



MODUL PINTAS 2024
TINGKATAN 5

4551/3

BIOLOGI
Ujian Amali
Kertas 3

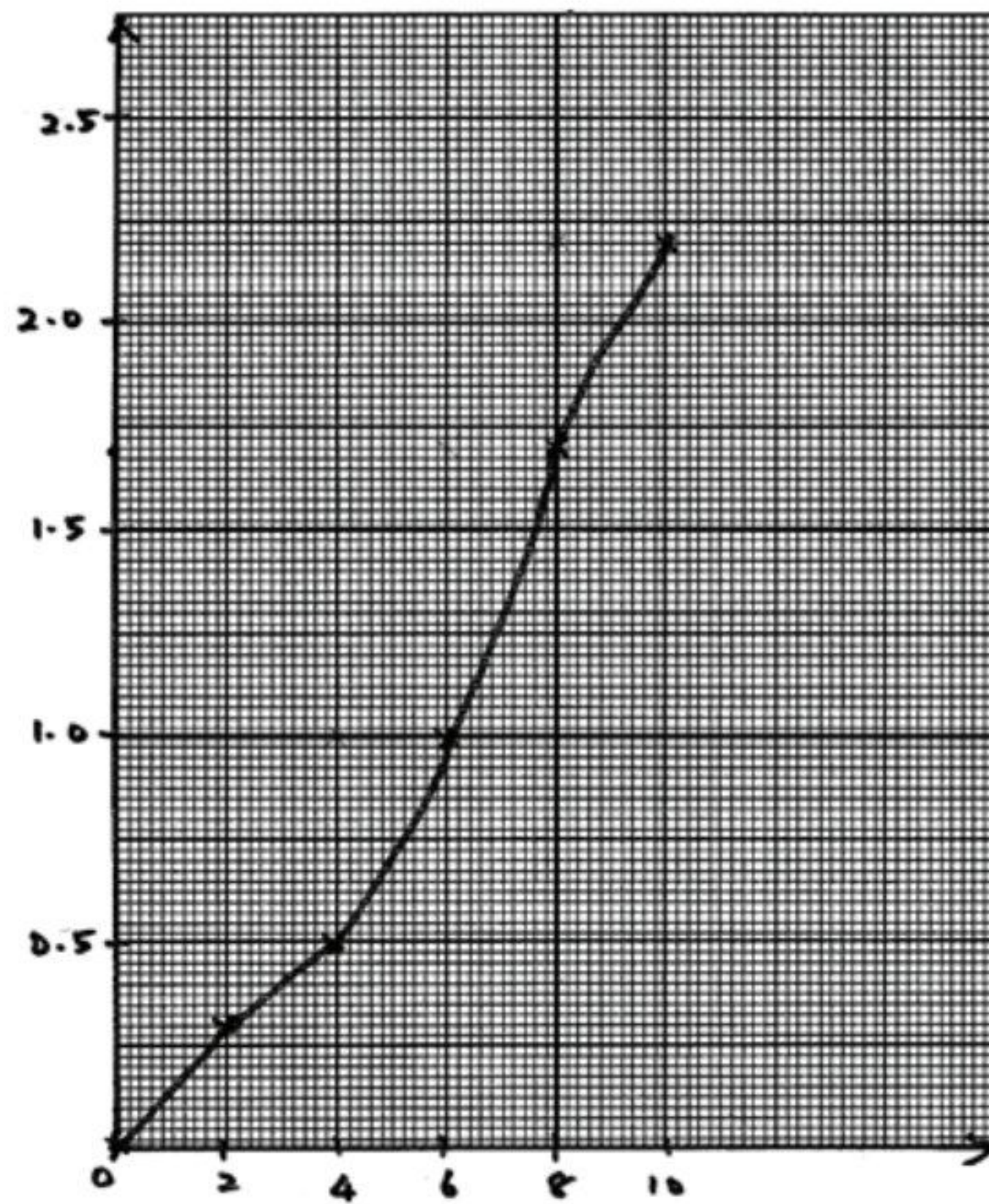
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PERATURAN PEMARKAHAN
BIOLOGI K3
4551/3

No	Skema markah Answer scheme	Markah Marks	Jumlah Total														
(a)	Boleh melengkapkan jadual berdasarkan dua kriteria. <i>Able to complete a table based on two criteria.</i> Jawapan: <i>Answer:</i> <table><tr><td>Masa (minit) Time (minute)</td><td>0</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr><tr><td>Aras larutan sukrosa (cm) Level of sucrose solution (cm)</td><td>0.0</td><td>0.3</td><td>0.5</td><td>1.0</td><td>1.7</td><td>2.2</td></tr></table> PU dimanipulasi + unit <i>Manipulated variable + unit</i> PU bergerak balas + unit <i>Responding variable + unit</i> Bacaan bagi aras larutan sukrosa <i>Reading for level of sucrose solution</i>	Masa (minit) Time (minute)	0	2	4	6	8	10	Aras larutan sukrosa (cm) Level of sucrose solution (cm)	0.0	0.3	0.5	1.0	1.7	2.2	1 1 1	3
Masa (minit) Time (minute)	0	2	4	6	8	10											
Aras larutan sukrosa (cm) Level of sucrose solution (cm)	0.0	0.3	0.5	1.0	1.7	2.2											
(b)	Boleh menyatakan pemboleh ubah: <i>Able to state variables:</i> Jawapan: <i>Answer:</i> (i) dimanipulasikan : Masa <i>Manipulated : Time</i> (ii) bergerak balas : Aras larutan sukrosa 30% <i>Responding : Level of 30% sucrose solution</i> (iii) dimalarkan : Isi padu/ Kepekatan larutan sukrosa <i>Constant : Volume/ concentration of sucrose solution</i>	1 1 1	3														

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Aras larutan sukrosa (cm)
Level of sucrose solution



Masa (minit)
Time (minute)

PU bergerak balas + unit
Responding variable + unit

1

PU dimanipulasikan + unit
Manipulated variable + unit

1

Sambung 6 Titik
Joint 6 Points

1

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(f)	Boleh menyatakan hubungan antara aras larutan sukrosa 30% dengan masa. <i>Able to state the relationship between level of 30% sucrose solution with time.</i> Jawapan: <i>Answer:</i> P1: Semakin bertambah masa, semakin bertambah aras larutan sukrosa 30%. <i>The higher the time, the higher the level of 30% sucrose solution.</i> P2: air meresap masuk ke dalam tiub Visking secara osmosis <i>water diffuses into Visking tubing via osmosis</i> P3: Kerana molekul air bersaiz kecil <i>Because water molecule small in size</i> Mana-mana 2P Any 2P	1 1 1	2
(g)	Boleh menerangkan ramalan aras larutan sukrosa 30% di dalam tiub kapilari jika air suling di dalam bikar digantikan dengan larutan sukrosa 60%. <i>Able to explain the level of 30% sucrose solution in the capillary tube if distilled water in beaker is replace with 60% sucrose solution.</i> Jawapan: <i>Answer:</i> P1: Berkurang/ menurun <i>Decreases/ lower</i> P2: Larutan sukrosa 60% lebih hipertonik berbanding larutan sukrosa 30% <i>60% sucrose solution is more hypertonic than 30% sucrose solution</i> P3: Kepekatan molekul air lebih tinggi dalam tiub Visking berbanding dalam bikar// keupayaan air dalam tiub Visking lebih tinggi berbanding dalam bikar <i>Concentration of water molecule is higher in Visking tubing than in beaker// water potential in beaker is higher than in Visking tubing</i> P4: Menyebabkan air meresap keluar dari tiub Visking <i>Causes water to diffuse out of Visking tubing by osmosis</i> Mana-mana 2P Any 2P	1 1 1 1	2