JAWAPAN

Bab 5 Jirim
Matter

5.1 Jirim Dalam Alam
Matter in Nature

1. (b), (d), (f)

2. (a) Benar / *True*
(b) Palsu / *False*
(c) Benar / *True*
(d) Palsu / *False*

3. (a) Sifat fizik / *Physical property*
(b) Sifat kimia / *Chemical property*
(c) Sifat fizik / *Physical property*
(d) Sifat kimia / *Chemical property*

4. (a) cecair, gas / *liquid, gas*
(b) Ais / *Ice*
(c) pepejal / *solid*
(d) pelarut / *solvent*
(e) Kaca / *Glass*

5.

Terapung / Tenggelam dalam cecair *Floats / Sinks in liquid*				
Cecair *Liquid*	***A***	***B***	***C***	***D***
A		Tenggelam *Sinks*	Tenggelam *Sinks*	Tenggelam *Sinks*
B	Terapung *Floats*		Tenggelam *Sinks*	Tenggelam *Sinks*
C	Terapung *Floats*	Terapung *Floats*		Tenggelam *Sinks*
D	Terapung *Floats*	Terapung *Floats*	Terapung *Floats*	

5.2 Tiga Keadaan Jirim
Three States of Matter

1. halus, diskret, bergerak / *discrete, fine, move*

2. (a) Pepejal / *Solid*
(b) Cecair / *Liquid*
(c) Gas / *Gas*

3. (a) Pepejal / *Solid*
(b) (i), (iii), (iv)

4.

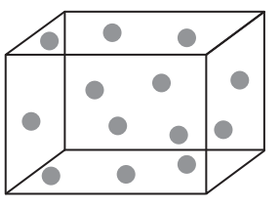
	Susunan zarah *Arrangement of particles*	**Pergerakan zarah** *Movement of particles*
(a)	rapat *closely*	Bergetar *Vibrate*
(b)	rapat *closely*	Bebas, berlanggar *freely, collide*
(c)	berjauhan *far*	rawak, berlanggar *randomly, collide*

5. **Hipotesis:** rendah, tinggi
Hypothesis: *low, high*

Pemboleh ubah / *Variables*:
(a) Suhu / *Temperature*
(b) Medium resapan / *Diffusion medium*
(c) Kadar resapan / *Rate of diffusion*

Keputusan / *Results*:
A: biru / *blue*
B: biru / *blue*

Perbincangan / *Discussion*:
1. Resapan / *Diffusion*
2. pepejal, pepejal , rapat, kecil / *Solid, solid, close, small*
3. (a)



(b) Kurang daripada 15 minit / *Less than 15 minutes*

Kesimpulan / *Conclusion*:
1. diterima / *accepted*
2. rendah, tinggi / *low, high*

6.

	Proses *Process*	**Haba (diserap / dibebas)** *Heat is (absorbed / released)*
(a)	Peleburan *Melting*	diserap *absorbed*
(b)	Kondensasi *Condensation*	dibebaskan *released*
(c)	Penyejatan *Evaporation*	diserap *absorbed*
(d)	Pembekuan *Freezing*	dibebaskan *released*
(e)	Pemejalwapan *Sublimation*	diserap *absorbed*

7. (a) NO. 100°C
(b) (i) Ais + air / *Ice + water*
(ii) Air + gas / *Water + gas*
(c) diserap, daya tarikan
absorbed, attractive forces
(d) bergetar, tetap, bebas, berlanggar
vibrate, fixed, freely, collide
(e) 30, kekal sama, fizikal
30, remains the same, physical

Power PT3

Bahagian A

1. A **2.** C **3.** C **4.** B **5.** D

Bahagian B

1. (a) *P*: Peleburan / *Melting*
Q: Kondensasi / *Condensation*
(b) (i) penyerapan haba / *absorption of heat*
(ii) cepat / *faster*

2. (a) (ii), (iii)
(b) (i) pendidihan / *boiling*
(ii) mendidih / *boils*

Bahagian C

3. (a) (i) Kunci besi / *Iron key*
(Terima jawapan lain yang sesuai / *Accept other suitable answer*)
(ii) Berkarat apabila terdedah kepada air dan udara.
Rusts when it is exposed to water and air.
(Terima jawapan lain yang sesuai / *Accept other suitable answer*)
(b) (i) Apabila mencampurkan dua jenis larutan yang sama, isi padu akhirnya adalah 50 cm^3. Hal ini kerana larutan yang sama mempunyai saiz molekul yang sama. Apabila mencampurkan dua jenis larutan yang berlainan, isi padu akhirnya adalah kurang daripada 50 cm^3. Hal ini kerana saiz molekul yang berbeza. Molekul bersaiz kecil mengisi ruang-ruang antara molekul bersaiz besar.
When mixing two same types of solutions, the final volume is 50 cm^3. This is because the same solution has the same size of molecules. When mixing two different types of solutions, the final volume is less than 50 cm^3. This is because of the different sizes of molecules. Small-sized molecules fill the space between large molecules.
(ii) Isi padu larutan / *Volume of the solution*
(c) (i) Takat didih ialah suhu apabila suatu cecair berubah menjadi gas pada tekanan tertentu. Suhu tidak berubah semasa pendidihan air kerana haba yang diserap digunakan untuk mengatasi daya tarikan antara zarah-zarah.
The boiling point is the temperature when a liquid turns into gas at a certain pressure. The temperature does not change during the boiling of water because the heat absorbed is used to overcome the attraction forces between the particles.
(ii) Takat didih larutan garam adalah lebih tinggi berbanding air suling. Larutan garam merupakan suatu campuran air dan garam. Kehadiran garam (bendasing) meningkatkan nilai takat didih air. Lebih banyak tenaga diperlukan.
The boiling point of the salt solution is higher than the distilled water. The salt solution is a mixture of water and salt. The presence of salt (impurity) increases the value of the boiling point of water. More energy is needed.

PRAKTIS TIMSS / PISA

100°C.

Takat didih air ialah 100°C.
The boiling point of water is 100°C.

Power KBAT

1. Dapat diperhatikan bahawa paras air di dalam gelas menurun. Ini kerana air digantikan oleh udara. Kesimpulannya, udara dapat memenuhi ruang.
It can be observed that the water level in the glass goes down. This is because the water is replaced by air. Therefore, it can be concluded that air occupies space.

2.