BAHAGIAN A
[20 *markah*]
[20 *marks*]
Jawab **semua** *soalan.*
Answer **all** *questions.*

1 Rajah di bawah menunjukkan satu tindakan oleh seorang budak lelaki apabila habuk masuk ke hidung.
Diagram below shows an action by a boy when dust enters the nose.

Apakah urutan laluan impuls yang betul bagi tindakan pada rajah di atas?
What is the correct direction of impulse pathway for the action in the diagram above?

A Afektor $\xrightarrow{\text{Impuls saraf}}$ Otak $\xrightarrow{\text{Impuls saraf}}$ Efektor
Affector $\xrightarrow{\textit{Nerve impulse}}$ *Brain* $\xrightarrow{\textit{Nerve impulse}}$ *Effector*

B Efektor $\xrightarrow{\text{Impuls saraf}}$ Otak $\xrightarrow{\text{Impuls saraf}}$ Afektor
Effector $\xrightarrow{\textit{Nerve impulse}}$ *Brain* $\xrightarrow{\textit{Nerve impulse}}$ *Affector*

C Afektor $\xrightarrow{\text{Impuls saraf}}$ Saraf Tunjang $\xrightarrow{\text{Impuls saraf}}$ Efektor
Affector $\xrightarrow{\textit{Nerve impulse}}$ *Spinal cord* $\xrightarrow{\textit{Nerve impulse}}$ *Effector*

D Efektor $\xrightarrow{\text{Impuls saraf}}$ Saraf Tunjang $\xrightarrow{\text{Impuls saraf}}$ Afektor
Effector $\xrightarrow{\textit{Nerve impulse}}$ *Spinal cord* $\xrightarrow{\textit{Nerve impulse}}$ *Affector*

LIVEWORKSHEETS

2 Rajah di bawah menunjukkan suatu situasi di taman permainan.
Diagram below shows a situation in the playground.

Apakah jenis pendengaran yang membolehkan Razi dapat mengesan kedudukan Amin?
What type of hearing allows Razi to detect Amin's position?

A Stereofonik
Stereophonic

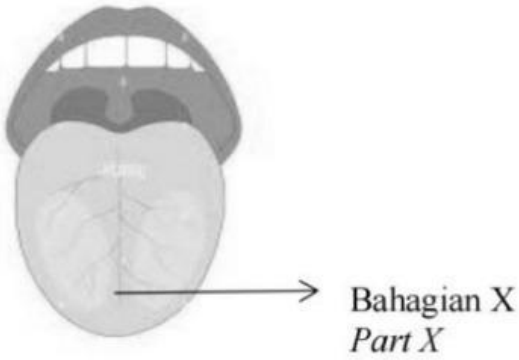
B Monofonik
Monophonic

C Monokular
Monocular

D Stereoskopik
Stereoscopic

LIVEWORKSHEETS

3 Rajah di bawah menunjukkan bahagian X pada lidah manusia.
The diagram below shows the part X of the human tongue.



Antara berikut yang manakah padanan yang betul antara bahagian X dengan rasa makanan?
Which of the following is the correct match between the part X of the tongue and the taste of food?

A Gula
Sugar

B Peria
Bitter Gourd

C Garam
Salt

D Cuka
Vinegar

LIVEWORKSHEETS

4 Manakah antara pernyataan berikut adalah **benar** mengenai fungsi stoma ?
Which of the following statements is **true** about function of stoma ?

I Tempat pertukaran gas
A place for gas exchange

II Mengawal saiz liang stoma
Control size of stomatal pore

III Menyerap cahaya matahari untuk fotosintesis
Absorb sunlight for photosynthesis

IV Membenarkan wap air dibebaskan daripada tumbuhan
Allows water vapor released from plants

A I dan II
I *and* II

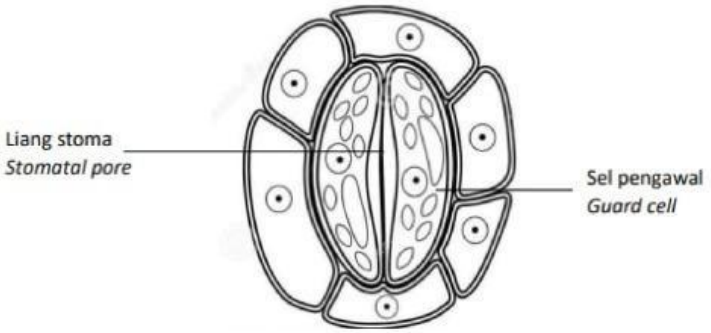
B II dan III
II *and* III

C III dan IV
III *and* IV

D I dan IV
I *and* IV

LIVEWORKSHEETS

5 Rajah di bawah menunjukkan keadaan stoma pada waktu malam.
Diagram below shows condition of stoma at night.



Menagapakah keadaan stoma seperti ditunjukkan?
Why the stoma condition as shown in diagram?

A Sel pengawal menjadi segah
The guard cells becomes turgid

B Air meresap masuk ke dalam sel pengawal
Water diffuses into the guard cells

C Sel pengawal menjalankan proses respirasi
The guard cells carry out process of respiration

D Paras glukosa dalam sel pengawal meningkat
Glucose level in guard cells increases

6 Antara beriku, yang manakah benar mengenai sistem respirasi bagi belalang?
Which of the following is correct about the respiratory system of grasshopper?

A Sistem respirasi belalang dikenali sebagai sistem spirakel
The respiratory system of the grasshopper is known as the spiracle system

B Spirakel ialah liang besar pada toraks dan abdomen belalang
Spiracles are big holes on the thorax and abdomen of the grasshopper

C Spirakel memisahkan abdomen daripada sel-sel badan belalang
Spiracles separate the abdomen from the cells of the body of the grasshopper

D *Oksigen yang masuk ke dalam belalang akan terus meresap ke dalam sel-sel badan*
The oxygen that enters the grasshopper will diffuse directly into the cells of the body

LIVEWORKSHEETS

7 Darah merupakan sejenis campuran.
Antara yang berikut, komponen darah dan peratusnya yang manakah adalah betul?
Blood is a type of mixture.
Which of the following blood components and its percentage is correct?

A Plasma darah kurang daripada 1%, Sel darah putih dan Platlet 55%
Blood plasma less than 1%, *White blood cell and Platelets* 55%

B Sel darah putih dan Platlet kurang daripada 1%, Plasma darah 55%
White blood cell and Platelets less than 1%, *Blood plasma* 55%

C Sel darah merah 55%, Sel darah putih dan Platlet 45%
Red blood cell 55%, *White blood cells and Platelets* 45%

D Plasma darah 45%, Sel darah merah 55%
Blood plasma 45%, *Red blood cell* 55%

8 Apakah persamaan antara sistem peredaran darah dalam haiwan dengan sistem pengangkutan dalam tumbuhan?
What is the similarity between blood circulatory system in animals and transport system in plant ?

A Mempunyai dua jenis salur pengangkutan
Have two types of transport vessels

B Mengangkut air, nutrien dan bahan terlarut
Transport water, nutrients and dissolved substances

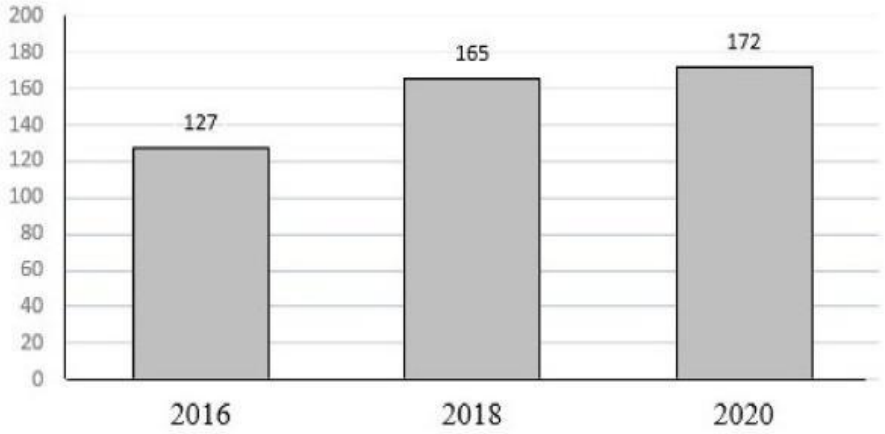
C Wujud dalam organisma kompleks dan organisma ringkas
Exist in complex and simple organisms

D Salur pengangkutan tidak bersambung antara satu sama lain
Transport vessel are not connected to each other

LIVEWORKSHEETS

9 Rajah di bawah menunjukkan sebuah graf.
Diagram below shows a graph.

Graf bilangan lombong aktif mengikut tahun
The graph of the number of active mines by year



Antara yang berikut, yang manakah kesan aktiviti dalam rajah terhadap alam sekitar?
Which of the following is the effect of the activities in the diagram on the environment?

A Kehilangan kesuburan tanah
Loss of soil fertility

B Kehilangan punca pendapatan
Loss of source of income

C Kehilangan habitat semulajadi dan biodiversiti
Loss of natural habitat and biodiversity

D Menyebabkan penyakit berkaitan sistem pernafasan
Causes diseases related to the respiratory system

LIVEWORKSHEETS

10 Yang manakah antara berikut benar tentang siri kereaktifan logam?
Which of the following is true about the reactivity series of metals?

I Satu senarai logam yang disusun berdasarkan kereaktifan terhadap karbon
A list of metals arranged by reactivity to carbon

II Satu senarai logam yang yang boleh bertindak balas dengan semua unsur
A list of metals that can react with all elements

III Satu senarai logam yang disusun berdasarkan kereaktifan terhadap oksigen
A list of metals arranged based on their reactivity to oxygen

IV Logam yang paling reaktif ialah Kalium (K) manakala yang paling kurang reaktif ialah emas (Au)
The most reactive metal is Potassium (K) *while the least reactive is gold* (Au)

A I dan II
I *and* II

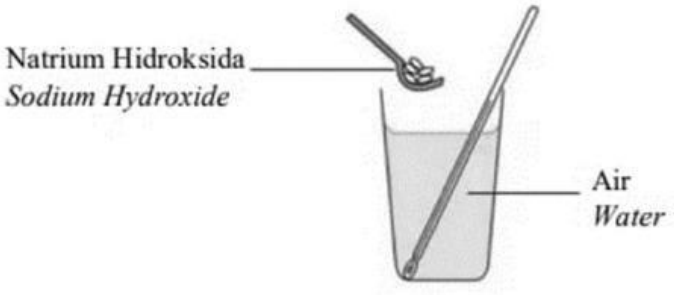
B II dan III
II *and* III

C III dan IV
III *and* IV

D I dan IV
I *and* IV

LIVEWORKSHEETS

11 Rajah di bawah menunjukkan aktiviti bagi mengkaji perubahan tenaga haba yang berlaku apabila natrium hidroksida bertindak balas dengan air.
Diagram below shows an acivity to study heat energy change occured when sodium hydroxide reacts with water.



Apakah tindak balas yang terlibat dalam aktiviti itu?
What is the reaction tinvolved in the activity?

A Tindak balas endotermik
Endothermic reaction

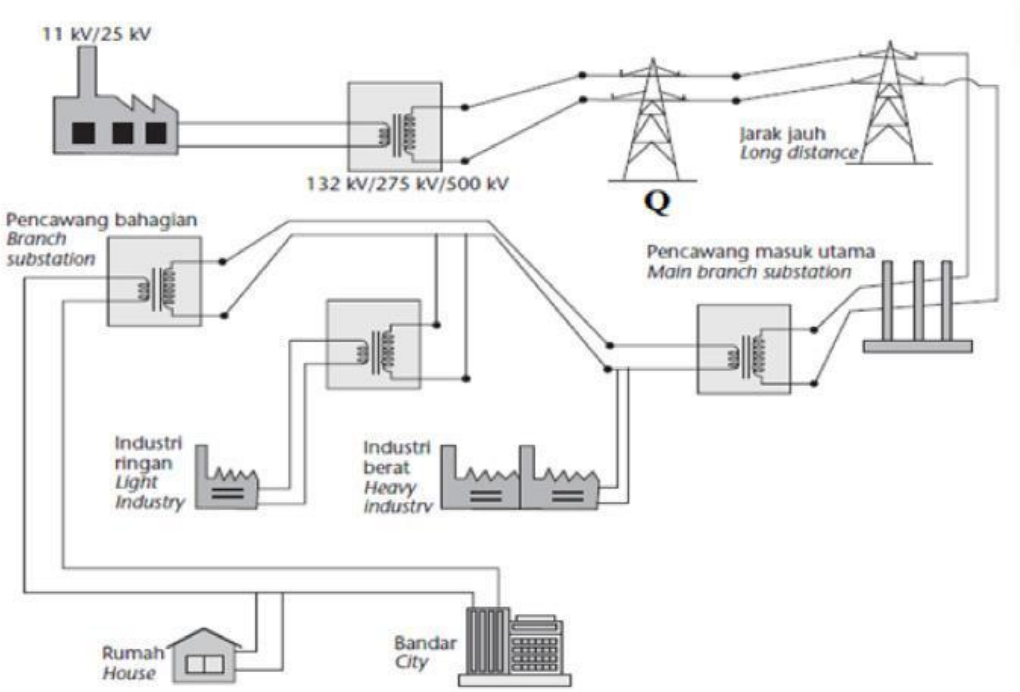
B Tindak balas eksotermik
Exothermic reaction

C Tindak balas peneutralan
Neutralization reaction

D Tindak balas pengoksidaan
Oxidation reaction

LIVEWORKSHEETS

12 Rajah di bawah menunjukkan sistem penghantaran dan pengagihan tenaga elektrik.
Diagram below shows the electricity transmission and distribution.



Apakah Q?
What is Q?

A Lapangan suis
Switch zone

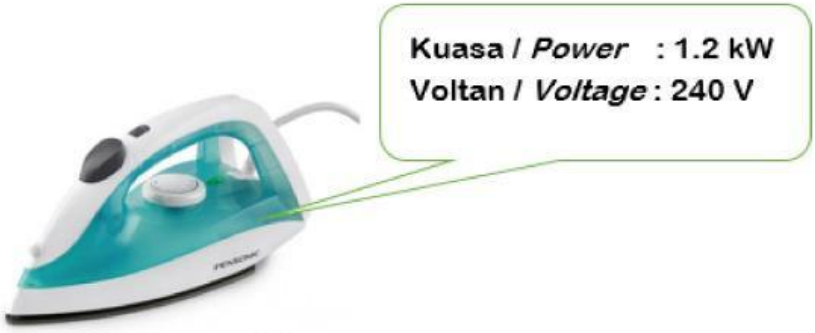
B Stesen janakuasa
Power station

C Pencawang masuk utama
Main substation

D Rangkaian Grid Nasional
National Grid Network

LIVEWORKSHEETS

13 Rajah di bawah menunjukkan suatu peralatan elektrik di rumah.
Diagram below shows an electrical equipment at home.

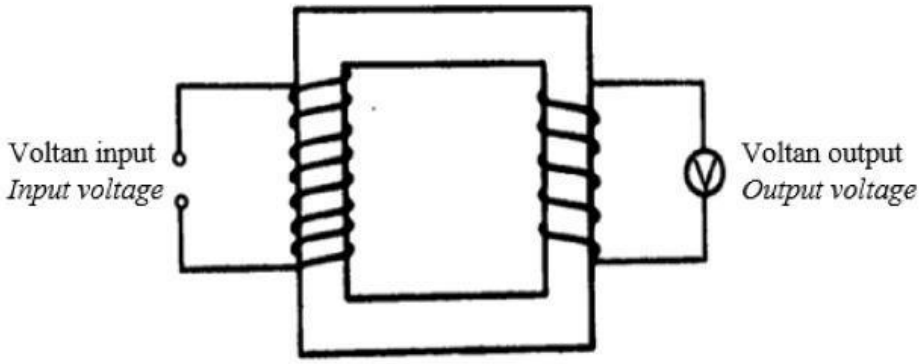


Apakah nilai arus yang melaluinya?
What is the value of the current passing through it?

A 0.005 A
B 288 A
C 0.2 A
D 5 A

LIVEWORKSHEETS

14 Rajah di bawah menunjukkan suatu alat yang digunakan dalam kebanyakan peralatan elektrik di rumah.
The diagram below shows a device used in most electrical appliances at home.



Peralatan elektrik manakah yang menggunakan alat seperti rajah di atas ?
Which electrical appliances use device like the diagram above ?

A Mesin basuh dan ketuhar gelombang mikro
Washing machine and microwave

B Kotak kawalan kelajuan kipas dan mesin basuh
Fan speed control box and washing machine

C Ketuhar gelombang mikro dan pengecas telefon bimbit
Microwave and handphone charger

D Kotak kawalan kelajuan kipas dan pengecas telefon bimbit
Fan speed control box and handphone charger

LIVEWORKSHEETS

15 Rajah 1 menunjukkan Pak Hassan yang sedang mengayuh sebuah beca berjisim 150 kg yang bergerak dengan halaju $0.2\ ms^{-1}$. Jisim ketiga-tiga mereka adalah sebanyak 130 kg.
Diagram 1 shows Pak Hassan who is pedalling a rickshaw with a mass of 150 kg that moves with a velocity of $0.2\ ms^{-1}$. The mass of all three of them is 130 kg.

Rajah 1

Diagram 1

Tenaga kinetik *Kinetic energy*	$= \frac{1}{2}mv^2$

Hitung tenaga kinetik yang dimiliki oleh beca tersebut.
Calculate the kinetic energy possessed by the trishaw.

A 0.4 J
0.4 J

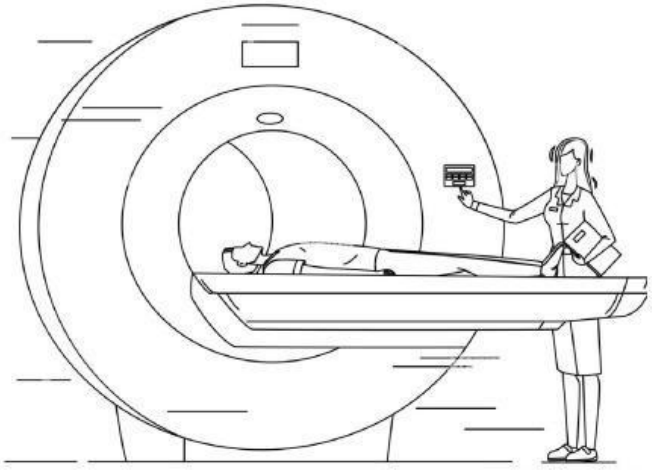
B 2.6 J
2.6 J

C 3.0 J
3.0 J

D *5.6 J*
5.6 J

LIVEWORKSHEETS

16 Rajah menunjukkan penggunaan sinar radioaktif dalam bidang perubatan.
Diagram shows the use of a type of radioactive ray in medical field.



Apakah jenis sinar radioaktif yang digunakan bagi tujuan di atas?
What type of radioactive ray is used for the above purpose?

A Sinar-X
X-ray

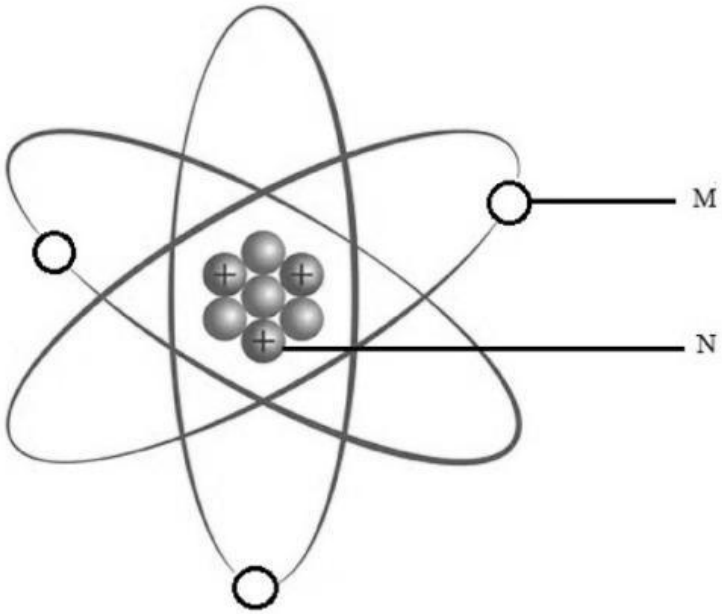
B Sinar alfa
Alpha ray

C Sinar beta
Beta ray

D Sinar gama
Gamma ray

LIVEWORKSHEETS

17 Rajah di bawah menunjukkan struktur atom.
The diagram below shows the structure of an atom.



Antara yang berikut, padanan yang manakah adalah betul?
Which of the following matches is correct?

	M	N
A	Proton *Proton*	Elektron *Electron*
B	Proton *Proton*	Neutron *Neutron*
C	Elektron *Electron*	Proton *Proton*
D	Elektron *Electron*	Neutron *Neutron*

18 Bahan radioaktif Y mereput dengan separuh hayatnya 5 jam. Hitung jisim bahan Y selepas 20 jam sekiranya jisim asal bahan Y ialah 200 g?
The radioactive substance Y decays with a half-life of 5 hours. Calculate the mass of substance Y after 20 hours if the original mass of substance Y is 200 g?

A 150 g
B 100 g
C 50 g
D 25 g

LIVEWORKSHEETS