

# SPM EXAMINATION PAPER 2017

## PAPER 1

Time: 1 hour and 15 minutes

**Instructions:** This question paper consists of 50 questions. Answer all questions.

**Arahan:** Kertas peperiksaan ini mengandungi 50 soalan. Jawab semua soalan.

- 1 Which of the following is the component of the central nervous system?

*Antara yang berikut, yang manakah komponen sistem saraf pusat?*

- A Brain  
*Otak*
- B Cranium  
*Kranium*
- C Spinal nerve  
*Saraf spina*
- D Somatic nerve  
*Saraf somatik*

- 2 Diagram 1 shows a reflex arc.

*Rajah 1 menunjukkan satu arka refleks.*

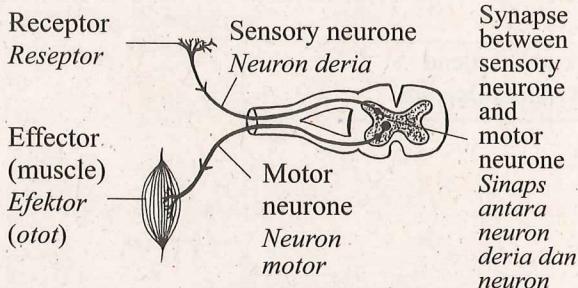


Diagram 1  
*Rajah 1*

What is the action involved?

*Apakah tindakan yang terlibat?*

- A Knee-jerk  
*Sentakan lutut*
- B Kicking a ball  
*Menendang bola*
- C Sneezing  
*Bersin*
- D Dancing  
*Menari*

- 3 What is the structure that allows the body to detect body posture without looking?

*Apakah struktur yang membolehkan badan mengesan postur badan tanpa melihat?*

- |                                  |  |
|----------------------------------|--|
| A Skin<br><i>Kulit</i>           | C Proprioceptors<br><i>Reseptor regang</i>     |
| B Cerebellum<br><i>Serebelum</i> | D Medulla oblongata<br><i>Medula oblongata</i> |

- 4 Diagram 2 shows a woman's endocrine system who suffered cancer at gland X.

*Rajah 2 menunjukkan sistem endokrin seorang wanita yang telah menghidap penyakit kanser di kelenjar X.*

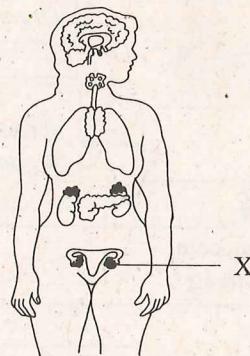


Diagram 2  
*Rajah 2*

What is the possibility that will happen to the woman?

*Apakah kemungkinan yang akan berlaku pada wanita tersebut?*

- A Increased blood glucose level  
*Aras glukosa darah meningkat*
- B Higher metabolism rate  
*Kadar metabolisme lebih tinggi*
- C Stunted growth  
*Pertumbuhan terbantut*
- D Menstrual cycle affected  
*Kitar haid terganggu*

- 5 Diagram 3 shows a situation faced by a student before an examination.

Rajah 3 menunjukkan satu situasi yang dihadapi oleh seorang pelajar sebelum menghadapi peperiksaan.



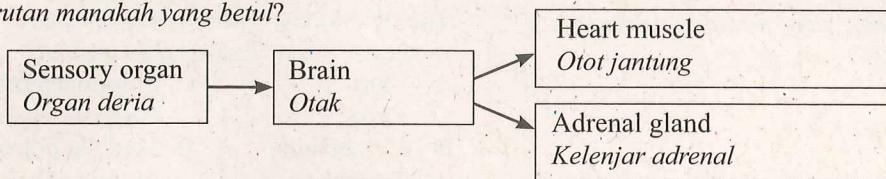
Diagram 3

Rajah 3

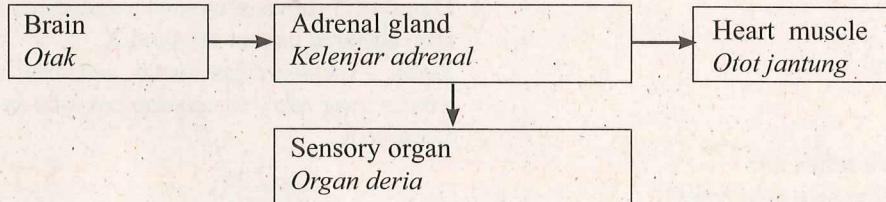
Which sequence is correct?

Urutan manakah yang betul?

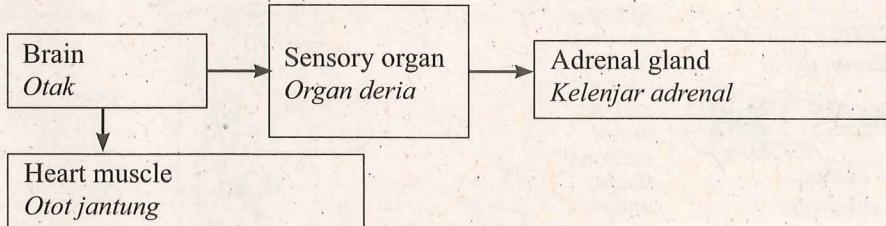
A



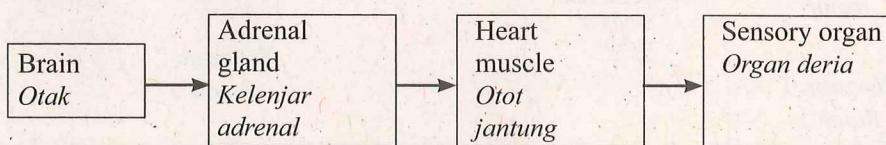
B



C



D



- 6 What is the internal factor that can affect the mind?

Apakah faktor dalaman yang boleh mempengaruhi minda?

- A Work pressure  
*Tekanan kerja*
- B Family problem  
*Masalah keluarga*

- C Traffic congestion  
*Kesesakan lalu lintas*
- D Drug consumption  
*Pengambilan dadah*

- 7 Diagram 4 shows different stages in a cell division.

Rajah 4 menunjukkan beberapa peringkat yang berbeza dalam pembahagian sel.

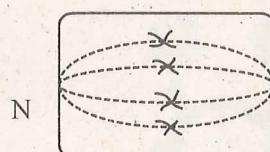
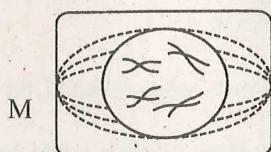
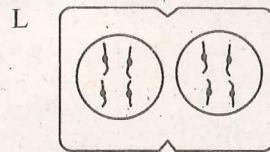
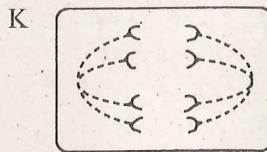


Diagram 4

Rajah 4

Which is the correct sequence?

Susunan manakah yang betul?

- A L, N, K, M  
B M, K, N, L

- C M, N, K, L  
D N, L, M, K

- 8 Diagram 5 shows the schematic diagram of inheritance in human beings.

Rajah 5 menunjukkan rajah skema perwarisan bagi manusia.

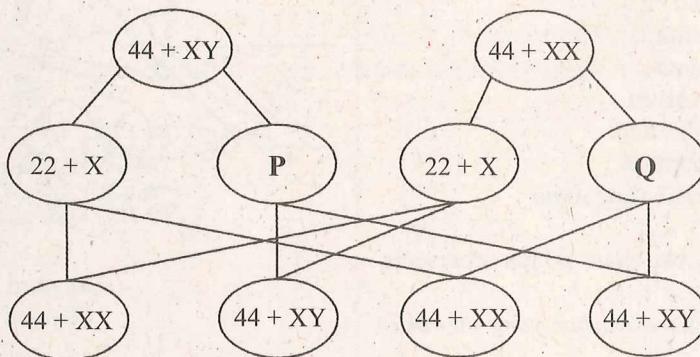


Diagram 5

Rajah 5

What are P and Q?

Apakah P dan Q?

	P	Q
A	22 + Y	22 + Y
B	22 + Y	22 + X
C	22 + X	22 + Y
D	22 + X	22 + X

- 9 Diagram 6 shows the process involved in the formation of twins.

Rajah 6 menunjukkan proses yang terlibat dalam pembentukan kembar.

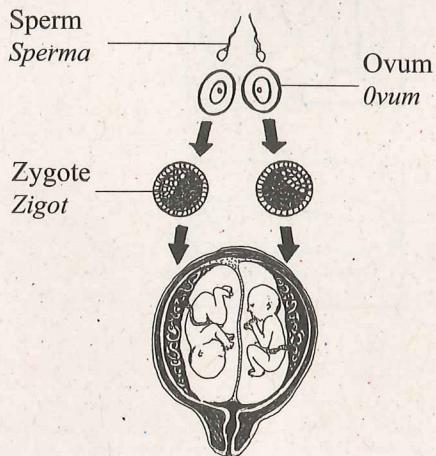


Diagram 6  
Rajah 6

Which of the following is true about the twins?  
Antara yang berikut, yang manakah benar tentang kembar tersebut?

- A Identical faces  
*Wajah yang sama*
- B Sharing a placenta  
*Berkongsi plasenta*
- C Two ovums involved  
*Dua ovum yang terlibat*
- D Same genetic content  
*Kandungan genetik yang sama*

- 10 Diagram 7 shows a bar chart which represents a type of variation.

Rajah 7 menunjukkan carta bar yang mewakili sejenis variasi.

Number of students  
Bilangan murid

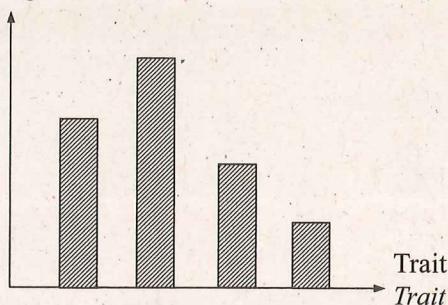


Diagram 7  
Rajah 7

Which trait is represented by the bar chart?

Trait manakah yang diwakili oleh carta bar itu?

- A Height  
*Ketinggian*
- B Skin colour  
*Warna kulit*
- C Body weight  
*Berat badan*
- D Blood group  
*Kumpulan darah*

- 11 Diagram 8 shows a man stranded on a small island.

Rajah 8 menunjukkan seorang lelaki terdampar di sebuah pulau kecil.

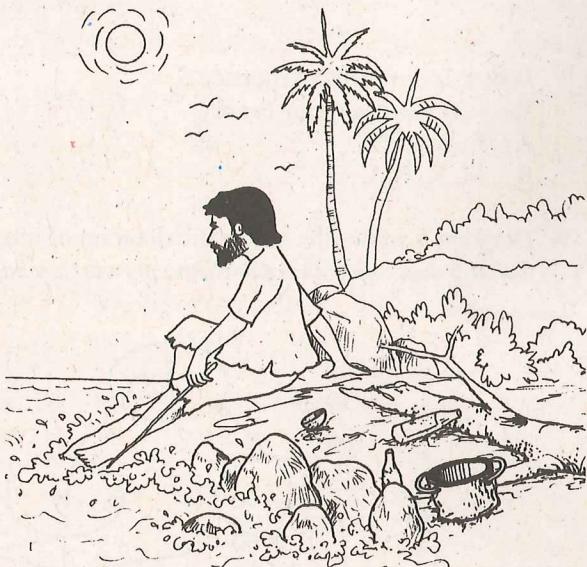


Diagram 8  
Rajah 8

If you were in the situation above, with the knowledge of science, suggest what you would do to get drinking water.

Jika anda berada dalam situasi di atas, dengan pengetahuan sains, cadangkan apa anda perlu lakukan untuk mendapatkan air minuman.

- A Dig a well  
*Menggali telaga*
- B Drink sea water  
*Minum air laut*
- C Filter sea water with sand  
*Menapis air laut dengan menggunakan pasir*
- D Sea water is boiled and vapour is cooled  
*Air laut dididihkan dan wapnya disejukkan*

- 12 Diagram 9 shows the structure of atom X.

Rajah 9 menunjukkan struktur bagi atom X.

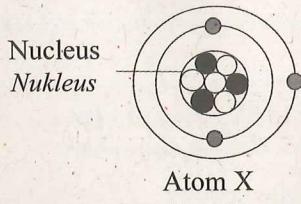


Diagram 9

Rajah 9

Which of the following is true about neutron?

Antara yang berikut, yang manakah benar mengenai neutron?

- A Neutron moves around the nucleus  
Neutron bergerak mengelilingi nukleus
- B Neutron is located in the nucleus.  
Neutron terletak di dalam nukleus
- C Atom X has three neutrons.  
Atom X mempunyai tiga neutron
- D Neutron is positively charged  
Neutron berasas positif

- 13 Diagram 10 shows an element in the Periodic Table.

Rajah 10 menunjukkan satu unsur dalam Jadual Berkala.

26	Fe
56	Ferum

Diagram 10

Rajah 10

What is the number of electrons of the atom?

Berapakah bilangan elektron bagi atom tersebut?

- A 26
- B 30
- C 56
- D 82

- 14 Diagram 11 shows an incomplete Periodic Table.

Rajah 11 menunjukkan Jadual Berkala yang tidak lengkap.

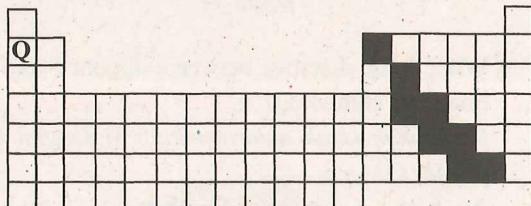


Diagram 11

Rajah 11

What is the characteristic of Q?

Apakah ciri Q?

- A Low melting point  
Takat lebur yang rendah
- B Good heat insulator  
Penebat haba yang baik
- C Able to conduct electricity  
Boleh mengkonduksikan elektrik
- D Gaseous state at room temperature  
Berkeadaan gas pada suhu bilik

- 15 A man lives in a swampy area.

What is the process to obtain pure water from the area?

Seorang lelaki tinggal di kawasan berpaya.

Apakah proses untuk mendapatkan air tulen dari kawasan tersebut?

- A Filtration  
Penurasan
- B Crystallisation  
Penghabluran
- C Neutralisation  
Peneutralan
- D Distillation  
Penyulingan

- 16 Diagram 12 shows an experiment to study the heat changes in a reaction.

Rajah 12 menunjukkan suatu eksperimen untuk mengkaji perubahan haba dalam suatu tindak balas.

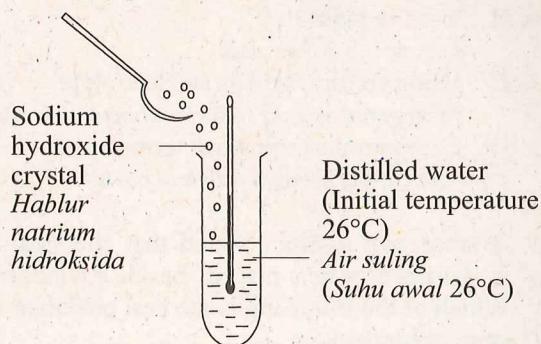


Diagram 12

Rajah 12

What is the possible final temperature of the reaction?

Apakah kemungkinan suhu akhir tindak balas tersebut?

- A 10°C
- B 23°C
- C 26°C
- D 40°C

- 17 Diagram 13 shows a reaction between metal and water.

Rajah 13 menunjukkan satu tindak balas antara logam dan air.

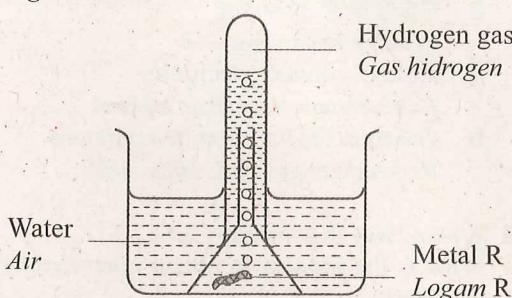


Diagram 13

Rajah 13

What is metal R?

Apakah logam R?

- |                      |                    |
|----------------------|--------------------|
| A Calcium<br>Kalsium | C Copper<br>Kuprum |
| B Zinc<br>Zink       | D Tin<br>Timah     |

- 18 Which of the following is true about acid-lead accumulators?

Antara yang berikut, yang manakah benar tentang akumulator asid plumbum?

- |   |
|---|
| A Small size<br>Saiz kecil  |
| B Used in radio<br>Digunakan dalam radio  |
| C Using sulfuric acid as an electrolyte<br>Menggunakan asid sulfurik sebagai elektrolit |
| D Carbon rod as a positive terminal<br>Rod karbon sebagai terminal positif              |

- 19 A laboratory assistant found that chemical R is damaged when placed beside a window. Which of the following is the best container to store chemical R?

Pembantu makmal mendapati bahan kimia R rosak apabila diletakkan di tepi tingkap. Antara yang berikut, yang manakah bekas terbaik untuk menyimpan bahan kimia R?

- |  |
|--|
| A Sealed plastic bottle<br>Botol plastik bertutup                            |
| B Sealed opaque glass bottle<br>Botol kaca legap bertutup                    |
| C Sealed oil-coated plastic bottle<br>Botol plastik bertutup dilapisi minyak |
| D Sealed transparent glass bottle<br>Botol kaca lutsinar bertutup            |

- 20 The following information shows the characteristics of the radioactive radiation Q. Maklumat berikut menunjukkan ciri-ciri sinaran radioaktif Q.

- Speed equal to the speed of light  
Kelajuan sama dengan laju cahaya
- High penetration power  
Kuasa penembusan sangat tinggi
- Ionising effect is very weak  
Kuasa pengionan sangat lemah

What is Q?

Apakah Q?

- |  |
|--|
| A Alpha ray<br>Sinaran alfa            |
| B Beta ray<br>Sinaran beta             |
| C Gamma ray<br>Sinaran gama            |
| D Ultraviolet ray<br>Sinaran ultraungu |

- 21 Diagram 14 shows two students, P and Q standing in front of a plane mirror.

Rajah 14 menunjukkan dua orang pelajar, P dan Q berdiri di hadapan sebuah cermin satah.

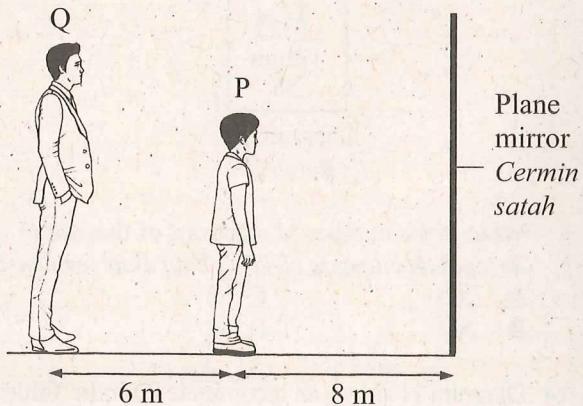


Diagram 14

Rajah 14

What is the distance between student P and the image of student Q?

Berapakah jarak antara pelajar P dengan imej pelajar Q?

- |        |        |
|--------|--------|
| A 6 m  | C 16 m |
| B 14 m | D 22 m |

- 22 Diagram 15 shows a ray diagram of an optical device.  
*Rajah 15 menunjukkan gambar sinar bagi satu alat optik.*

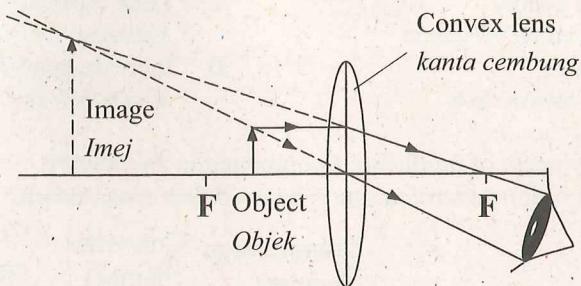


Diagram 15  
*Rajah 15*

Which of the optical devices produces the image above?

*Apakah alat optik yang menghasilkan imej di atas?*

A Magnifying glass

*Kanta pembesar*

B Microscope

*Mikroskop*

C Telescope

*Teleskop*

D Camera

*Kamera*

- 23 What is the process of the formation of a rainbow?

*Apakah proses pembentukan pelangi?*

A Light addition

*Penambahan cahaya*

B Light dispersion

*Penyebaran cahaya*

C Light scattering

*Penyerakan cahaya*

D Light subtraction

*Penolakan cahaya*

What is the colour of light P?

*Apakah warna bagi cahaya P?*

C Yellow

*Kuning*

A Green

*Hijau*

B Red

*Merah*

D Magenta

*Magenta*

- 24 Diagram 16 shows a red light passing through two coloured filters.

*Rajah 16 menunjukkan cahaya merah yang melalui dua turas warna.*

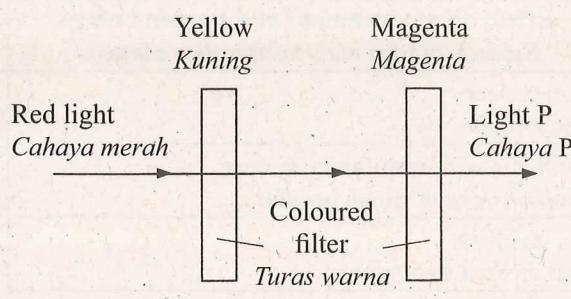


Diagram 16  
*Rajah 16*

- 25 Diagram 17 shows a mixing of pigment colours.

*Rajah 17 menunjukkan percampuran warna pigmen.*

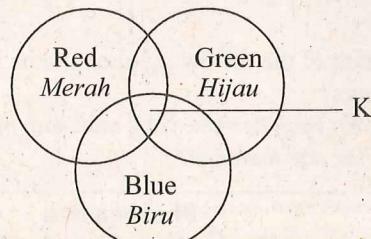


Diagram 17

*Rajah 17*

What is the colour of K?

*Apakah warna K?*

C White

*Putih*

A Green

*Hijau*

B Purple

*Ungu*

D Orange

*Jingga*

\* Tiada jawapan untuk soalan ini.

26 What is the importance of colour to animals?

*Apakah kepentingan warna bagi haiwan?*

- A Attract the opposite gender

*Menarik perhatian jantina berlainan*

- B Produce more feathers

*Menghasilkan lebih banyak bulu*

- C Look more beautiful

*Kelihatan lebih cantik*

- D Increase appetite

*Menambah selera makan*

27 Diagram 18 shows the process of producing a compound in an industry.

*Rajah 18 menunjukkan proses penghasilan satu sebatian dalam suatu industri.*

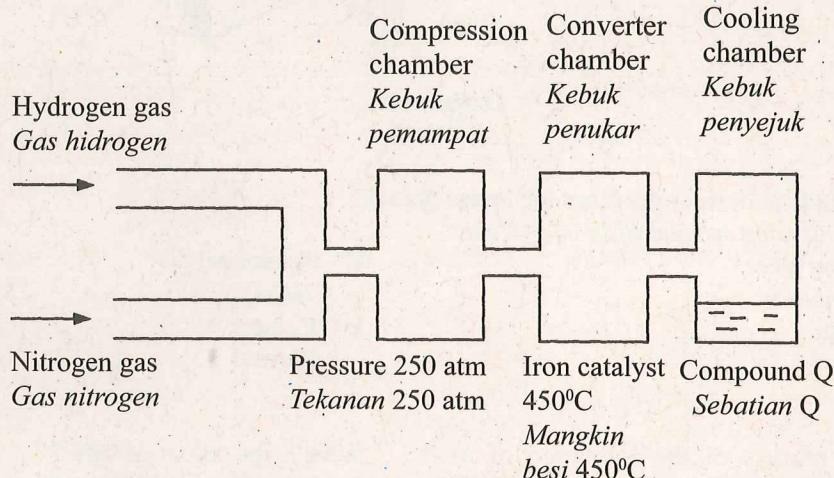


Diagram 18

*Rajah 18*

What is compound Q?

*Apakah sebatian Q?*

- A Nitrate

*Nitrat*

- B Ammonia

*Ammonia*

- C Nitric acid

*Asid nitrik*

- D Sulphuric acid

*Asid sulfurik*

28 Which of the following phenomena is matched correctly to their effects on the environment and human beings?

*Antara yang berikut, yang manakah merupakan padanan fenomena yang betul dengan kesan terhadap alam sekitar dan manusia?*

	<b>Phenomenon Fenomenon</b>	<b>Effect on environment and human beings Kesan terhadap alam sekitar dan manusia</b>
A	Greenhouse effect <i>Kesan rumah hijau</i>	Skin cancer <i>Kanser kulit</i>
B	Haze <i>Jerebu</i>	Problems with respiratory system <i>Masalah dengan sistem penafasan</i>
C	Acid rain <i>Hujan asid</i>	Sea level rises <i>Aras air laut meningkat</i>
D	Ozone layer depletion <i>Penipisan lapisan ozon</i>	Corrosion of man-made structures <i>Kakisan struktur buatan manusia</i>

- 29 Diagram 19 shows a type of microorganism.  
*Rajah 19 menunjukkan sejenis mikroorganisma.*



Diagram 19  
*Rajah 19*

How does this microorganism reproduce?  
*Bagaimakah mikroorganisma ini membiak?*

- A Budding  
*Pertunasan*
- B Binary fission  
*Belahan dedua*
- C Conjugation  
*Konjugasi*
- D Infect host cells  
*Menjangkiti sel perumah*

- 30 Diagram 20 shows a jar of processed vegetable.  
*Rajah 20 menunjukkan sebalang sayuran yang diproses.*



Diagram 20  
*Rajah 20*

What is the factor that helps the vegetable to last longer?

*Apakah faktor yang membantu sayuran itu tahan lama?*

- A Temperature  
*Suhu*
- B Nutrient  
*Nutrien*
- C pH value  
*Nilai pH*
- D Humidity  
*Kelembapan*

- 31 Choose the correct match between the disease and its method of transmission.

*Pilih padanan yang betul tentang penyakit dan kaedah penyebarannya.*

	Disease <i>Penyakit</i>	Method of transmission <i>Kaedah penyebaran</i>
A	Malaria <i>Malaria</i>	Mosquito <i>Nyamuk</i>
B	Ringworm <i>Kurap</i>	Food <i>Makanan</i>
C	Gonorrhea <i>Gonorea</i>	Contaminated water <i>Air tercemar</i>
D	Tuberculosis <i>Tuberkulosis</i>	Housefly <i>Lalat</i>

- 32 Diagram 21 shows a graph of a type of immunity.  
*Rajah 21 menunjukkan graf bagi satu jenis keimunan.*

Level of antibody  
*Aras antibodi*

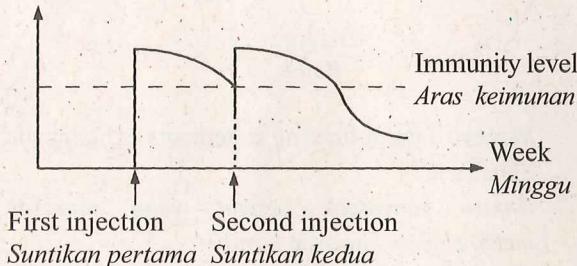


Diagram 21  
*Rajah 21*

What is the type of the immunity?

*Apakah jenis keimunan ini?*

- A Natural passive immunity  
*Keimunan pasif semulajadi*
- B Artificial passive immunity  
*Keimunan pasif buatan*
- C Natural active immunity  
*Keimunan aktif semulajadi*
- D Artificial active immunity  
*Keimunan aktif buatan*

- 33 Diagram 22 shows the result of an experiment to study the effect of an antibiotic on the growth of bacteria.

Rajah 22 menunjukkan keputusan eksperimen untuk mengkaji kesan antibiotik terhadap pertumbuhan bakteria.

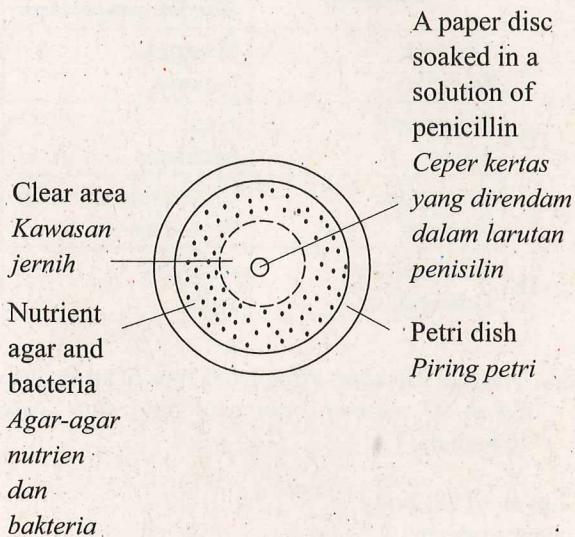


Diagram 22

Rajah 22

Which of the following statements explains the clear area?

Antara pernyataan berikut, yang manakah menerangkan kawasan jernih?

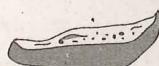
- A Area where bacteria does not grow  
Kawasan yang tidak ditumbuhinya oleh bakteria
- B Area where bacteria is not placed  
Kawasan yang tidak diletakkan bakteria
- C The reaction area of penicillin disc  
Kawasan tindakan cepur penisilin
- D Area without nutrient  
Kawasan yang tiada nutrien

- 34 Diagram 23 shows the food and calorie values as displayed in a restaurant.

Rajah 23 menunjukkan makana dan nilai kalori yang dipamerkan dalam sebuah restoran.



A bowl of noodle soup = 380 kcal  
Semangkuk mee sup = 380 kcal



Slice of papaya = 30 kcal  
Sepotong betik = 30 kcal



A glass of iced milo = 150 kcal  
Segelas milo ais = 150 kcal



A glass of plain water = 0 kcal  
Segelas air kosong = 0 kcal

Diagram 23

Rajah 23

Which of the following food sets has the lowest calorific value?

Antara set makana yang berikut, yang manakah mempunyai nilai kalori yang paling rendah?

- A A bowl of noodle soup and a glass of iced milo  
Semangkuk mee sup dan segelas milo ais
- B A bowl of noodle soup, a slice of papaya and a glass of plain water  
Semangkuk mee sup, sepotong betik dan segelas air kosong
- C A bowl of noodle soup and a glass of plain water  
Semangkuk mee sup dan segelas air kosong
- D A bowl of noodle soup, a glass of iced milo and a slice of papaya  
Semangkuk mee sup, segelas milo ais dan sepotong betik

35 What causes health problems to humans?

*Apakah yang menyebabkan masalah kesihatan kepada manusia?*

- A Irregular meal time

*Waktu makan yang tidak tetap*

- B Eat less but often

*Makan sedikit tetapi kerap*

- C Eat according to the food pyramid

*Makan mengikut piramid makaman*

- D Choose healthy food

*Memilih makanan yang berkhasiat*

36 Diagram 24 shows the food web in an oil palm plantation. It is found that the yield has decreased.

*Rajah 24 menunjukkan siratan makanan di dalam ladang kelapa sawit. Didapati bahawa hasilnya berkurangan.*

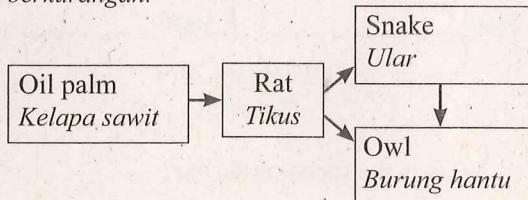


Diagram 24

Rajah 24

What is the best suggestion to solve this problem?

*Apakah cadangan yang terbaik untuk mengatasi masalah tersebut?*

- A Kill the snakes

*Membunuh ular*

- B Clean the farm

*Membersihkan kebun*

- C Increase the number of owls

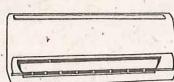
*Menambah bilangan burung hantu*

- D Increase the number of rats

*Menambah bilangan tikus*

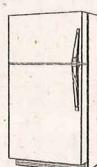
37 Diagram 25 shows two electrical appliances used at home.

*Rajah 25 menunjukkan dua barang elektrik yang digunakan di rumah.*



Air conditioner

Penyaman udara



Refrigerator

Peti sejuk

Diagram 25

Rajah 25

What is the pollutant produced from the usage of the above appliances?

*Apakah bahan pencemar yang terhasil daripada penggunaan barangang di atas?*

- A Oxygen

*Oksigen*

- B Carbon dioxide

*Karban dioksida*

- C Sulphur dioxide

*Sulfur dioksida*

- D Chlorofluorocarbon (CFC)

*Klorofluorokarbon (CFC)*

38 A student is assigned to produce ethanol but he has run out of sugar solution. Which of the following is the most suitable to replace the sugar solution?

*Seorang pelajar ditugaskan untuk menghasilkan etanol, tetapi dia telah kehabisan larutan gula.*

*Antara yang berikut, yang manakah paling sesuai menggantikan larutan gula?*

- A Cucumber

*Timun*

- C Eggplant

*Terung*

- B Chili

*Cili*

- D Pineapple

*Nanas*

39 The following information shows the stages in the extraction of palm oil.

*Maklumat berikut menunjukkan peringkat-peringkat dalam pengekstrakan minyak kelapa sawit.*

P - Digestion  
*Pencernaan*

Q - Purification  
*Penulenan*

R - Sterilisation  
*Pensterilan*

S - Extraction  
*Pengekstrakan*

Which sequence is correct?

*Urutan manakah yang betul?*

- A P, S, Q, R

- B P, R, S, Q

- C R, P, S, Q

- D R, P, Q, S

- 40 Diagram 26 shows the effect of substance R on latex.

Rajah 26 menunjukkan kesan bahan R terhadap lateks.

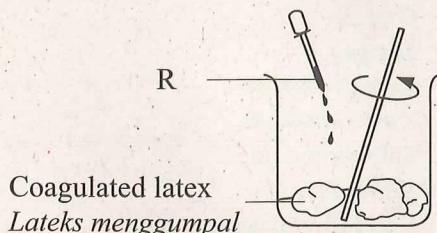


Diagram 26  
Rajah 26

What is R?

Apakah R?

- A Sulphur monoxide  
*Sulfur monoksida*
- B Etanoic acid  
*Asid etanoik*
- C Ammonia solution  
*Larutan ammonia*
- D Sodium hydroxide  
*Natrium hidroksida*

- 41 Diagram 27 shows an operational stage in a four-stroke petrol engine.

Rajah 27 menunjukkan satu peringkat operasi enjin petrol empat lejang.

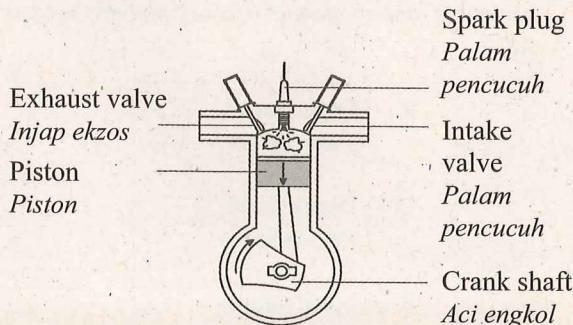


Diagram 27  
Rajah 27

What is the stage of the stroke?

Apakah peringkat lejang tersebut?

- A Exhaust stroke  
*Lejang ekzos*
- B Intake stroke  
*Lejang aruhan*

C Power stroke

*Lejang kuasa*

D Compression stroke

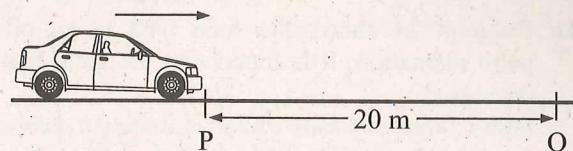
*Lejang mampatan*

- 42 Diagram 28 shows a toy car moving from P to Q.

Rajah 28 menunjukkan sebuah kereta mainan yang bergerak dari P ke Q.

Direction of motion

Arah gerakan



Time : 08 : 02 : 00 am  
Masa

Time : 08 : 02 : 04 am  
Masa

Diagram 28  
Rajah 28

What is the speed of the car?

$$\left[ \text{Speed} = \frac{\text{distance (m)}}{\text{time (s)}} \right]$$

Berapakah laju kereta itu?

$$\left[ \text{Laju} = \frac{\text{jarak (m)}}{\text{masa (s)}} \right]$$

- A  $5 \text{ m s}^{-1}$
- B  $16 \text{ m s}^{-1}$
- C  $24 \text{ m s}^{-1}$
- D  $80 \text{ m s}^{-1}$

- 43 Which of the following shoes produces the smallest pressure?

Antara yang berikut, kasut yang manakah menghasilkan tekanan yang paling rendah?

A



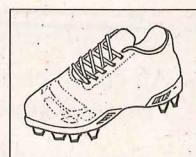
C



B



D



- 44 Diagram 29 shows a plasticine ball before and after it has been soaked into a eureka container which contains water to measure the weight of the plasticine ball.

Rajah 29 menunjukkan satu bola plastisin sebelum dan selepas direndam ke dalam bekas eureka yang mengandungi air untuk mengukur berat bola plastisin itu.

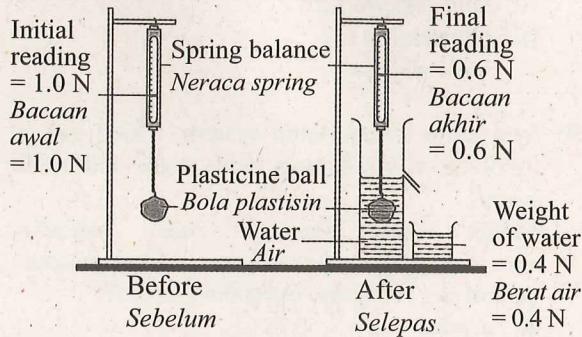


Diagram 29

Rajah 29

What is the upthrust that acted on the plasticine ball?

Berapakah daya tujah yang bertindak ke atas bola plastisin itu?

- A 0.4 N                      C 1.0 N
- B 0.6 N                      D 2.0 N

- 45 Diagram 30 shows a type of fruit.

Rajah 30 menunjukkan sejenis buah.

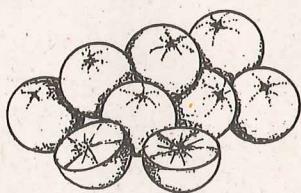


Diagram 30

Rajah 30

What is the best food processing method to make the fruits last longer?

Apakah kaedah pemprosesan makanan yang paling sesuai untuk menjadikan buah tersebut tahan lebih lama?

- A Freeze drying              C Freezing  
*Pengeringbekuan*              *Penyejukbekuan*
- B Cooling                      D Vacuum packaging  
*Pendinginan*                      *Pembungkusan vakum*

- 46 Diagram 31 shows an example of a food label. According to the Food Regulations 1985, the manufacturer is required to label the food correctly.

Rajah 31 menunjukkan contoh label makanan. Mengikut Peraturan-Peraturan Makanan 1985, pengeluar diwajibkan melabelkan makanan dengan betul.

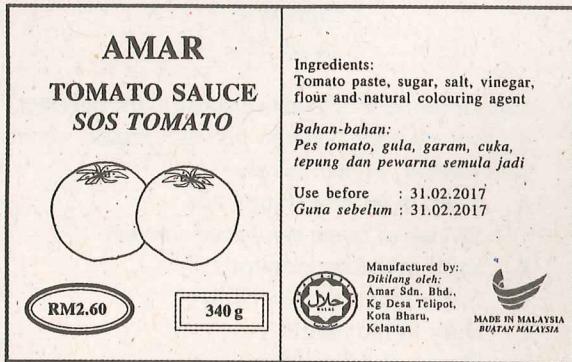


Diagram 31

Rajah 31

Based on the label above, what is the necessary information that is not stated?

Berdasarkan label di atas, apakah maklumat yang diperlukan tetapi tidak dinyatakan?

- A Halal sign  
*Tanda halal*
- B Price of the food  
*Harga makanan*
- C Nutrition value  
*Nilai nutrisi*
- D Name and address of manufacturer  
*Nama dan alamat pengilang*

- 47 Diagram 32 shows a type of process.

Rajah 32 menunjukkan satu jenis proses.

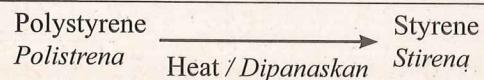


Diagram 32

Rajah 32

What is the process?

Apakah proses tersebut?

- A Distillation  
*Penyulingan*
- B Vulcanisation  
*Pem vulkanan*
- C Polymerisation  
*Pempolimeran*
- D Depolymerisation  
*Penyahpolimeran*

- 48 Diagram 33 shows a structure of a polymer.  
*Rajah 33 menunjukkan struktur sejenis polimer.*

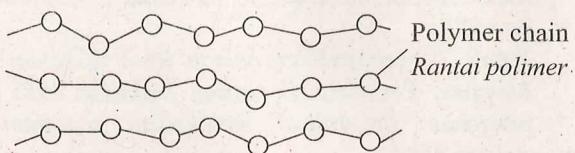


Diagram 33  
*Rajah 33*

What is the best method to dispose of the polymer?  
*Apakah kaedah yang paling sesuai untuk melupuskan polimer tersebut?*

- A Keep in garbage dump site  
*Simpan di tapak pelupusan sampah*
- B Burn in the incinerator  
*Bakar di dalam insinerator*
- C Bury in the jungle  
*Tanam di dalam hutan*
- D Throw into a river  
*Buang ke dalam sungai*

- 49 Diagram 34 shows a security guard using a walkie-talkie to communicate.  
*Rajah 34 menunjukkan seorang pengawal keselamatan yang menggunakan walkie-talkie untuk berhubung.*



Diagram 34  
*Rajah 34*

What type of wave is used by the walkie -talkie?  
*Apakah jenis gelombang yang digunakan oleh walkie-talkie tersebut?*

- A Microwaves  
*Gelombang mikro*
- B Radio waves  
*Gelombang radio*
- C Infrared ray  
*Sinar inframerah*
- D Ultraviolet ray  
*Sinar ultraungu*

- 50 In a radio transmission system, which part is involved in combining radio wave and audio wave?

*Dalam sistem pemancar radio, bahagian manakah yang terlibat dalam menggabungkan gelombang radio dan gelombang audio?*

- A Aerial  
*Aerial*
- B Amplifier  
*Amplifier*
- C Modulator  
*Modulator*
- D Microphone  
*Mikrofon*

**END OF QUESTION PAPER**  
**KERTAS PEPERIKSAAN TAMAT**