PEPERIKSAAN PERCUBAAN

TINGKATAN 5

BIOLOGI 4551/3

KERTAS 3

45 Minit **Empat Puluh Lima Minit**

PERATURAN PEMARKAHAN

BIOLOGI KERTAS 3

4551/3

Soalan	Jawapan	Markah	Jumlah Markah
(a)	(i) Perubahan warna larutan dalam tiub Visking *Change of colour in the Visking tubing* (ii) Isipadu ampaian kanji / Isipadu air suling/ Isipadu larutan iodin / Tempoh masa rendaman tiub Visking *Volume of starch suspension / Volume of distilled water / Volume of iodine solution/ Duration of soaking the Visking tubing*	1 1	2
(b)	P1: Molekul yang bersaiz kecil / glukosa // Molekul bersaiz Besar / kanji *Small sized molecules / glucose // Large sized Molecules / starch* P2: Dapat meresap / melalui / merentasi // Tidak dapat Meresap / melalui / merentasi *Able to diffuse / go through / pass through // Unable to diffuse/ go through/ pass through* P3: Membrane telap memilih/ tiub Visking *Selectively permeable membrane / Visking tubing*	1 1 1	3
(c)	Warna larutan dalam tiub visking berubah dari keruh ke biru tua *The colour in Visking tubing changes from cloudy to blue black*	1	1
(d)	P1: Molekul iodin bersaiz lebih kecil berbanding liang pada tiub Visking. *Iodin molecule is smaller in size compared to the pore of the Visking tubing* P2: (Molekul) iodin meresap masuk (ke dalam tiub Visking) *Iodin (molecule) diffuses into (Visking tubing)* P3: Ampaian kanji bertukar menjadi biru tua *Starch suspension changes to blue black*	1 1 1	2

<table>
<tr><td>(e)</td><td>P1: Membran plasma ialah membran telap memilih
Plasma membrane is a selectively permeable membrane

P2: Hanya membenarkan molekul bersaiz kecil untuk Meresap / melaluinya/ merentasinya // Menghalang molekul bersaiz besar melaluinya / merentasinya
Only allows small sized molecules to diffuse / go Through / pass through // Prevents large sized molecules to diffuse / go through/ pass through</td><td>1

1</td><td>2</td></tr>
<tr><td>(f)</td><td><table>
<tr><th>Bahan
Material</th><th>Radas
Apparatus</th></tr>
<tr><td>Tiub Visking
Visking tubing</td><td>Bikar
Beaker</td></tr>
<tr><td>Ampaian kanji
Starch suspension</td><td>Silinder penyukat
Measuring cylinder</td></tr>
<tr><td>Larutan iodin
Iodin solution</td><td>Jam randik
Stopwatch</td></tr>
<tr><td>Air suling
Distilled water</td><td></td></tr>
<tr><td>Benang
Thread</td><td></td></tr>
</table></td><td>5B+3R =2

3B/2B+ 2R/1R= 1

1B+1R =0</td><td>2</td></tr>
<tr><td>(g)</td><td>Ramalan:
Prediction

P1: Larutan di dalam bikar akan bertukar warna menjadi biru tua.
Solution in the beaker will change to blue black</td><td>1</td><td>3</td></tr>
</table>

	Penerangan: ***Explanation*** P2: (Molekul) iodin mempunyai saiz yang lebih kecil berbanding liang tiub Visking // (Molekul) kanji mempunyai saiz yang lebih besar berbanding liang tiub visking *Iodine (molecule) is smaller in size compared to the pore of the Visking tubing // Starch (molecule) is bigger in size compared to the pore of the Visking tubing* P3: (Molekul) iodin dapat meresap/ merentas / melalui tiub Visking // (Molekul) kanji tidak dapat meresap / merentasi/ melalui tiub Visking *Iodine (molecule) able to diffuse / go through / pass through visking tubing// Starch (molecule) unable able to diffuse / go through/ pass through Visking tubing*	1 1	