

55/1  
Sains  
Kertas 1  
Ogos  
1 jam



JABATAN PELAJARAN PERAK

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PEPERIKSAAN PERCUBAAN SELARAS  
PENILAIAN MENENGAH RENDAH  
PERINGKAT NEGERI PERAK TAHUN 2010

SAINS  
KERTAS 1

Satu jam

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JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini mengandungi 40 soalan objektif.*
2. *Jawab semua soalan.*
3. *Tiap-tiap soalan diikuti oleh empat cadangan jawapan yang berhuruf A, B, C dan D. Bagi tiap-tiap soalan pilih satu jawapan sahaja. Tandakan jawapan anda pada kertas objektif yang disediakan.*
4. *Fikir dengan teliti ketika memilih jawapan. Jika anda hendak menukar sesuatu jawapan, padamkan sehingga bersih dan tandakan jawapan yang baru.*

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Kertas soalan ini mengandungi 20 halaman bercetak.

1. Figure 1 shows the positions of eye. In which position should your eyes be to get the correct readings using measuring cylinder?

Rajah 1 menunjukkan kedudukan mata. Pada kedudukan manakah mata anda berada untuk mendapat bacaan yang tepat pada silinder penyukat?

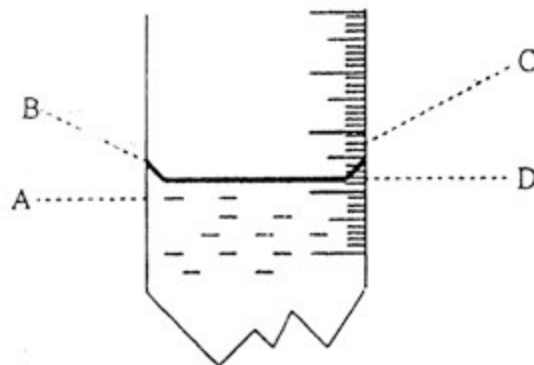
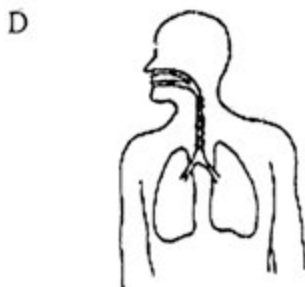
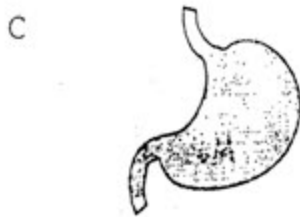


Figure 1  
Rajah 1

2. Which of the following is an organ?  
Antara berikut, yang manakah ialah organ?



3. Solids P and S are placed in a gas jar containing liquids Q and R as shown in the figure 2.  
*Pepejal P and S dimasukkan ke dalam satu balang gas mengandungi cecair Q dan R seperti dalam rajah 2.*

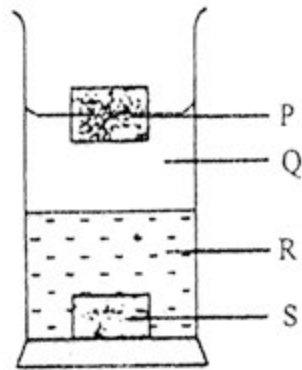


Figure 2  
 Rajah 2

- Which of the following statements is true?  
*Antara pernyataan berikut, yang manakah benar?*
- A Solid P is less dense than solid S  
*Pepejal P kurang tumpat daripada pepejal S*
  - B Solid P is more dense than liquid Q  
*Pepejal P lebih tumpat daripada cecair Q*
  - C Liquid R is less dense than liquid Q  
*Cecair R kurang tumpat daripada cecair Q*
  - D Liquid Q is more dense than solid S  
*Cecair Q lebih tumpat daripada pepejal S*

4. Figure 3 shows three types of matter.  
Rajah 3 menunjukkan tiga jenis jirim.

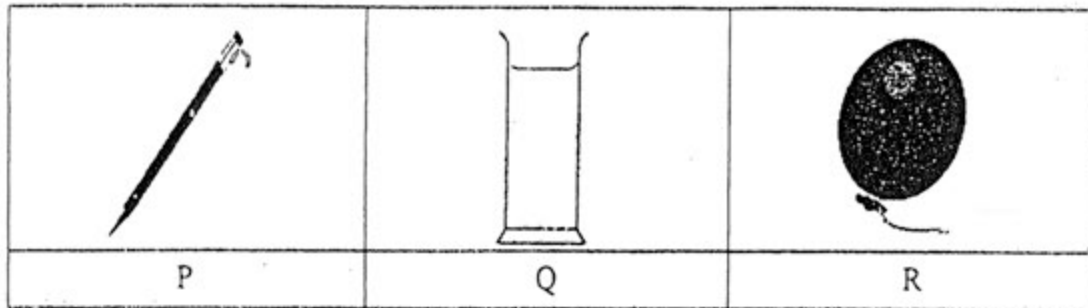

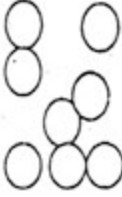


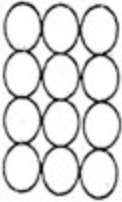



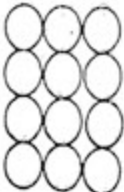





Figure 3  
Rajah 3

- Which of the followings shows the correct arrangement of particles in the Figure 3?  
Antara berikut yang manakah menunjukkan susunan zarah yang tepat dalam Rajah 3?

	P	Q	R
A			
B			
C			
D			

5. The following are the importance of a certain natural resource.  
Berikut merupakan kepentingan satu sumber semulajadi.

- Contains water and minerals  
*Mengandungi air dan mineral*
- As a medium that support plant growth  
*Sebagai medium untuk menyokong pertumbuhan tumbuhan*
- Provides habitat for various organisms  
*Menjadi habitat benda hidup*

The natural resource referred to is  
*Sumber semulajadi itu ialah*

- A Soil  
*Tanah*
- B Minerals  
*Mineral*
- C Fossil fuel  
*Bahan api fosil*
- D Water  
*Air*
6. Figure 4 shows percentage of gases in the air. Which of the following gas is used for photosynthesis?  
*Rajah 4 menunjukkan peratus gas di udara. Antara gas berikut digunakan untuk fotosintesis?*

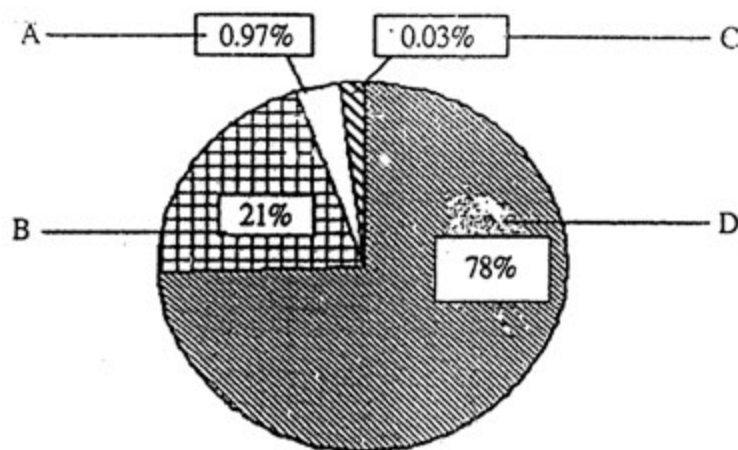


Figure 4  
*Rajah 4*

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7. Figure 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.

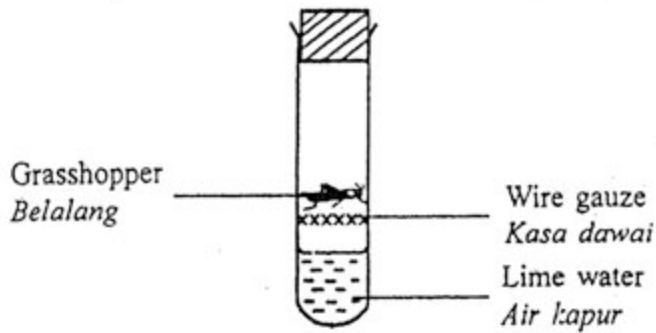
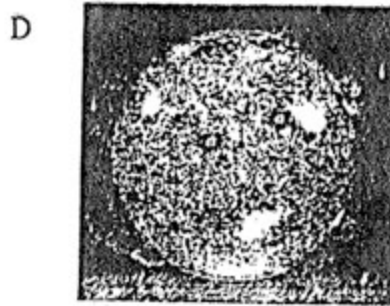
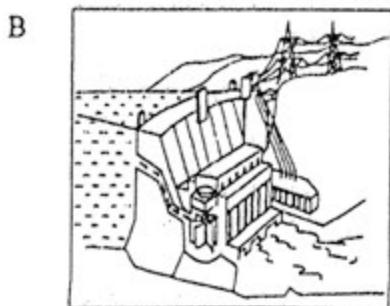
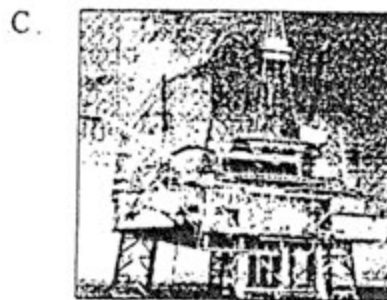
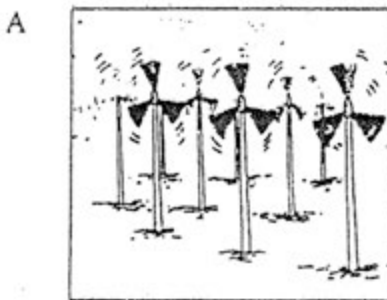


Figure 5  
 Rajah 5

The colour of lime water in the boiling tube turns to cloudy. What kind of gas is released during respiration?

Warna air kapur di dalam tabung uji bertukar menjadi keruh. Apakah jenis gas yang dibebaskan semasa respirasi?

- A Oxygen  
 Oksigen
- B Nitrogen  
 Nitrogen
- C Carbon dioxide  
 Carbon dioksida
- D Hydrogen  
 Hidrogen
8. Which of the following is an example of non-renewable sources of energy.  
 Antara berikut yang manakah contoh sumber tenaga yang tidak boleh diperbaharui.



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 SULIT

9. Figure 6 shows the condition of a bimetallic strip after being heated.  
Rajah 6 menunjukkan keadaan jalur dwilogam selepas dipanaskan.



Figure 6  
Rajah 6

Which of the following explain the observation in Figure 6?

Antara berikut, yang manakah menerangkan pemerhatian pada Rajah 6?

- A Metal P is hotter than metal Q  
*Logam P lebih panas daripada logam Q*
- B Metal Q is hotter than metal P  
*Logam Q lebih panas daripada logam P*
- C Metal P expands more than metal Q  
*Logam P mengembang lebih daripada logam Q*
- D Metal Q expands more than metal P  
*Logam Q mengembang lebih daripada logam P*
10. Figure 7 shows a heated bimetallic strips.  
Rajah 7 menunjukkan jalur dwilogam yang di panaskan

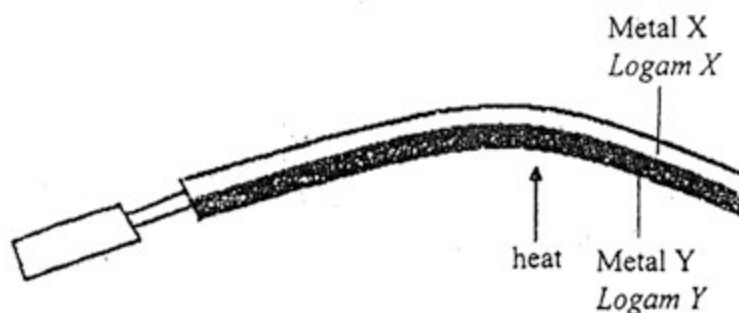


Figure 7  
Rajah 7

Which appliance uses the principle of expansion of the metals above?

Alatan yang manakah menggunakan prinsip pengembangan logam di atas?

- A Fire alarm  
*Penggera kebakaran*
- B Alarm clock  
*Jam penggera*
- C Vacuum pump  
*Pam hampagas*
- D Electric crane  
*Kren elektrik*

11. Figure 8(a) shows a student reading Braille map.  
*Rajah 8(a) menunjukkan seorang pelajar sedang membaca peta Braille.*

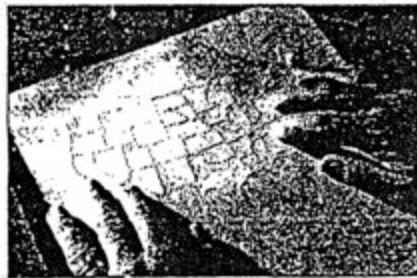


Figure 8(a)  
*Rajah 8(a)*

Figure 8(b) shows a cross section of human skin. Which of the following parts involved in Figure 8(a).

*Rajah 8(b) menunjukkan keratan rentas kulit manusia. Antara berikut yang manakah terlibat dalam aktiviti dalam Rajah 8(a).*

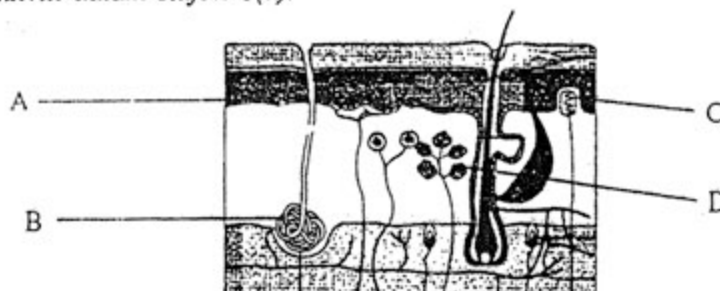


Figure 8(b)  
*Rajah 8(b)*

12. Figure 9 shows the process in which food from the mouth pushes through oesophagus into the stomach by the contraction and relaxation the muscles of the wall.  
*Rajah 9 menunjukkan proses pergerakan makanan daripada mulut melalui esofagus ditolak ke perut melalui pengecutan dan pengenduran dinding otot*

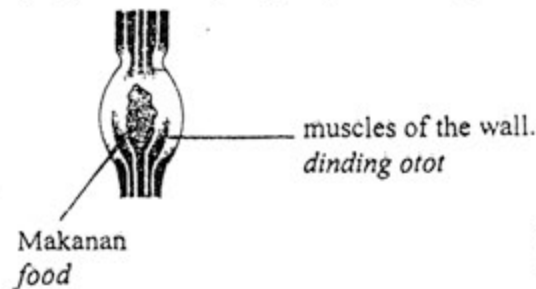


Figure 9  
*Rajah 9*

Which of the following is the process shown in Figure 9?  
*Antara berikut yang manakah adalah proses yang ditunjukkan dalam Rajah 9?*

- A defecation  
*penyahtinjaan*
- B digestion  
*pencernaan*
- C dialysis  
*dialisis*
- D peristalsis  
*peristalsis*

13. Figure 10 shows some characteristics of plants Q and P.  
Rajah 10 menunjukkan ciri-ciri pokok Q dan P.

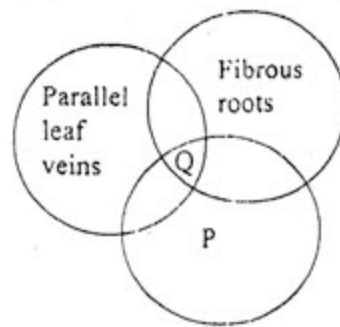


Figure 10  
Rajah 10

Which of the following correctly represents plant Q and its characteristic plant P?  
Antara berikut yang manakah menunjukkan pokok Q dan ciri-ciri pokok P adalah benar?

	Plant Q	Characteristic P
A	Paddy plant <i>Pokok padi</i>	Seed with one cotyledon <i>Biji dengan satu kotiledon</i>
B	Durian tree <i>Pokok durian</i>	Seed with two cotyledon <i>Biji dengan dua kotiledon</i>
C	Mushroom <i>Cendawan</i>	Reproduced by spores <i>Pembiakan dengan spora</i>
D	Maize plant <i>Pokok jagung</i>	Does not produce flower <i>Tidak menghasilkan bunga</i>

14. Table 1 below shows the calorific value of some foods.  
Jadual 1 di bawah menunjukkan nilai kalori beberapa jenis makanan.

Food <i>Makanan</i>	Quantity <i>Kuantiti</i>	Calorific value/(kJ) <i>Nilai kalori/(kJ)</i>
Bread <i>Roti</i>	1 piece <i>1 keping</i>	53
Banana <i>pisang</i>	1 piece <i>1 biji</i>	136
Milk <i>Susu</i>	1 glass <i>1 gelas</i>	75

Table 1  
Jadual 1

Ramli had consumed the following food for breakfast:  
*seorang pelajar mengambil makanan berikut untuk sarapan pagi*

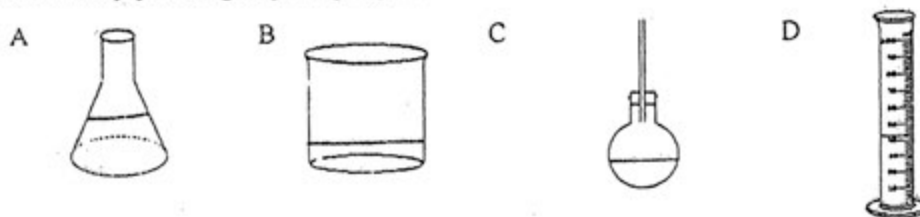
Bread – 3 pieces <i>Roti – 3 keping</i>	Banana – 2 pieces <i>Pisang – 2 biji</i>	Milk – 1 glass <i>Susu – 1 gelas</i>
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Based on Table 1, calculate the calorific value consumed by Ramli for his breakfast.  
*Berdasarkan Jadual 1, kira nilai kalori yang diambil oleh Ramli.*

- A 496 kJ  
B 506 kJ  
C 516 kJ  
D 526 kJ

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15. Which of the following consist of vertebrates only.  
*Antara berikut yang manakah menunjukkan haiwan bertulang belakang sahaja.*
- A Worm, prawn, turtle  
*Cacing, udang dan penyu*
- B Worm, crab and monkey  
*Cacing, ketam dan monyet*
- C Bird, crab and monkey  
*Burung, ketam dan monyet*
- D Bird, frog and monkey  
*Burung, katak dan monyet*
16. Four containers below contain same volume of water. Which container will evaporates faster?  
*Empat bekas di bawah mengandungi isipadu air yang sama. Antara berikut yang manakah akan menyejat dengan paling cepat?*



17. Figure 11 shows the electrolysis of acidified water.  
*Rajah 11 menunjukkan elektrolisis air berasid.*

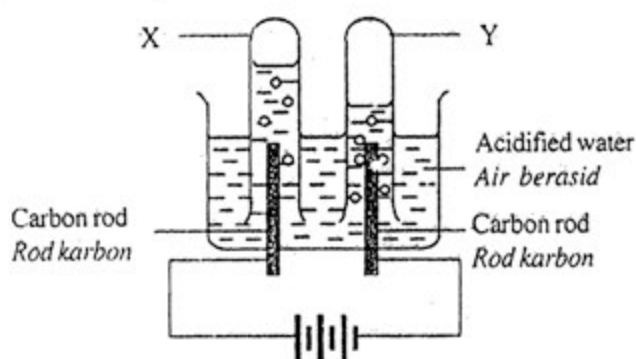


Figure 11  
*Rajah 11*

- Which of the following shows the correct confirmation tests for gas X and Y?  
*Antara berikut yang manakah ujian pengesahan benar untuk gas X dan Y?*

	Gas X	Gas Y
A	Lime water turns chalky <i>Air kapur menjadi keruh</i>	Red litmus paper turns blue <i>Kertas litmus merah bertukar biru</i>
B	A glowing wooden splinter is ignited <i>Kayu uji berbara menyala</i>	A pop sound is produced with a lighted splinter <i>Bunyi pop dihasilkan dengan kayu uji menyala</i>
C	A glowing wooden splinter is ignited <i>Kayu uji berbara menyala</i>	Lime water turns chalky <i>Air kapur menjadi keruh</i>
D	A lighted splinter is put out <i>Kayu uji menyala padam</i>	A glowing wooden splinter is ignited <i>Kayu uji berbara menyala</i>

18. Figure 12 shows a syringe being used to take some water from a beaker.  
Rajah 12 menunjukkan picagari yang digunakan untuk mengambil air daripada bikar.

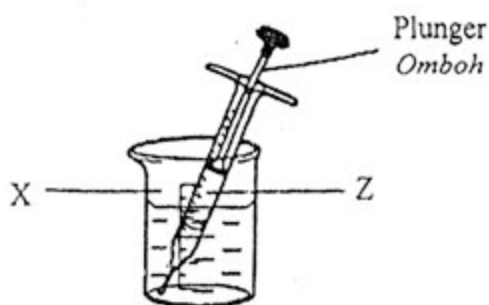


Figure 12  
Rajah 12

What will happen if the plunger is pulled upwards?  
Apakah yang berlaku apabila omboh ditarik ke atas?

- A Air pressure at point X increases  
Tekanan udara pada titik X meningkat
- B Air pressure at point Z increases  
Tekanan udara pada titik Z meningkat
- C Air pressure at point Z decreases  
Tekanan udara pada titik Z berkurang
- D Air pressure at point X and Z are equal  
Tekanan udara pada titik X dan Z adalah sama
19. Figure 13 shows a boy climbing up a wall.  
Rajah 13 menunjukkan seorang budak lelaki sedang memanjat dinding.



Figure 13  
Rajah 13

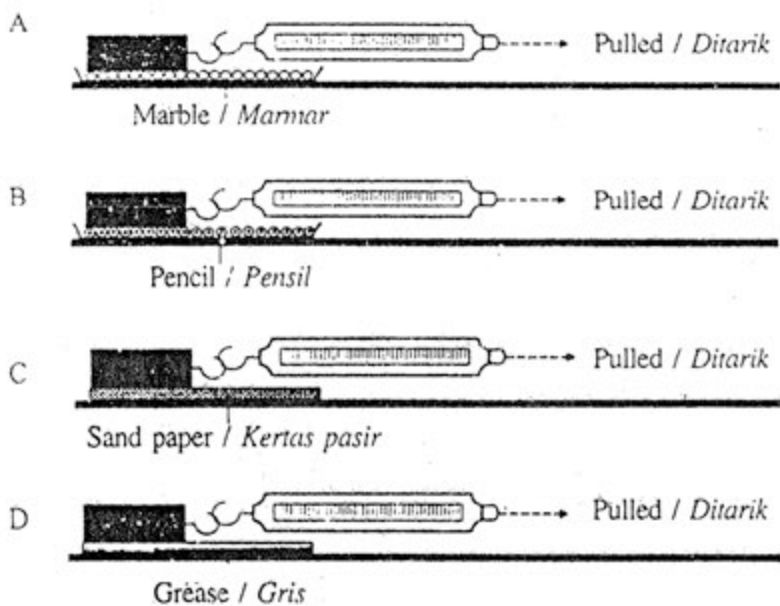
The boy manages to climb 400 cm in 8 seconds. If the power of the boy is 240 W, calculate the body weight of the boy.

Budak lelaki itu dapat memanjat setinggi 400 cm dalam masa 8 saat. Jika kuasa budak itu ialah 240 W, kirakan berat badan budak itu.

- A 120 N  
B 270 N  
C 390 N  
D 480 N

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20. Which of the following is an **advantage** of friction?  
*Antara berikut yang manakah merupakan kelebihan geseran?*
- A Helps ships to float on water.  
*Membantu kapal terapung di atas air*
- B Causes machines to produce heat.  
*Menyebabkan mesin mengeluarkan haba*
- C Allows vehicles to move on the road.  
*Membenarkan pergerakan kenderaan di atas jalanraya.*
- D Helps boats to move effortlessly in water.  
*Mengurangkan pergerakan bot di atas air.*
21. Which of the following activities uses the greatest force?  
*Antara berikut yang manakah menggunakan daya yang sangat besar?*



22. Figure 14 shows a wild orchid plant.  
*Rajah 14 menunjukkan satu tumbuhan orkid liar.*



Figure 14  
 Rajah 14

What is the support system of the plant?  
*Apakah sistem sokongan tumbuhan tersebut?*

- |                                      |   |
|--------------------------------------|---|
| A Tendrils<br><i>Sulur paut</i>      | C Buttress roots<br><i>Akar banir</i>   |
| B Prop roots<br><i>Akar sokongan</i> | D Clasping roots<br><i>Akar cengkam</i> |

23. Figure 15 shows four cylinders P, Q, R and S.  
Rajah 15 menunjukkan empat silinder P, Q, R and S.

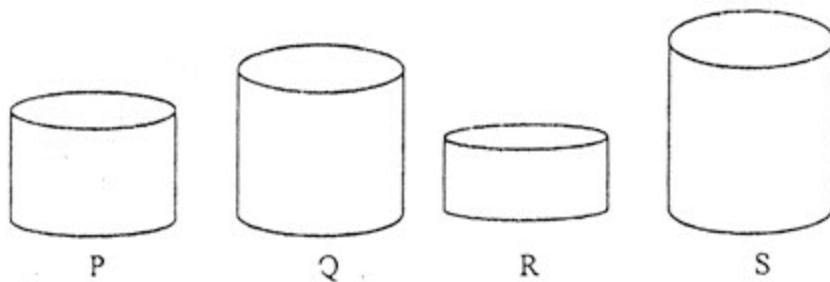


Figure 15  
Rajah 15

Based on the picture above, arrange the cylinder in ascending order of stability.  
Berdasarkan rajah di atas, susun silinder mengikut susunan kestabilan secara menaik.

- A P, Q, R, S  
B S, Q, P, R  
C R, P, Q, S  
D Q, P, S, R
24. Figure 16 shows a simple machine.  
Rajah 16 menunjukkan sebuah mesin ringkas.

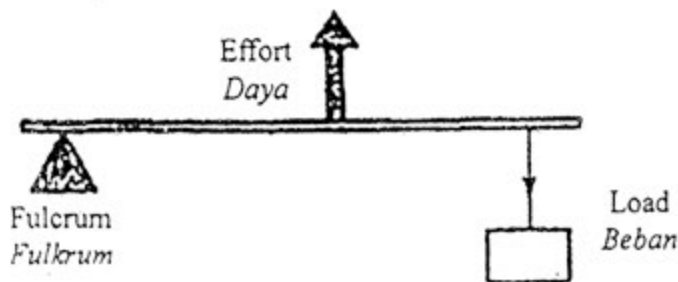


Figure 16  
Rajah 16

Which of the following has the same class of lever shown in figure 16?  
Antara berikut yang manakah menunjukkan kelas sistem tuas yang sama seperti Rajah 16?

- A Scissors  
Gunting  
B See-saw  
Jongkang-jongket  
C Paper cutter  
Pemotong kertas  
D Broom  
Penyapu

25. Figure 17 shows a scissor used to cut a piece of hair.  
*Rajah 17 menunjukkan gunting digunakan untuk memotong sehelai rambut.*

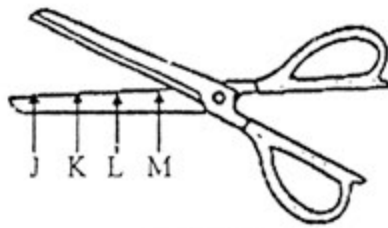


Figure 17  
*Rajah 17*

J, K, L and M are four different positions of the hair. Where the hair should be placed in order to be cut with the least effort?

*J, K, L dan M merupakan empat kedudukan rambut yang berlainan. Antara berikut di manakah rambut itu harus diletak supaya daya yang kurang sekali digunakan?*

- A Position J  
*Kedudukan J*  
 B Position K  
*Kedudukan K*  
 C Position L  
*Kedudukan L*  
 D Position M  
*Kedudukan M*
26. How much work was done if a force of 10 N is applied to pull the nail as shown in Figure 18?  
*Berapakah kerja yang dilakukan jika daya 10 N digunakan untuk menarik paku yang ditunjukkan dalam Rajah 18?*

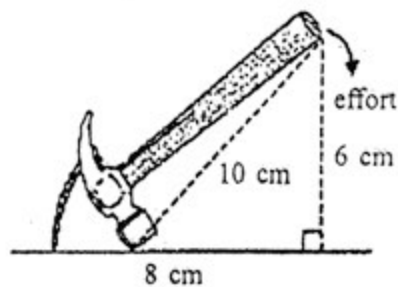


Figure 18  
*Rajah 18*

- A 48 J  
 B 60 J  
 C 80 J  
 D 100 J

27. The Figure 19 shows an alveolus which surrounded by blood capillaries. The oxygen in the alveolus moves to the surrounding blood capillaries.  
*Rajah 19 menunjukkan alveolus yang dikelilingi oleh kapilari darah. Oksigen dalam alveolus bergerak memasuki kapilari darah.*

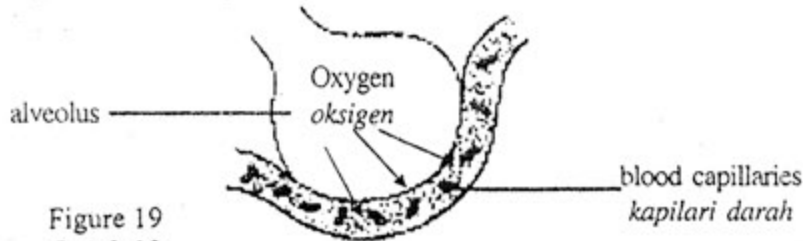


Figure 19  
*Rajah 19*

What process is involved?  
*Apakah proses yang terlibat?*

- A Diffusion  
*Resapan*  
 B Absorbtion  
*Serapan*  
 C Exhalation  
*Hembus nafas*  
 D Transportation.  
*Peredaran*
28. Figure 20 shows a balsam plant. The balsam plant was put into the beaker of coloured water after an hour. A cross sectional cut of the root and the stem of the plant are observed.  
*Rajah 20 menunjukkan pokok keembung. Pokok keembung itu diletakkan di dalam bikar yang mengandungi air berwarna. Selepas satu jam, keratan rentas akar dan batang pokok tersebut diperhatikan*

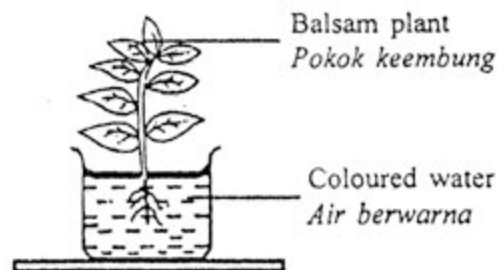
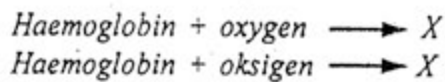


Figure 20  
*Rajah 20*

The parts that are seen coloured in the root and stem are ...  
*Bahagian yang berwarna pada batang dan akar adalah*

- A Xylem tissues  
*Tisu kambium*  
 B Phloem tissues  
*Tisu floem*  
 C Cambium tissues  
*Tisu xylem*  
 D Epidermis tissues  
*Tisu epidermis*

29. The equation below shows the formation of X.  
*Persamaan di bawah menunjukkan pembentukan X.*



What colour is X?  
*Apakah warna X?*

- A. Dark blue  
*Biru gelap*
  - B. Bright blue  
*Biru terang*
  - C. Bright red  
*Merah terang*
  - D. Dark red  
*Merah gelap*
30. Figure 21 shows the human lungs  
*Rajah 21 di bawah menunjukkan peparu manusia.*

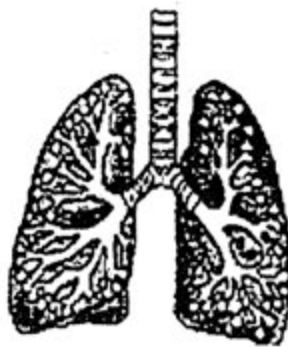


Figure 21  
*Rajah 21*

What are the waste products excreted by the organ?  
*Apakah bahan buangan yang dikumuhkan oleh organ tersebut?*

- A. Carbon dioxide  
*Karbon dioksida*
- B. Carbon dioxide and urea  
*Karbon dioksida dan urea*
- C. Carbon dioxide and water vapour  
*Karbon dioksida dan wap air*
- D. Carbon dioxide, water vapour and urea  
*Karbon dioksida, wap air dan urea*

31. Figure 22 shows the schematic diagram of human reproduction.  
Rajah 22 di bawah menunjukkan rajah skema bagi pembiakan manusia

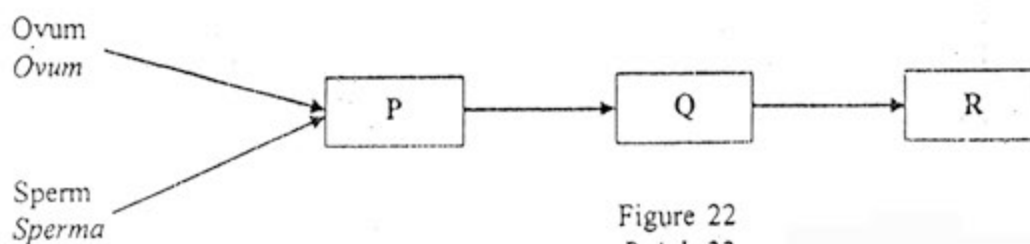


Figure 22  
Rajah 22

- Which of the following represent P, Q and R?  
Antara berikut yang manakah mewakili P, Q and R?

	P	Q	R
A	Zygote Zigot	Embryo Embrio	Foetus Fetus
B	Embryo Embrio	Foetus Fetus	Zygote Zigot
C	Foetus Fetus	Zygote Zigot	Embryo Embrio
D	Zygote Zigot	Foetus Fetus	Embryo Embrio

32. Figure 23 shows the dicotyledonous seed.  
Rajah 23 di bawah menunjukkan biji benih dikotiledon.

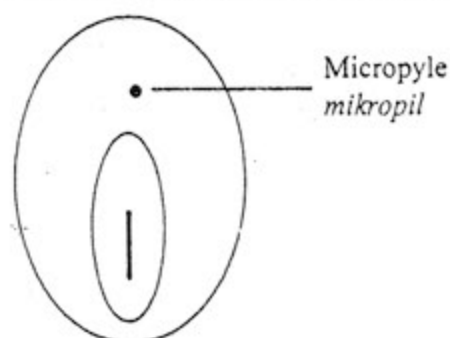
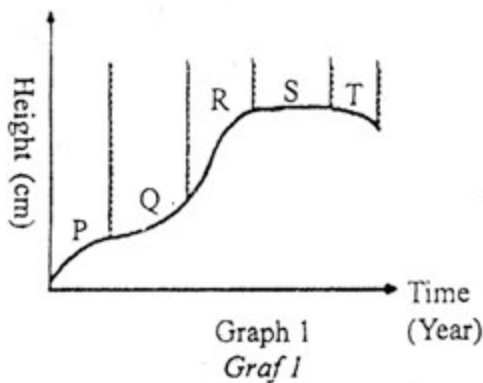


Figure 23  
Rajah 23

- What is the function of micropyle?  
Apakah fungsi mikropil?

- A store food  
Menyimpan makanan
- B Protect the seed  
Melindungi biji
- C Attach the seed to the fruit  
Melekatkan biji ke buah
- D Enable the water and air to enter the seed  
Membolehkan air dan udara memasuki biji.

33. Graph 1 shows the human growth curve  
*Graf 1 menunjukkan graf pertumbuhan manusia*



Which of the following stages represent rapid growth?  
*Antara berikut yang manakah menunjukkan pertumbuhan pesat?*

- |   |                           |   |                           |
|---|---------------------------|---|---------------------------|
| A | P only<br><i>P sahaja</i> | C | P and Q<br><i>P dan Q</i> |
| B | Q only<br><i>Q sahaja</i> | D | P and R<br><i>P dan R</i> |
34. What are the elements found in zinc carbonate?  
*Apakah unsur-unsur yang hadir dalam zink karbonat?*
- |   |  |   |  |
|---|--|---|--|
| A | Zinc and carbon<br><i>Zink dan karbon</i>      | C | Zinc and carbon dioxide<br><i>Zink dan karbon dioksida</i> |
| B | Zinc and carbonate<br><i>Zink dan karbonat</i> | D | Zinc, carbon and oxygen<br><i>Zink, karbon dan oksigen</i> |
35. Figure 24 shows the fractional distillation of crude oil  
*Rajah 24 menunjukkan penyulingan berperingkat minyak mentah.*

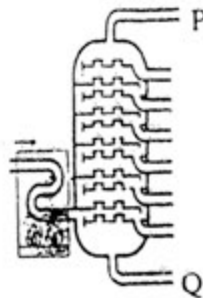


Figure 24  
Rajah 24

What are the use of the products obtained in fraction P and Q?  
*Apakah kegunaan hasil yang diperolehi daripada pecahan P dan Q?*

- |   |  |
|---|--|
| A | As lubricant and cooking gas<br><i>Sebagai pelincir dan gas memasak</i>                                    |
| B | As cooking gas and tar for road<br><i>Sebagai gas memasak dan tar untuk jalan</i>                          |
| C | Fuel for vehicles and tar for road<br><i>Sebagai bahan api kenderaan dan tar untuk jalan</i>               |
| D | For making plastics and fuel for vehicles.<br><i>Sebagai bahan membuat plastic dan bahan api kenderaan</i> |

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36. Figure 25 shows a wire passing through the middle of a cardboard.  
*Rajah 25 menunjukkan seutas dawai melalui tengah kadbod.*

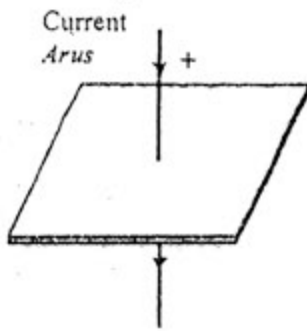


Figure 25  
*Rajah 25*

The current is passed through the wire. Iron filings are sprinkled on the cardboard around the wire and then the cardboard is gently tapped. What is the shape and direction of the magnetic field?

*Arus dilalukan menerusi dawai itu. Serbuk besi ditabur ke atas kadbod yang mengelilingi dawai dan kemudian kadbod tersebut dijentik secara perlahan-lahan. Apakah bentuk dan arah medan magnet?*

	Shape and direction of magnetic field <i>Bentuk dan arah medan magnet</i>
A	
B	
C	
D	

[Lihat sebelah  
 SULIT

