

[2 marks]

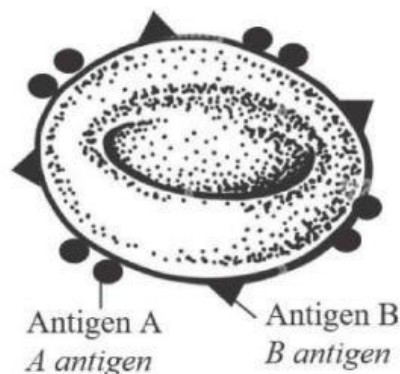
- 2 (a) Gariskan jawapan yang betul bagi pernyataan di bawah.
Underline the correct answer for the statements below.

- (i) Darah merupakan suatu (campuran/sebatian).
Blood is a type of (mixture/compound).
- (ii) Darah dapat dikelaskan kepada (tiga/empat) kumpulan darah.
Blood can be classified into (three/four) blood groups.

[2 markah]

[2 marks]

- (b) Rajah di bawah menunjukkan sel darah merah bagi salah satu kumpulan darah.
Diagram below shows the red blood cells of a blood group.



Tandakan (✓) pada pernyataan yang betul tentang sel darah merah di atas.
Tick (✓) on the correct statements about red blood cells above.

Pernyataan <i>Statements</i>	Tanda (✓) <i>Tick (✓)</i>
Sel darah merah ini akan diserang oleh antibodi Anti-A <i>These red blood cells will be attacked by Anti-A antibody</i>	
Tidak boleh menerima darah jenis B <i>Cannot accept type B blood</i>	
Menyebabkan penggumpalan darah sekiranya diterima oleh darah jenis O <i>Causes blood coagulation if received by type O blood</i>	

[2 markah]

[2 marks]