Kertas skema pemarkahan ini mengandungi 9 halaman bercetak

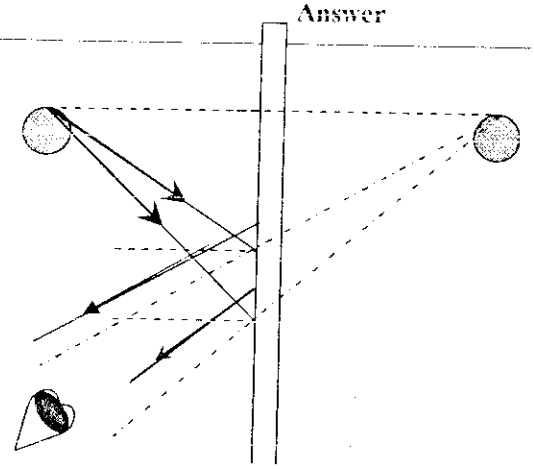
MARKING SCHEME / PERATURAN PEMARKAHAN

SCIENCE PAPER 1 / SAINS KERTAS 1

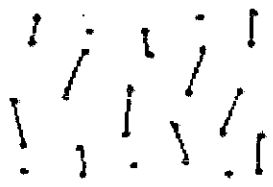
1 C	11 A	21 B	31 A	41 C
2 A	12 A	22 A	32 B	42 D
3 B	13 C	23 B	33 C	43 D
4 C	14 D	24 C	34 D	44 B
5 D	15 B	25 D	35 D	45 B
6 C	16 C	26 B	36 C	46 C
7 A	17 D	27 D	37 D	47 B
8 D	18 A	28 C	38 A	48 B
9 B	19 B	29 C	39 A	49 A
10 C	20 A	30 D	40 B	50 A

SCIENCE PAPER 2 / SAINS KERTAS 2

Section A

Question		Answer	Mark
1	a.		2
	b.	Object distance and image distance from the mirror are the same	1
	c.	i. Virtual and upright ii. Same saiz as object	1 1
		TOTAL	5
2	a	30°C	1
	b	All points correct (5-6 points) - 2 marks 3 – 4 points correct - 1 mark	2
	c	The number of microbes decrease when the temperature is higher.	1
	d	9 // 8 // 7 // 6 // 5 // 4 // 3 // 2 // 1 // 0	1
		TOTAL	5
3	a	Volume of alcohol	1
	b	As the temperature increase, the volume of alcohol increase	1
	c(i)	37°C	1
	c(ii)	Fermentation occurs rapidly at 37°C	1
	d	Fermentation is a process where alcohol is produced by fermentation	1
		TOTAL	5
4	a(i)	Able to read the stopwatch reading correctly.	1

		Answer: 6 min	
	a(ii).	Able to state one observation correctly. Sample answer: The stopwatch readings are different.	1
	b	Able to state one manipulated variable. Answer: Mass of object	1
	c	Able to state the hypothesis correctly. Sample answer: The higher the mass of object, the longer the time taken for the object to swing // The higher the mass of object, the higher the inertia.	1
	d	Able to mark the vehicle which has the highest inertia correctly. [Mark next to the car]	1
		TOTAL	5
		Section B	
5	a)	X : Sensory Neurone *Neuron deria* Y : Motor neurone *Neuron motor* Z: Spinal cord *Saraf tunjang*	1 1 1
	b)	Reflex action Tindakan refleks	1
	c)	To prevent injury *Untuk mencegah kecederaan*	1
	d)	Spinal cord/ *Saraf tunjang*	1
		TOTAL	6
6	a	The number of proton	1
	b(i)	Q, T	1
	(ii)	R	1
	c	U	1
	d	S,T	1

	c	Metal	1
		TOTAL	6
7	a	i) Beta / β ii) Gamma/$\acute{c}$	1 1
	b	<table><tr><td>Beta//Q// β</td><td>Gamma//R//$\acute{c}$</td></tr></table>	2
	c	Kill cancer cells	1
	d	Cause mutation/ cancer / kills body cells/ death	1
			6
8	a.	*P* : Copper Q : Zinc	1 1
	b.	Alloying	1
	c.	i. Strong and hard	1
		ii. The foreign atoms change the arrangement of the atoms of main metal and prevent them from sliding over one anotner.	1
	d.	The metal is soft // its shape is easily changed	1
		TOTAL	6
9	a	Able to state the type of plastic correctly. Answer: Thermoset	1
	b	Able to mark the polymer chain correctly. Answer: mark next to cross-linkage polymer chain 	1
	c	Able to state the characteristics of the plastic correctly Sample answer:	1

		1. Cannot be remoulded // moulded only once // cannot be reshaped // hard //do not bend //do not burn easily	
	d	Able to state the effect of improper disposal of plastic on environment correctly. Sample answer: 1 environmental polation 2. clogged drain	1
	c	Able to state two correct ways to dispose plastic correctly. Sample answer: 1 Reuse 2 Burn in the incinerator 3 recycle	2
		TOTAL	6
		Section C	
10	a	Hypothesis / Hipotesis : Different metals shows different reactivity with dilute acid *Logam-logam yang berlainan menunjukkan kereaktifan tindak balas yang berbeza dengan asid cair.*	1
	b	(i) Aim / Tujuan: To study the reactivity of metals towards acid. *[Untuk mengkaji kereaktifan logam terhadap asid]*	1
		ii) Variables [Pembolehubah]: Constant : Concentration of acid // quantity/mass of metal *[dimalarkan]* : *[Kepekatan asid // Kuantiti jisim logam]* Manipulated : Type of metal *[dimanipulasikan] :[jenis logam]* Responding : Reactivity of metal *[bergerak balas] : [Kereaktifan tindak balas logam]* Any two correct [Mana-mana 2 betul]	2
		iii) List of apparatus and materials [Senarai radas dan bahan] : Magnesium powder, aluminium powder, zink powder, copper powder, dilute hydrochloric acid, test tube, test tube rack *[Serbuk Magnesium, serbuk aluminium, serbuk zink, serbuk kuprum, asid hidroklorik cair, tabung uji, rak tabung uji]*	1

iv) Prosedur [Kaedah] :

1. Four test tubes A, B, C and D are prepared and labeled
[Empat tabung uji A, B, C dan D disediakan dan dilabelkan] — 1
2. 5 cm^3 of dilute hydrochloric acid is poured into each test tube respectively
[5 cm^3 asid hidroklorik cair dituskan ke dalam setiap tabung uji] — 1
3. In each of the test tubes, 5 cm of magnesium powder, aluminium powder, zinc powder and copper powder is added into the dilute asid.
[Di dalam setiap tabung uji, 5 cm serbuk magnesium, serbuk aluminium, serbuk zink dan serbuk kuprum ditambahkan ke dalam asid cair] — 1
4. The reactivity of metal is observed and the result is recorded in a table
[Kereaktifan logam diperhatikan dan *keputusan dicatat dalam sebuah jadual.*] — 1

v) Tabulation of data *[Penjadualan data]* :

Type of metal *[Jenis logam]*	Reactivity of metal *[Kecergasan tindak balas logam]*
Magnesium	
Aluminium	
Zinc	
Copper	

1

TOTAL 10

11 a Able to give four effect of extensive logging activity to the environment correctly.
1. Extinction of certain species of floras and faunas — 1
2. Soil erosion during heavy downpour — 1
3. Landslides on slopes — 1
4. Global warming due to the increase of carbon dioxide in the atmosphere — 1

Able to identify the problem correctly. — 1
The problem is gasses produce by factory causes air pollution.

b Able to explain two methods to solve the problem.
Samples answer
1. By controlling the use of fossil fuels.
less gasses produces by the factory — 1
2. Using higher chimney.
Gasses produces by the factory will be swept away by the wind more quickly. — 1
3. Using the filter or catalytic converter to filter the gasses.
gasses produces by factory less harmful and less polluted to the environment — 1

Any two answer

Able to choose the best method and give the reason correctly. — 1
Sample answer
1. By controlling the use of fossil fuel to reduce air pollution.
2. Using the higher chimney to reduce air pollution.
3. Using the filter to reduce air pollution.

			1 --- 10
12	a	Four differences between meiosis and mitosis. Meiosis / mitosis 1 To form gametes / - To form somatic cells 2 Happen in testes / ovary/ Anther / - happen in somatic cell/ tip of root/ shoot 3 Cell division occur twice / - Cell division occur once 4 Four daughter cells are produced / - two daughter cells are Produced 5 Number of chromosomes in daughter cells is half Compared to parents cell / - Number of chromosomes in daughter cells is the same compared to parents cell 6 crossing over occurs / - No crossing over Any 4 answers	4
	b	Two common characteristics: • Caused by environmental factors • Do not show obvious variation in trait among individuals of the same species. One other example of continuous variation: • Height Two examples of discontinuous variation: • Blood group // ear lobe • Fingerprint // ability to roll the tongue Relate the common characteristics to construct the concept of continuous variation : Sample swer: Continuous variation refers to characteristics which do not show obvious variation in a trait among individuals of the same species and caused by the environmental factors.	1 1 1 1 1 1 --- 10

