

018
Science (SK)
Jun
2010
1 $\frac{1}{4}$ jam

JABATAN PELAJARAN
NEGERI SEMBILAN DARUL KHUSUS

Canang 2

SEKOLAH-SEKOLAH RENDAH NSDK
2010



0
1
8

SCIENCE

Satu jam lima belas minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini adalah dalam Bahasa Inggeris mengandungi dua bahagian: **Bahagian A dan Bahagian B.***
2. *Rajah yang mengiringi masalah dalam kertas soalan ini dimaksudkan untuk memberi maklumat yang berguna bagi menjawab soalan. Rajah tidak semestinya dilukis mengikut skala, kecuali dinyatakan sebaliknya.*
3. **Bahagian A ada 30 soalan. Jawab semua soalan.**
4. *Jawab dengan menghitamkan ruangan pada **Kertas Jawapan Bahagian A.***
5. **Bahagian B ada 5 soalan. Jawab semua soalan.**
6. *Jawab dengan menulis jawapan kamu dalam ruang yang disediakan.*



Kertas soalan ini mengandungi 26 halaman bercetak di Bahagian A
dan 10 halaman bercetak di Bahagian B

Section A
Bahagian A

[30 marks]
[30 markah]

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

Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
1	ILT/Y4/2.3	2.3.5 Breathing structure	Fact/Class			ABH

1. The information below shows two animals, J and K release carbon dioxide from their bodies.

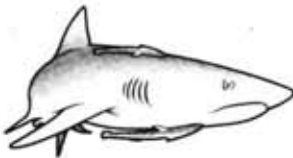
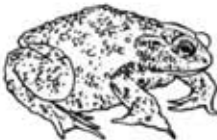


Maklumat di bawah menunjukkan dua ekor haiwan J dan K membebaskan karbon dioksida daripada badannya.

J : Through gills
Melalui insang





K : Through skin
Melalui kulit.

Which of the following are represented by J and K?

Manakah antara berikut mewakili J dan K?

	J	K
A		
B		

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C		
D		

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Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
2	ILT/Y4/2.4	2.4.9 Reproduce	Class	M		ABH





2. The information below shows a few types of plants.

Maklumat di bawah menunjukkan beberapa jenis tumbuhan.

P - Potato <i>Kentang</i>	Q - Ginger <i>Halia</i>	R - Turmeric <i>Kunyit</i>
------------------------------	----------------------------	-------------------------------

Which of the following has the same way of reproduction as the plants above?

Antara berikut, yang manakah mempunyai cara pembiakan yang sama dengan tumbuhan di atas?

A		B	
C		D	

Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
3		Y4/3/3.5.3	Fact	E		ABH

3. Diagram 1 shows a type of plant

Rajah 5 menunjukkan sejenis tumbuhan



Diagram 1

Rajah 1

What characteristic that helps the plant to protect itself from hot weather?

Apakah ciri-ciri yang melindungi tumbuhan itu daripada cuaca panas ?

- A Soft stem and long leaves
Batang lembut dan daun panjang
- B Waxy leaves
Daun berlilin
- C Poisonous substances
Bahan beracun
- D Curls up its waxy leaves
Menggulung daunnya yang berlilin

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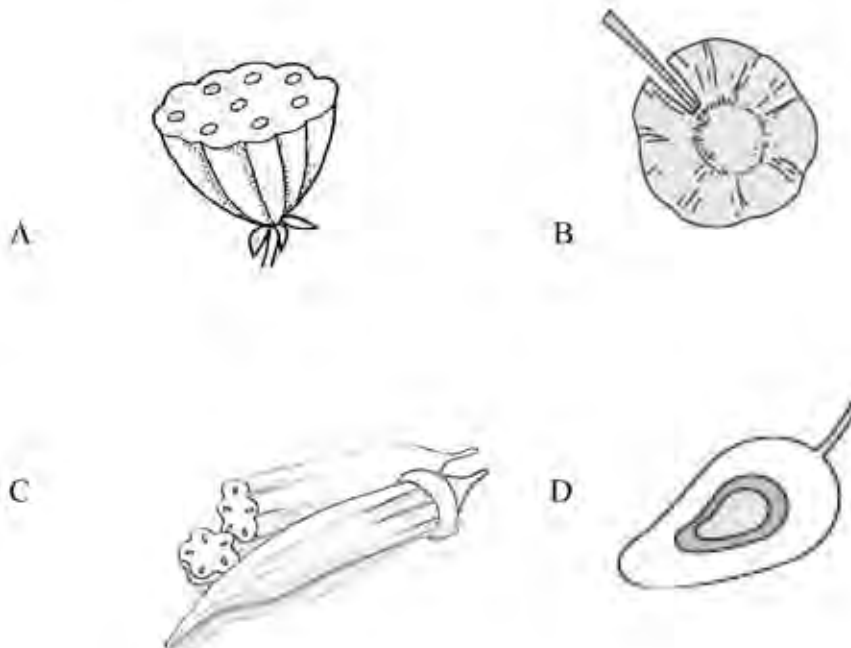
Question Number	Theme/Year L. Area	L.Objective L.Outcome/page	Cognitive Domain	Level Difficulties	Answer	Notes
4	AK/5		CLASS	E		RBK

4. Diagram 2 shows a type of fruit.
Rajah 2 menunjukkan sejenis buah.



Diagram 2
Rajah 2

Which of the following has the same way of dispersal as the fruit above?
Antara berikut, yang manakah mempunyai cara pencaran yang sama seperti buah di atas?



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Question Number	Theme/Year L. Area	L.Objective L.Outcome/page	Cognitive Domain	Level Difficulties	Answer	Notes
5	AK/5		Interprate	M		RBK

5. Diagram 3 shows some living things in a habitat.
Rajah 3 menunjukkan beberapa hidupan di satu habitat.

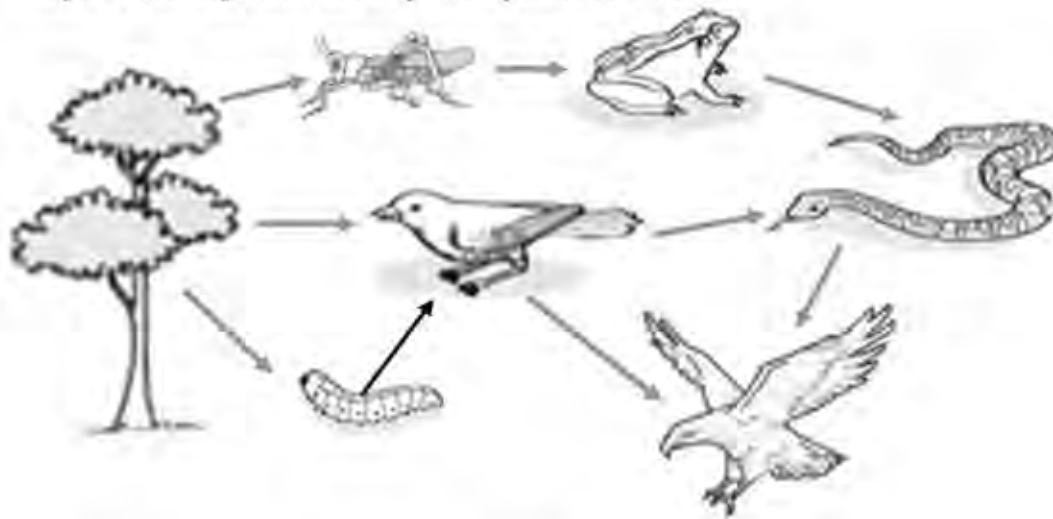


Diagram 3
Rajah 3

How many food chains are there in this food web?
Berapakah jumlah rantai makanan yang terdapat didalam siratan makanan ?

- A Three
Tiga
- B Four
Empat
- C Five
Lima
- D Six
Enam

Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
6	ILT	1.3.4	Fact	M		JJ

6. The information below is about an endangered animal X.
Maklumat di bawah ialah mengenai haiwan X yang terancam.

- Hunted for its meat and skin
Diburu untuk daging dan kulit
- Habitat destroyed
Kemusnahan habitat

Which of the following is animal X?
Antara yang berikut, manakah haiwan X?

- A Tapir
Tenuk
- B Porcupine
Landak
- C Peacock
Merak
- D Deer
Rusa

Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
7	ILT	1.4.1	Fact	E		JJ

7. Diagram 4 shows two human activities.
Rajah 4 menunjukkan dua aktiviti manusia.



Diagram 4
Rajah 4

What environmental destruction is caused by these activities?

Apakah kemusnahan alam sekitar yang disebabkan oleh aktiviti-aktiviti di atas?

- | | |
|---|--|
| A Landslide
<i>Tanah runtuh</i> | B Air pollution
<i>Pencemaran udara</i> |
| C Land pollution
<i>Pencemaran tanah</i> | D Flash flood
<i>Banjir kilat</i> |

Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
8	3	Y4/1/1.3.3	Terminology	E		ABH

- 8 What is meant by volume?
Apakah yang dimaksudkan dengan isipadu ?
- A Distance between two points
Jarak di antara dua titik
- B The size of a surface
Saiz suatu permukaan
- C The period of time between two moments
Tempoh di antara dua ketika
- D Amount of space occupied
Jumlah ruang yang boleh diisi

Question Number	Theme/Year L. Area	L.Objective L.Outcome/ page	Cognitive Domain	Level Difficulties	Answer	Notes
9	AF/5		Fact	M		RBK

9. Diagram 5 shows a source of energy.
Rajah 5 menunjukkan sejenis sumber tenaga.



Diagram 5
Rajah 5

What are the advantages of this energy?
Apakah kelebihan tenaga ini?

- I The energy does not run out.
Tenaga tidak akan kehabisan
- II The energy supply is limited.
Bekalan tenaga terhad
- III The energy does not cause air pollution
Tenaga tidak menyebabkan pencemaran udara
- IV The energy supply needs high cost of maintenance
Bekalan tenaga memerlukan kos penyelenggaraan yang tinggi..

A I and II
I dan II

B II and IV
II dan IV

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C I and III
I dan III

D III and IV
III dan IV

Question Number	Theme/Year L. Area	L.Objective L.Outcome/ page	Cognitive Domain	Level Difficulties	Answer	Notes
10	AF/5					RBK

10. Diagram 6 shows the shadow of puppets from a 'wayang kulit'
Diagram 6 menunjukkan bayang- bayang patung daripada wayang kulit.

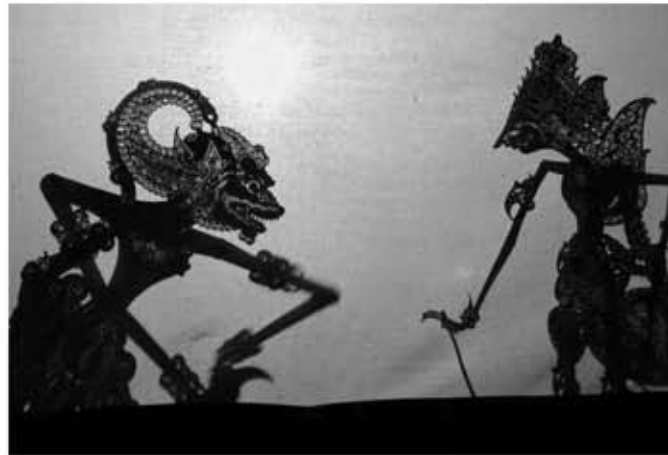


Diagram 6
Rajah 6

How is the shadow formed?
Bagaimanakah bayang- bayang itu terbentuk?

- I The puppets are made of an opaque material
Patung diperbuat dari bahan legap
- II The light was blocked by the puppets
Cahaya dihalang oleh patung
- III The light was reflected by the puppets
Cahaya dipantulkan oleh patung
- IV The puppets are made of translucent materials
Patung diperbuat dari bahan lut cahaya

A I and II
I dan II

B II and IV
II dan IV

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C I and III
I dan III

D III and IV
III dan IV

Question Number	Theme/Year L. Area	L.Objective L.Outcome/page	Cognitive Domain	Level Difficulties	Answer	Notes
11	AF/5		Principle	Medium		RBK

11. Diagram 7 shows a set of apparatus prepared by a group of pupils.
Rajah 7 menunjukkan peralatan yang disediakan oleh sekumpulan murid.

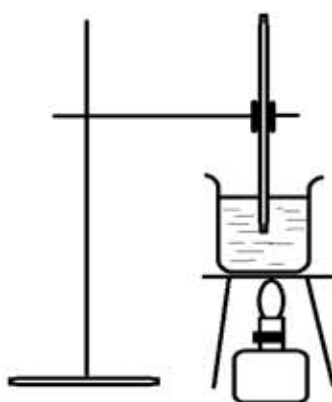


Diagram 7
Rajah 7

The temperature of water will rise until its boiling point. Which statement is correct?
Suhu air meningkat sehingga mencapai takat didih. Pernyataan manakah yang betul?

- A The water expands
Air mengembang
- B The water gains heat
Air menerima haba
- C The water loses heat
Air kehilangan haba
- D The water has reached room temperature
Air mencapai suhu bilik

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Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
12		1.2.2/1.2.3	Fact	Medium		JJ

12. Diagram 8 shows two activities.
Rajah 8 menunjukkan dua aktiviti.



Diagram 8
Rajah 8

Which of the following shows the effects of force that represent activities P and Q?
Antara berikut, yang manakah menunjukkan kesan daya mewakili aktiviti P dan Q?

	P	Q
A	Change the direction of a moving object <i>Mengubah arah objek yang bergerak</i>	Change the speed of an object <i>Mengubah kelajuan objek</i>
B	Change the shape of an object <i>Mengubah bentuk objek</i>	Stop a moving object <i>Menghentikan objek bergerak</i>
C	Change the direction of a moving object <i>Mengubah arah objek yang bergerak</i>	Change the shape of an object <i>Mengubah bentuk objek</i>
D	Stop a moving object <i>Menghentikan objek bergerak</i>	Change the direction of a moving object <i>Mengubah arah objek yang bergerak</i>

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Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
13		2.11	Translation	Difficult		JJ

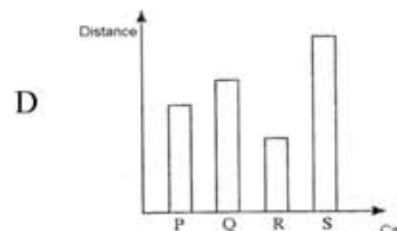
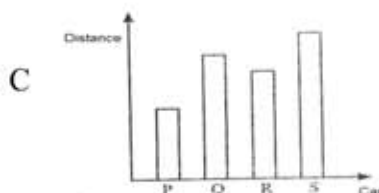
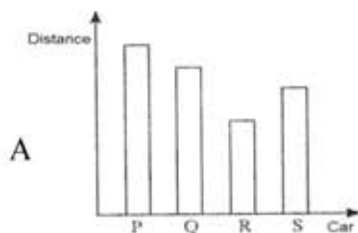
13. The statements below show the observations about the distance travelled by car P, Q, R and S in an hour.

Pernyataan menunjukkan pemerhatian yang dibuat mengenai jarak perjalanan yang dilalui oleh kereta dalam satu jam.

- Distance travelled by P is shorter than Q
Jarak perjalanan P lebih pendek daripada Q
- Distance travelled by Q is shorter than S
Jarak perjalanan Q lebih pendek daripada S
- Distance travelled by R is shorter than P and Q
Jarak perjalanan R lebih pendek dari P dan Q

Which bar chart shows the observation?

Carta palang yang manakah menunjukkan pemerhatian tersebut?



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Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
14	3/4/1	14.5	sequence	Difficult		ABH

14: The following information shows the steps of recycling paper.

Maklumat berikut menunjukkan langkah-langkah dalam kitar semula kertas.

J - The paper is blended

Kertas dikisar

K - Old newspapers are shredded into small pieces

Surat khabar lama dikoyak menjadi cebisan kecil

L - The paper is then compressed

Kertas itu kemudian dimampatkan

M - The paper is left to dry

Kertas dibiarkan kering

A J, K, L, M

B K, M, J, L

C K, J, L, M

D L, K, M, J

Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
15	3/4/1	1.6.1	Method	Medium		ABH

15 Diagram 9 shows two objects made of iron.

Rajah 9 menunjukkan objek yang diperbuat daripada besi.

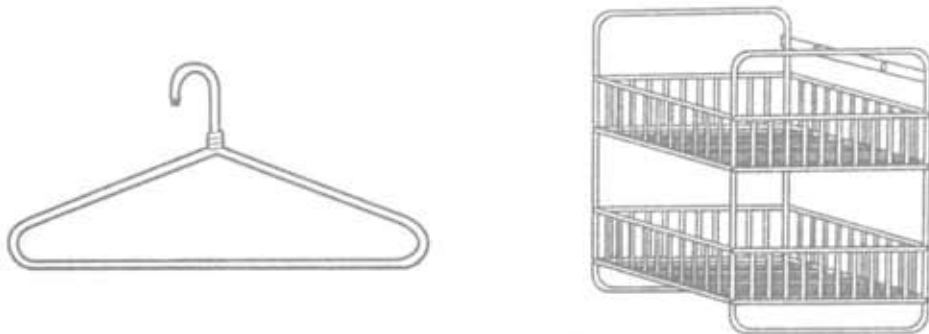


Diagram 9

Rajah 9

What is the best way to prevent the objects from rusting?

Apakah cara yang terbaik untuk mencegah objek tersebut daripada berkarat?

- A Coating with plastic
Menyaluti dengan plastik
- B Coating with wax
Menyaluti dengan lilin
- C Coating with grease
Menyaluti dengan gris
- D Coating with oil
Menyaluti dengan minyak

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Question Number	Theme/Year L. Area	L.Objective L.Outcome/page	Cognitive Domain	Level Difficulties	Answer	Notes
16	AB/5		Secquence	Medium		RBK

16. Four types of liquid of the same volume were poured into four similar containers. The time taken to fill up the containers was recorded in a table below.
Empat jenis cecair yang sama isipadunya dituangkan ke dalam empat bekas yang serupa. Masa diambil bagi memenuhi bekas itu dicatatkan seperti jadual di bawah.

	Liquid Cecair	Time Masa
P	Glue <i>Gam</i>	20 seconds <i>20 saat</i>
Q	Water <i>Air</i>	11 seconds <i>11 saat</i>
R	Cooking oil <i>Minyak masak</i>	15 seconds <i>15 saat</i>
S	Condensed milk <i>Susu pekat manis</i>	18 seconds <i>18 saat</i>

Arrange the liquids based on their flowing rates from slowest to the fastest.
Susun cecair tersebut berdasarkan kadar alirannya dari paling perlahan kepada paling laju.

- A Q, R, S, P
- B Q, R, P, S
- C P, S, R, Q
- D P, R, S, Q

Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
17	IM/ Y5 / 1.4	1.4.2	Application	Medium		RSF

17. Which of the following are good practices to keep our water resources clean?
Manakah di antara berikut amalan yang baik untuk menjaga kebersihan sumber air kita?

- I Avoid throwing rubbish into the swimming pool
Elak membuang sampah ke dalam kolam renang
- II Treating the sewage before releasing it into the river
Merawat kumbahan sebelum disalir semula ke sungai
- III Build housing estate far from the rivers
Membina kawasan perumahan jauh dari sungai
- IV Build factories near to the water resources
Membina kilang-kilang hampir dengan sumber air
- A I and II B II and III
I dan II II dan III
- C I and IV D III and IV
I dan IV III dan IV

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SULIT

Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
18	IM/ Y5 / 2.1	2.1.2	Application	Medium		RSF

18. Choose the correct pair according to the properties of the substances.
Pilih pasangan yang betul berdasarkan sifat bahan.

	Tastes <i>Rasa</i>	Change in the colour of litmus paper <i>Perubahan warna kertas litmus</i>
A	Sour <i>masam</i>	No changes <i>Tiada perubahan</i>
B	Bitter <i>Pahit</i>	Red to blue <i>Merah ke biru</i>
C	Tasteless <i>Tiada rasa</i>	Blue to red <i>Biru ke merah</i>
D	Salty <i>Masin</i>	Red to blue <i>Merah ke biru</i>

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SULIT

Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
19	IM	1.2.6	Secquence	Medium		JJ

19. The following information shows the steps in the process of pickling mango.
Maklumat berikut menunjukkan langkah-langkah dalam proses penjerukan mangga.

P - Pour in concentrated sugar solution
Campurkan dalam larutan gula pekat

Q - Close the container tightly and put it aside for a week
Tutup bekas dengan ketat dan biarkan selama seminggu

R - Peel and clean the mango
Kupas dan bersihkan buah mangga

S - Put the mango into a container
Masukkan buah mangga ke dalam bekas

- A P, Q, R, S
B Q, R, S, P
C R, S, P, Q
D S, P, Q, R

Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
20	IM	2.2.2/2.2.3	Classifying			JJ

20. Diagram 10 shows waste materials classified into two groups.
Rajah 10 menunjukkan bahan buangan yang dikelaskan kepada dua kumpulan.



P



Q

Diagram 10
Rajah 10

Which of the following can be classified correctly into group P and Q?

Antara berikut, yang manakah boleh dikelaskan dengan betul dalam kumpulan P dan Q ?

	P	Q
A	Plastic <i>Plastik</i>	Paper <i>Kertas</i>
B	Paper <i>Kertas</i>	Wood <i>Kayu</i>
C	Glass <i>Kaca</i>	Plastic <i>Plastik</i>
D	Wood <i>Kayu</i>	Glass <i>Kaca</i>

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Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
21	ITEATU/ Y5 / 2.1	2.1.7	Fact	Easy		RSF

21. The Earth rotates on its axis from west to east. Which of the following is the correct statement?
Bumi berputar di atas paksinya dari barat ke timur. Antara berikut, pernyataan manakah yang benar?
- A It takes one day to make one complete rotation
Ia mengambil masa sehari untuk membuat satu putaran yang lengkap
 - B It takes one week to make one complete rotation
Ia mengambil masa seminggu untuk membuat satu putaran yang lengkap
 - C It takes one month to make one complete rotation
Ia mengambil masa sebulani untuk membuat satu putaran yang lengkap
 - D It takes one year to make one complete rotation
Ia mengambil masa setahun untuk membuat satu putaran yang lengkap

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SULIT

Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
22	ITEATU/ Y5 / 2.2	2.2.3	Fact	Easy		RSF

Diagram 11 shows an occurrence of day and night.

Masukkan gambar Bumi: siang dan malam (dah ada pada Rizal = Diagram 11)

22. How does it occur?
Bagaimanakah ia terjadi?

- A The movement of the Moon around the Sun
Pergerakan Bulan mengelilingi Matahari
- B The rotation of the Moon around the Earth
Putaran Bulan mengelilingi Bumi
- C The movement of the Earth around the Sun
Pergerakan Bumi mengelilingi Matahari
- D The rotation of the Earth on its axis
Putaran Bumi di atas paksinya

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SULIT

Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
23		2.2.2/2.2.3	Classifying			JJ

23. Diagram 12 shows an orbit of a planet around the Sun.
Rajah 12 menunjukkan orbit sebuah planet mengelilingi Matahari.

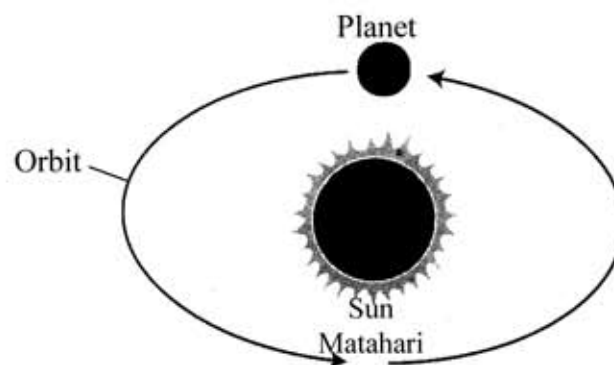


Diagram 12
Rajah 12

Which of the following statement is **correct**?

Antara berikut, pernyataan manakah yang benar ?

- A The larger the orbit, the longer the time the planet moves around the Sun
Semakin besar orbit, semakin lama planet mengelilingi Matahari
- B The larger the orbit the faster the planet moves around the Sun
Semakin besar orbit, semakin laju planet mengelilingi Matahari
- C The size of the orbit is the same for all the planets in the Solar System
Semua planet mempunyai saiz orbit yang sama dalam Sistem Suria
- D The shapes of the orbits of all the planets in the Solar System are different
Semua planet mempunyai bentuk orbit yang berlainan dalam Sistem Suria

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Question Number	Theme / Year /L.Area	L.Objective LO come / page	Cognitive Domain	Level Difficulties	Answer	Notes
24	BAS/6/1.1.1	1.1.1	Extrapolation	medium		MRS

24. Diagram 13 shows a phenomenon during the night.

Rajah 13 menunjukkan suatu fenomena yang berlaku pada waktu malam.

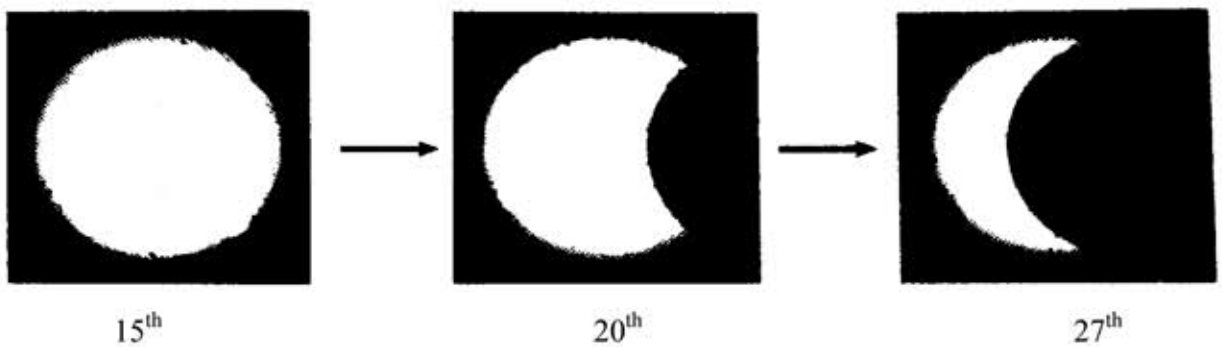


Diagram 13
Rajah 13

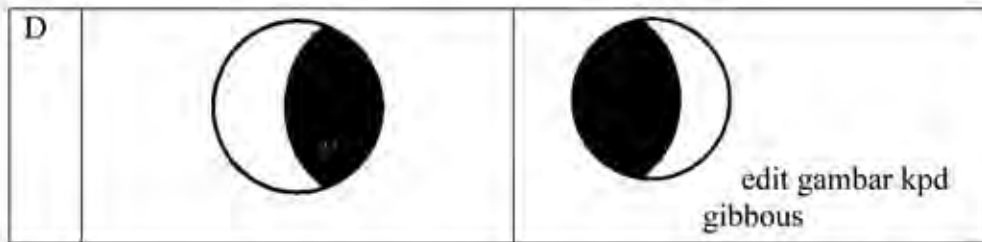
What are the phases of the moon on the 3rd and 10th night?

Apakah fasa-fasa bulan pada malam ke-3 dan ke-10?

	3rd	10th
A		
B		
C		

edit gambar kpd half moon

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Question Number	Theme/Year/L.Area	L.Objectif	Cognitif Domain	Level Difficulties	Answer	Notes
25	BAS/6/1,2.1	1.2.1		medium		MRS

25. Diagram 14 shows the different positions of the Moon.
Rajah 14 menunjukkan kedudukan Bulan yang berbeza.

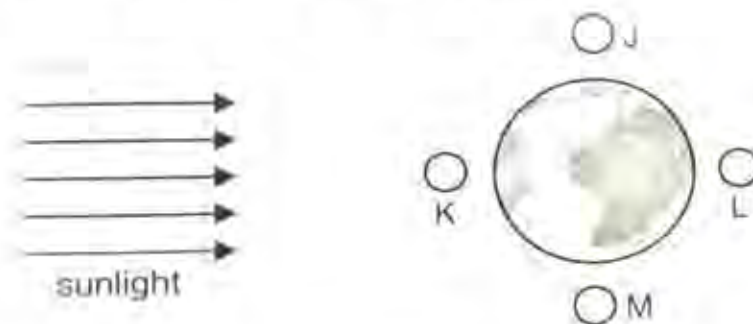


Diagram 14
Rajah 14

Which position does the total eclipse of the sun occur?
Kedudukan yang manakah berlakunya gerhana Matahari penuh?

- A J
- B K
- C L
- D M

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Question number	Theme / Year / L.Area	L.Objective L.O.come/pg	Cognitive Domain	Level Difficulties	Answer	Notes
26						ABH

26. Diagram 15 shows a device.
Rajah 15 menunjukkan sejenis alat.



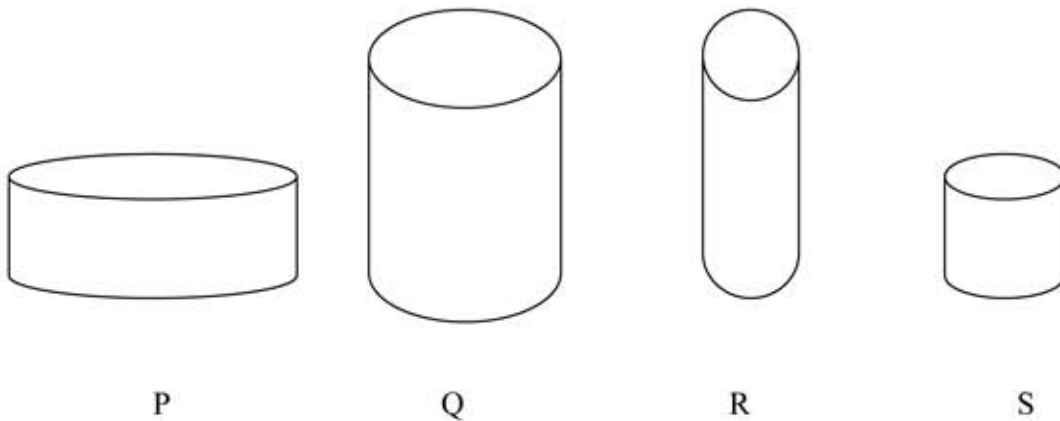
Diagram 15
Rajah 15

What limitation does the device above overcome?
Apakah had keupayaan yang diatasi oleh alat di atas?

- A Memory
Ingatan
- B Physical
Fizikal
- C Sight
Penglihatan
- D Hearing
Pendengaran

Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
27	IT/ Y5 / 1.2	1.2.3				RSF

27. Arrange the following objects from the most stable to the least stable.
Susun objek-objek di bawah daripada yang paling stabil ke yang paling kurang stabil.



- A P, Q, R, S
B Q, S, R, P
C P, S, Q, R
D S, P, Q, R

Question Number	Theme / Year / Learning Area	Learning Objective / Learning Outcome / Page	Cognitive Domain	Level of Difficulties	Answer	Notes
28	IT/ Y5 / 1.2	1.2.5				RSF

28. Diagram 16 shows a bridge.
Rajah 16 menunjukkan sebuah jambatan



Diagram 16
Rajah 16



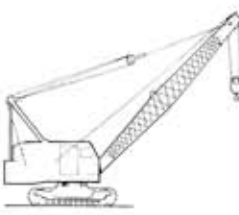

Which of the following affect the strength of the structure?
Manakah yang menyebabkan keteguhan binaan tersebut?

- | | | | |
|-----|---|---|---------------------------------|
| I | The materials
<i>Bahan binaan</i> | | |
| II | The shape
<i>Bentuk binaan</i> | | |
| III | The base area
<i>Keluasan tapak binaan</i> | | |
| IV | The height
<i>Ketinggian binaan</i> | | |
| A | I and II
<i>I dan II</i> | B | II and III
<i>II dan III</i> |
| C | I and III
<i>I dan III</i> | D | III and IV
<i>III dan IV</i> |

| Lihat sebelah
 SULIT

Qu	Theme/Year/L.Area	L.Objectif	Cognitive	Level	Answer	Notes
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29. Which of the following is correctly matched?
Antara berikut, padanan manakah betul?

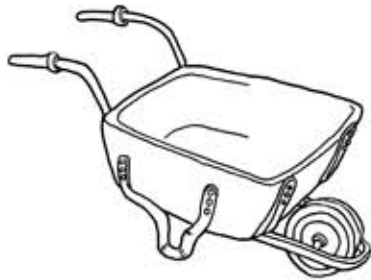
	Object <i>Objek</i>	Simple Machine <i>Mesin ringkas</i>
A		Wedge <i>Baji</i>
B		Lever <i>Tuas</i>
C		Inclined plane <i>Satah condong</i>
D		Pulley <i>Takal</i>

Question Number			Domain	Difficulties		
30	DT/6/1.2.1	1.2.1		medium		MRS

30. Which complex machine consists of the simple machines below?
Mesin kompleks manakah mempunyai mesin-mesin ringkas di bawah?

- Gear
Gear
- Wheel and axle
Roda dan gandar
- Lever
Tuas

A



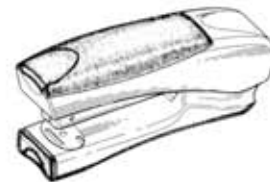
B



C



D



NO. KAD PENGENALAN /
NO SIJIL KELAHIRAN

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

ANGKA GILIRAN

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



JABATAN PELAJARAN
NEGERI SEMBILAN DARUL KHUSUS

UJIAN CANANG 2 TAHUN 2010

SCIENCE

018

Bahagian B

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. Tulis **nombor kad pengenalan** atau **nombor sijil kelahiran** dan **angka giliran** kamu pada petak-petak yang disediakan.
2. Jawapan kamu hendaklah ditulis pada ruang yang disediakan dalam kertas soalan ini.
3. Kamu dibenarkan menjawab **keseluruhan** atau **sebahagian** soalan sama ada dalam bahasa Inggeris atau bahasa Melayu.

<i>Untuk Kegunaan Pemeriksa</i>		
Nama Pemeriksa :		
Soalan	Markah Penuh	Markah Diperolehi
1	5	
2	4	
3	5	
4	3	
5	3	
JUMLAH		

Kertas soalan ini mengandungi 11 halaman bercetak.

Section B
Bahagian B

[20 marks]

[20 markah]

Answer **all** questions. Write your answers in the space provided.

Jawab semua soalan. Tuliskan jawapan kamu dalam ruang yang disediakan.

1. Mohd Haziq performed three types of activities. Number of heartbeat was recorded in Table 1.

Mohd Haziq telah melakukan tiga jenis aktiviti. Bilangan degupan jantung telah direkodkan dalam Jadual 1.

Type of activity <i>Jenis aktiviti</i>	Number of heartbeats in one minute <i>Bilangan degupan jantung dalam seminit</i>
Resting <i>Berehat</i>	60
Walking <i>Berjalan</i>	75
Running <i>Berlari</i>	90

Table 1

Jadual 1

- (a) In this investigation :
Dalam penyiasatan ini :

- (i) What is changed (manipulated variable)?
Apakah yang diubah (pembolehubah dimanipulasi)?

[1 mark]

[1 markah]

- (ii) What is kept the same (constant variable)?
Apakah yang ditetapkan (pembolehubah dimalarkan)?

[1 mark]

[1 markah]

[Lihat sebelah

- (b) State one relationship (hypothesis) between the variable that is changed (manipulated) and the variable that is observed (responding), that can be made in this investigation.

Nyatakan satu hubungan (hipotesis) antara pembolehubah yang dimanipulasikan dengan pembolehubah bergerak balas yang boleh dibuat dalam penyiasatan ini.

[1 mark]

[1 markah]

- (c) Predict the number of heartbeats in one minute for the jumping activity.

Ramalkan bilangan degupan jantung dalam satu minit bagi aktiviti melompat.

[1 mark]

[1 markah]

- (d) What is the purpose (aim) of this investigation?

Apakah tujuan penyiasatan ini?

[1 mark]

[1 markah]

2. Diagram 2 shows three different types of rods K, L and M. Each rod is attached with a thumbtack using wax. Then the rods are heated.

Rajah 2 menunjukkan tiga batang rod K, L dan M yang berlainan jenis. Setiap rod telah dilekatkan dengan paku tekan menggunakan lilin. Kemudian rod tersebut dipanaskan.

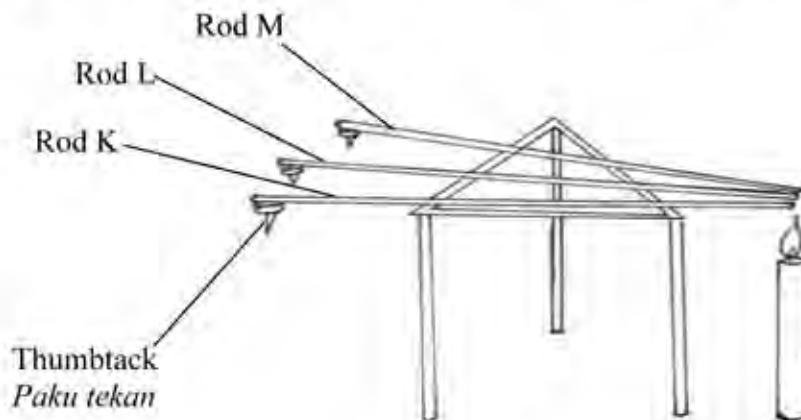


Diagram 2
Rajah 2

The time taken for the thumbtacks to fall is shown in Table 2.

Masa yang diambil untuk paku tekan jatuh ditunjukkan dalam Jadual 2.

Rod	Time taken for the thumbtack to fall down (seconds) <i>Masa yang diambil untuk paku tekan jatuh (saat)</i>
K	90
L	60
M	140

Table 2
Jadual 2

- (a) State **one** reason (inference) about the time taken for thumbtack to fall down from rod M.

*Nyatakan **satu** sebab (inferens) tentang masa yang diambil untuk paku tekan jatuh daripada rod M.*

[1 mark]

[1 markah]

! Lihat sebelah

- (b) What is the aim of this investigation?
Apakah tujuan penyiasatan ini?

[1 mark]
[1 markah]

- (c) State **one** variable that was observed (responding variable) in this investigation?
*Nyatakan **satu** pembolehubah yang bergerak balas dalam penyiasatan ini?*

[1 mark]
[1 markah]

- (d) What conclusion can be made from this investigation?
Apakah kesimpulan yang boleh dibuat berdasarkan penyiasatan?

[1 mark]
[1 markah]

3. Maimunah hung a towel under the Sun. She measured the mass of the towel every 20 minutes. Diagram 3 shows the observation.

Maimunah menjemur sehelai tuala di bawah cahaya matahari. Dia mengukur jisim tuala tersebut setiap 20 minit. Rajah 3 menunjukkan penyiasatan itu.

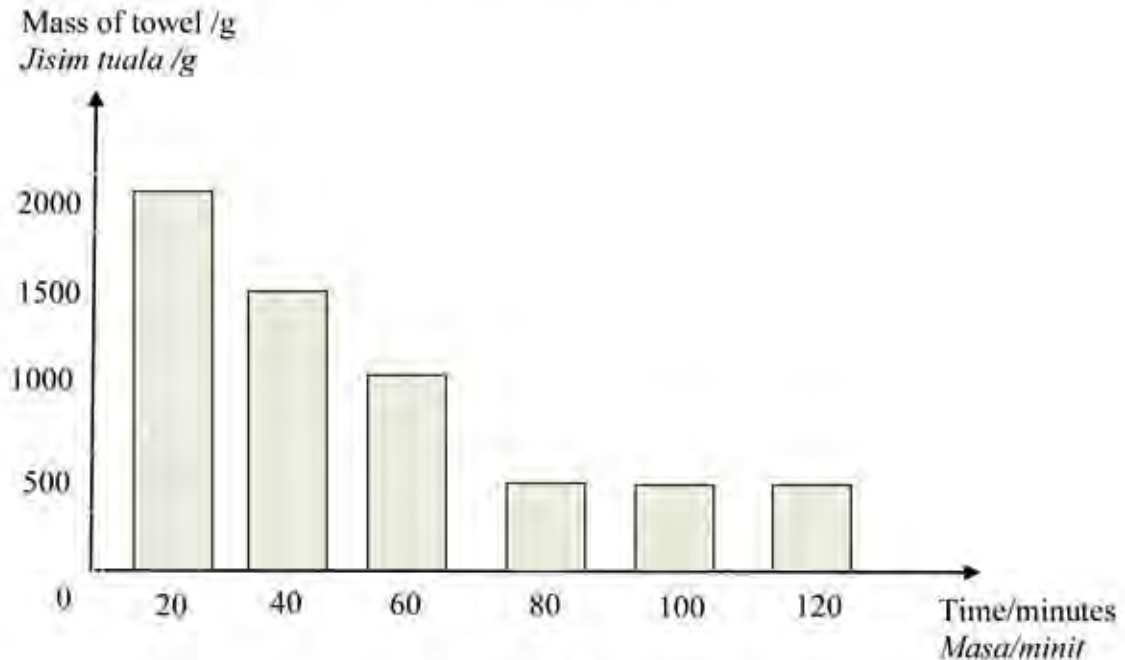


Diagram 3
Rajah 3

- (a) What is the purpose (aim) of this investigation?
Apakah tujuan penyiasatan ini?

[1 mark]
[1 markah]

- (b) What is the trend of change in the mass of towel in Diagram 3?
Apakah corak perubahan jisim tuala dalam Rajah 3?

[1 mark]
[1 markah]

| Lihat sebelah

- (c) What will happen to the mass of towel when the investigation continues until 140 minutes?
Apakah akan berlaku ke atas jisim tuala apabila penyiasatan ini disambung sehingga 140 minit?

[1 mark]
[1 markah]

- (d) State **one** reason (inference) based your answer in (c).
Nyatakan satu sebab (inferens) berdasarkan jawapan di (c).

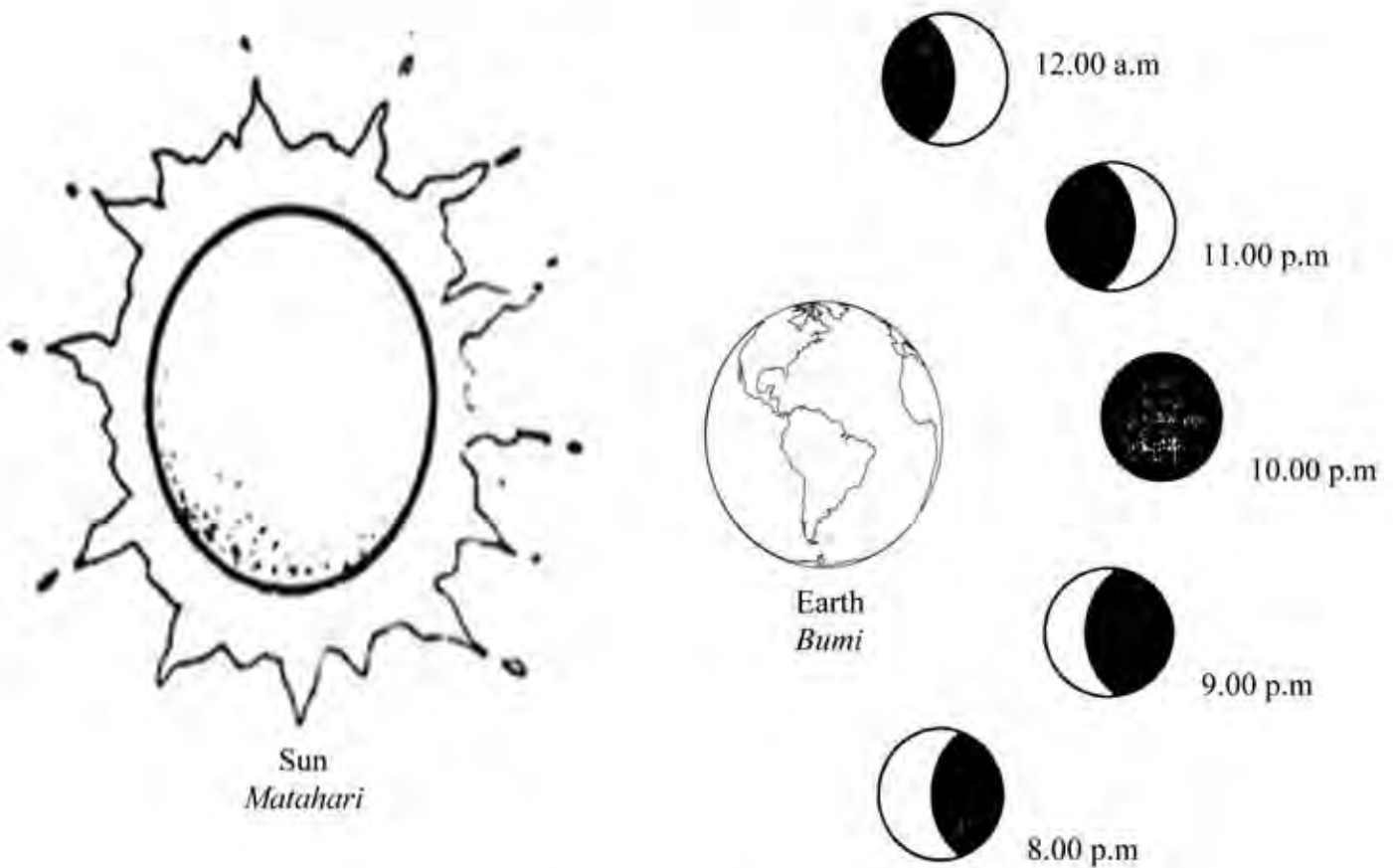
[1 mark]
[1 markah]

- (e) What conclusion can be made from this investigation?
Apakah kesimpulan yang boleh dibuat daripada penyiasatan ini?

[1 mark]
[1 markah]

4. A group of pupils investigated an eclipse of the moon. Diagram 4 shows the shapes of different stages of the eclipse.

Sekumpulan murid menjalankan penyiasatan tentang gerhana bulan. Rajah 4 menunjukkan bentuk-bentuk bagi peringkat-peringkat yang berlainan tentang gerhana itu.



*Diagram 4
Rajah 4*

- (a) What is the purpose (aim) of this investigation?
Apakah tujuan penyiasatan ini?

[1 mark]
[1 markah]

| Lihat sebelah

- (b) State the trend in the changes of brightness of the Moon from 8.00 p.m to 12.00 a.m.
Nyatakan corak perubahan kecerahan Bulan dari pukul 8.00 p.m hingga 12.00 a.m.

[1 mark]
[1 markah]

- (c) State **one** information gathered in this investigation.
*Nyatakan **satu** maklumat yang dikumpulkan dalam penyiasatan ini.*

[1 mark]
[1 markah]

5. Diagram 5 shows an investigation carried out by a group of pupils.
Rajah 5 menunjukkan penyiasatan yang dibuat oleh sekumpulan pelajar.

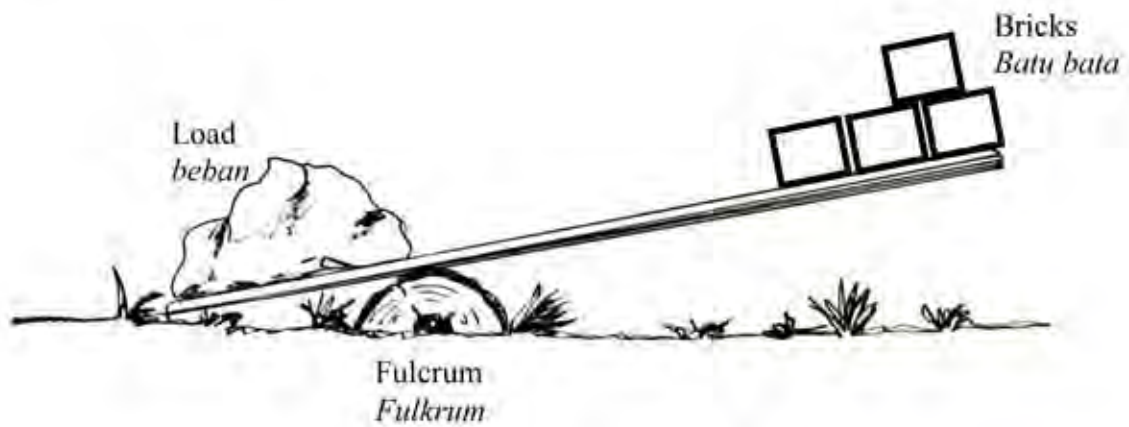


Diagram 5
Rajah 5

They used a lever to lift a load with different distances of fulcrum from the load.
 Table 5 shows the results of the investigation.

Mereka menggunakan tuas untuk mengangkat beban dengan berlainan jarak fulcrum dari beban. Jadual 5 menunjukkan keputusan penyiasatan itu.

Distance of fulcrum from the load (cm) <i>Jarak fulcrum dari beban (cm)</i>	20	30	40	50	60
Number of bricks needed to lift up the load <i>Bilangan bata diperlukan untuk mengangkat beban</i>	4	6	8	10	12

Table 5
Jadual 5

| Lihat sebelah

- (a) What is the purpose (aim) of this investigation?
Apakah tujuan penyiasatan ini?

[1 mark]
[1 markah]

- (b) What is kept the same (constant variable) in this investigation?
Apakah pembolehubah dimalarkan dalam penyiasatan ini ?.

[1 mark]
[1 markah]

- (c) State one relationship (hypothesis) between the variable that is changed (manipulated) and the variable that is observed (responding) that can be made in this investigation.
Nyatakan satu hubungan (hipotesis) antara pembolehubah yang dimanipulasikan dengan pembolehubah bergerak balas yang boleh dibuat dalam penyiasatan ini.

[1 mark]
[1 markah]

END OF QUESTION PAPER
KERTAS SOALAN TAMAT