

1. What is the first step should be taking when an accident occurs during an experiment?
Apakah tindakan awal yang perlu diambil apabila berlaku kemalangan semasa menjalankan ujikaji?
 - A Handle the chemical spill by hand
Kendalikan tumpahan bahan kimia menggunakan tangan.
 - B Make the spill area as a restricted area
Jadikan Kawasan tumpahan sebagai kawasan larangan.
 - C Block spills from spreading using sand to form boundaries
Sekat tumpahan daripada merebak menggunakan pasir untuk membentuk sempadan
 - D Immediately inform the teacher or laboratory assistant in the event of any accident.
Seegera memberitahu guru atau pembantu makmal jika berlaku sebarang kemalangan

2. An officer from the state Education Department has come to your school to perform an audit on fire extinguishers
Sekolah anda telah didatangi oleh pegawai dari Jabatan Pendidikan Negeri untuk menjalankan audit ke atas alat pemadam kebakaran.

The following items are examined by the officer **except**....
Berikut ialah perkara yang diperiksa kecuali.....

 - A Expiry date of fire extinguishers
Tarikh luput pemadam kebakaran
 - B Types of fire extinguishers
Jenis pemadam kebakaran
 - C Number of fire extinguishers
Bilangan pemadam kebakaran
 - D Supplier of fire extinguishers
Pembekal pemadam kebakaran

3. Aman was having a meal with her family. During the meals, Aman's grandfather choking and having difficulties to breathe.
Aman sedang makan dengan ahli keluarganya. Semasa makan, datuk Aman tercekik dan mengalami kesukaran bernafas.

What is the first action of his father should take?
Apakah Langkah pertama yang perlu dilakukan oleh ayah Aman?

 - A Call a doctor
Menelefon doctor
 - B Call ambulance
Menelefon ambulan
 - C Perform CPR rescue
Melakukan CPR
 - D Perform Heimlich Manoeuvre technique
Melakukan Teknik Heimlich Manoeuvre

4. Why does a human pulse increase when doing vigorous activities?
Mengapa denyutan nadi manusia meningkat ketika membuat kerja-kerja yang lasak?
 - A The heart rate is increased as the heart pumps more blood throughout the body
Denyutan jantung meningkat kerana jantung mengepam lebih banyak darah ke seluruh badan.
 - B The blood in the body is flowing fast
Darah dalam badan mengalir laju

- C Increased body metabolism.
Metabolisme badan meningkat
- D A lot of energy is needed to carry on heavy work.
Banyak tenaga diperlukan bagi melakukan kerja-kerja berat.
5. The information below is about the characteristics of an alternative energy resource.
Maklumat di bawah adalah berkaitan dengan ciri-ciri sejenis sumber tenaga alternatif.
- Generated from waste material
Dijanakan daripada bahan buangan
 - Inconsistent supply
Bekalan yang tidak tetap

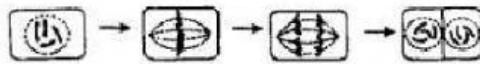
What is the energy source?

Apakah sumber tenaga itu?

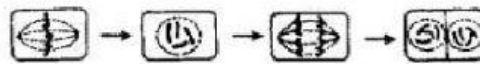
- A Biomass
Biojisim
- B Nuclear energy
Tenaga nuclear
- C Solar energy
Tenaga suria
- D Fossil fuels
Bahan api fosil
6. Which of the following socio-scientific issue can be related directly to the release of carbon dioxide by vehicles?
Antara isu sosiosaintifik berikut, yang manakah boleh dikaitkan secara langsung dengan pembebasan gas karbon dioksida oleh kenderaan?
- A Landslide
Tanah runtuh
- B Greenhouse effect
Kesan rumah hijau
- C Earthquake
Gempa bumi
- D Ozone layer depletion
Penipisan lapisan ozon

7. Which of the following is the **correct** sequence of stages of mitosis?
 Antara yang berikut yang manakah urutan peringkat mitosis yang **betul**?

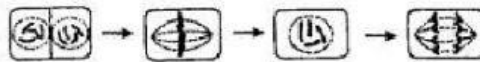
A



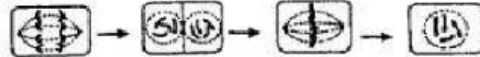
B



C



D



8. Which of the following inherited disease is related to gene mutation?
 Antara penyakit baka berikut, yang manakah berkaitan dengan mutasi gen?

- A Down syndrome
Sindrom Down
- B Turner syndrome
Sindrom Turner
- C Colour blindness
Buta warna
- D Polyploidy
Poliploidi

9. Which of the following animal has endoskeleton?
 Antara haiwan berikut, yang manakah mempunyai rangka dalam?

- A Jellyfish
Obor-obor
- B Cockroach
Lipas
- C Udang
Shrimp
- D Snake
Ular

10. Diagram 1 shows a graph of the growth curve for males and females
Rajah 1 menunjukkan graf lengkung pertumbuhan bagi lelaki dan perempuan.

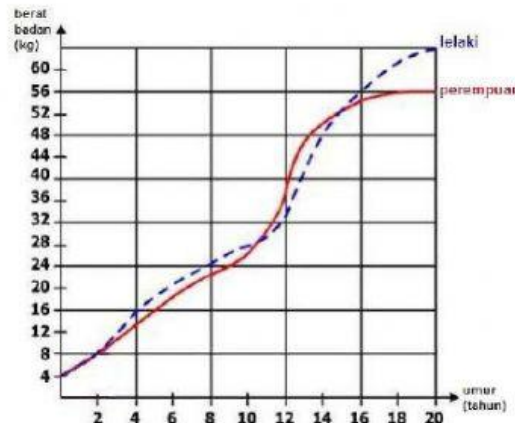
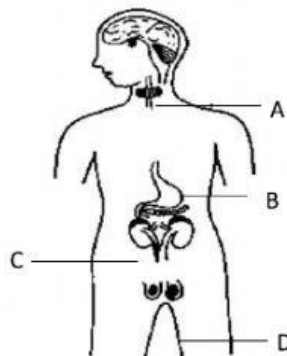


Diagram 1/ Rajah 1

Which statement **correctly** describes the growth curve shown?

Pernyataan yang manakah betul menerangkan tentang lengkung pertumbuhan yang ditunjukkan?

- A At the age of 3 – 13 years, the growth rate of females is faster than males.
Pada umur 3 – 13 tahun, kadar pertumbuhan perempuan adalah lebih cepat daripada lelaki.
- B At the age of 13 – 15 years, the growth rates of male and female are the same.
Pada umur 13 – 15 tahun, kadar pertumbuhan lelaki dan perempuan adalah sama.
- C At the age of 16 and above, the growth rate of males is faster than that of females.
Pada umur 16 tahun ke atas, kadar pertumbuhan lelaki adalah lebih cepat daripada perempuan.
- D In infancy up to 3 years, the growth rate of females is faster.
Pada peringkat bayi sehingga 3 tahun, kadar pertumbuhan perempuan adalah lebih cepat.
11. A student who had broken her mother's favorite plate felt scared and anxious. Her heart rate also increased. Which gland acts during this situation?
Seorang pelajar yang telah memecahkan pinggan kesayangan ibunya berasa takut dan gelisah. Kadar denyutan jantungnya juga meningkat. Kelenjar manakah yang bertindak semasa situasi ini?



12. Which of the following hormones is secreted by the pancreas?
Antara hormone berikut, yang manakah dirembeskan oleh pankreas?
- A Insulin
Insulin
 - B Thyroxine
Tiroksina
 - C Adrenaline
Adrenalina
 - D Progesterone
Progesteron
13. What is isotopes?
Apakah isotop?
- A Atoms of the same element which have same number of protons
Atom unsur yang sama yang mempunyai bilangan proton yang sama
 - B Atoms of the same element which have different number of electrons
Atom unsur yang sama yang mempunyai bilangan electron yang berbeza
 - C Atom from different element which have the same number of protons
Atom unsur yang berbeza yang mempunyai bilangan proton yang sama
 - D Atom from different element which have the same number of neutrons
Atom unsur yang berbeza yang mempunyai bilangan neutron yang sama
14. Diagram 2 below shows an electron configuration of element Z
Rajah 2 dibawah menunjukkan konfigurasi electron suatu unsur Z

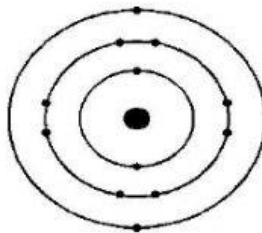


Diagram 2/ Rajah 2

- State the location of element Z in the periodic table according to its period and group.
Nyatakan kedudukan unsur Z dalam jadual berkala berdasarkan kala dan kumpulan.
- A Period 3, group 2
Kala 3, kumpulan 2
 - B Period 2, group 14
Kala 2, kumpulan 14
 - C Period 3, group 12
Kala 3, kumpulan 12
 - D Period 1, group 2
Kala 1, kumpulan 2
15. Which of the following is an Alloy?
Manakah antara berikut merupakan sejenis aloi?
- A Bronze
Gangsa
 - B Antimony
Antimoni
 - C Copper
Kuprum

- D Argon
Argon

16. The information below shows a type of treatment.
Maklumat di bawah menunjukkan satu kaedah perubatan.

- *Pass down the generation*
Diwarisi secara turun – temurun
- *The cost of treatment is not expensive.*
Kos rawatan tidak mahal.
- *An example of a medicine is ginger.*
Contoh ubat ialah halia.

What is the type of the treatment?

Apakah kaedah rawatan itu?

- A Traditional treatment
Perubatan Tradisional
- B Modern treatment
Rawatan moden
- C Complementary treatment
Rawatan Komplementari
17. Which of the following can be used as an antioxidant for food?
Antara yang berikut, yang manakah dapat digunakan sebagai antioksidan dalam makanan?
- A Stimulant
Stimulan
- B Penicillin
Penisilin
- C Streptomycin
Streptomisin
- D Ascorbic acid
Asid askorbik
18. Ramli cycles 600 metres in 120 seconds. What is Ramli's speed?
Speed = $\frac{\text{Distance (m)}}{\text{Time taken (s)}}$
Ramli berbasikal sejauh 600 meter dalam masa 120 saat. Berapakah laju pergerakan Ramli?
Laju = $\frac{\text{Jarak (m)}}{\text{Masa (s)}}$
- A 0.2 m s^{-1}
- B 5.0 m s^{-1}
- C 480 m s^{-1}
- D 720 m s^{-1}
19. Which of the following statements is **true** about free fall?
*Antara pernyataan berikut, yang manakah **benar** tentang jatuh bebas?*
- A A sheet of paper fall freely because its motion is affected by air resistance.
Sehelai kertas jatuh bebas kerana gerakannya dipengaruhi oleh rintangan udara.
- B Free fall only occurs in a vacuum
Jatuh bebas sebenarnya hanya berlaku dalam keadaan vakum.
- C Objects falling freely, fall with the different gravitational acceleration no matter what their mass and shape are.

Objek yang jatuh bebas mempunyai pecutan graviti yang berbeza tanpa mengira jisim dan bentuknya.

20. Which factor affects inertia of an object?
 Faktor manakah yang mempengaruhi inertia suatu objek?
- A Size
 Saiz
- B Mass
 Jisim
- C Speed
 Laju
- D Distance
 Jarak
21. Diagram 3 shows the process of generating electricity from nuclear energy.
 Rajah 3 menunjukkan proses menjana tenaga elektrik daripada tenaga nuclear.

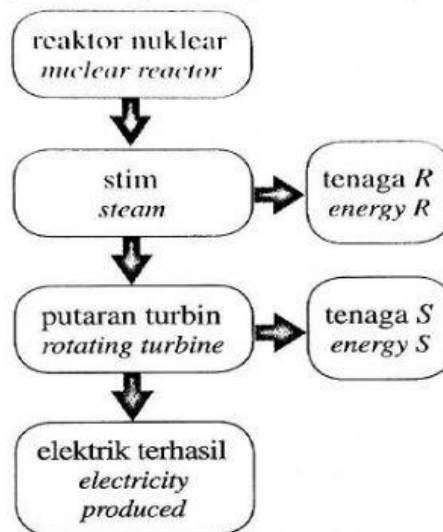


Diagram 3/ Rajah 3

What are R energy dan S energy?
 Apakah tenaga R dan S?

	R	S
A	Kinetic energy Tenaga kinetik	Heat energy Tenaga haba
B	Chemistry energy Tenaga kimia	Heat energy Tenaga haba
C	Heat energy Tenaga haba	Kinetic energy Tenaga kinetik
D	Kinetic energy Tenaga kinetik	Chemistry energy Tenaga kimia

22. A worker who handles radioactive substances is exposed to radioactive rays. Which of the following safety precautions should be taken by the worker?
Seorang pekerja yang mengendalikan bahan radioaktif terdedah kepada sinar radioaktif. Antara yang berikut, yang manakah langkah keselamatan yang perlu diambil oleh pekerja tersebut?
- A Wear docimeter.
Memakai dosimeter.
- B Sterilise the apparatus after using.
Mensteril peralatan selepas digunakan.
- C Wash hands and feet with antiseptic.
Mencuci tangan dan kaki dengan antiseptic.
- D Wear protective attire coated with aluminium
Memakai pakaian pelindung yang dilapisi dengan aluminium.
23. Diagram 4 shows a microorganism which grows on the surface of a pice of bread.
Rajah 4 menunjukkan mikroorganisma yang tumbuh atas permukaan roti.

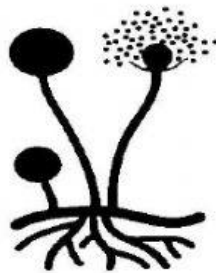


Diagram 4/ Rajah 4

- What is the microorganism?*
Apakah mikroorganisma tersebut?
- A Yeast
Yis
- B Mucor
Mukor
- C Ameba
Amoeba
- D *Bacillus subtilis*
Bacillus subtilis
24. Below is the list of substances used in the treatment of diseases caused by pathogens.
Berikut ialah senarai bahan yang digunakan dalam rawatan penyakit yang disebabkan oleh patogen.

- | |
|--|
| <ul style="list-style-type: none"> • Penicillin / <i>Penisilin</i> • Tetracycline / <i>Tetrasiklin</i> • Streptomycin / <i>Streptomisin</i> |
|--|

The substances listed above are example of...
Bahan-bahan tersenarai di atas merupakan contoh...

- A Antibiotic
Antibiotik

- B Antiseptic
Antiseptik
- C Antiserum
Antiserum
- D Vaccine
Vaksin

25. Table 1 show the calorific value of three types of food.
Jadual 1 menunjukkan nilai kalori bagi tiga jenis makanan.

Food Makanan	Calorific value/ kJ g^{-1} Nilai kalori/ kJ g^{-1}
Rice Nasi	15.04
Chicken Ayam	8.27
Cabbage Kubis	0.34

Table 1
Jadual 1

Ali takes lunch whis consists of 25 g of rice, 10 g of chicken and 100 g of cabbage.
Calculate the total calorific value taken by Ali.

Ali mengambil makan tengah hari yang terdiri daripada 25 g nasi, 10 g ayam dan 100 g kubis. Hitung jumlah kalori yang diambilnya.

- A 23.65 kJ
B 492.7 kJ
C 359.15 kJ
D 450.42 kJ
26. Diagram 5 shows part of nitrogen cycle.
Rajah 5 menunjukkan sebahagian daripada kitar nitrogen.

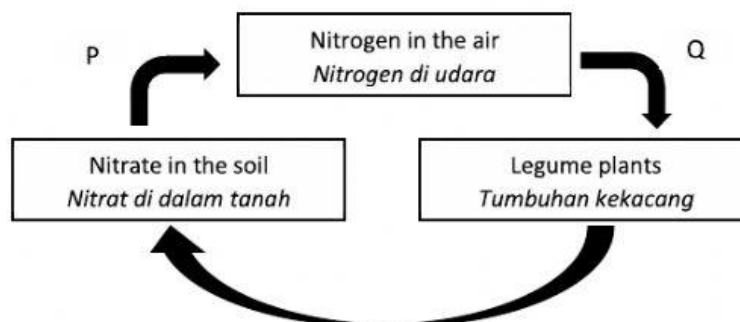


Diagram 5
Rajah 5

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

	P	Q
A	Decomposition Penguraian	Nitrification Penitratan