

**SKEMA PEMARKAHAN BAHAGIAN A KERTAS 2 MODUL 1 2014 MPSM KEDAH**

QUESTION NO		MARKING CRITERIA	SUB MARKS	TOTAL MARKS												
1	(a)	(i) P:Dinding sel Q:Kloroplas R: Mitokondria	1 1 1	3												
		(ii) F 1: P/Dinding sel dibina daripada selulosa P1 :sejenis karbohidrat yang kuat dan tegar. P2 : Memberikan bentuk yang tetap kepada sel.  F2 : P / Dinding sel bersifat telap sepenuhnya P2 : Membolehkan pergerakan bebas masuk bahan dari luar ke dalam sel membolehkan tekanan segar berlaku untuk sel. P3 : sitoplasma terkeluar dari sel  Mana-mana ( F +P)	1 1  1 1	2												
		(iii) P1 – enzim selulase menghidrolisiskan selulosa P2 –untuk menghasilkan glukosa	1 1	2												
(b)	(i)	Perbezaan antara proses dalam Q dan R : <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Proses dalam Q</th> <th style="width:50%;">Proses dalam R</th> </tr> </thead> <tbody> <tr> <td>Memerlukan Karbon dioksida</td> <td>Menghasilkan karbon dioksida</td> </tr> <tr> <td>Memerlukan tenaga</td> <td>Menghasilkan tenaga</td> </tr> <tr> <td>Menghasilkan glukosa</td> <td>Menggunakan / mengurai glukosa</td> </tr> <tr> <td>Memerlukan cahaya</td> <td>Tidak memerlukan cahaya</td> </tr> <tr> <td>Berlaku bila cahaya mencukupi</td> <td>Berlaku pada bila-bila masa</td> </tr> </tbody> </table> Mana-mana 2	Proses dalam Q	Proses dalam R	Memerlukan Karbon dioksida	Menghasilkan karbon dioksida	Memerlukan tenaga	Menghasilkan tenaga	Menghasilkan glukosa	Menggunakan / mengurai glukosa	Memerlukan cahaya	Tidak memerlukan cahaya	Berlaku bila cahaya mencukupi	Berlaku pada bila-bila masa	1 1 1 1	2
Proses dalam Q	Proses dalam R															
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		(ii) P1 – Kepekatan karbon dioksida meningkat. P2 – Karbon dioksida ialah gas rumah hijau. P3 - Gas rumah hijau menyerap haba yang banyak. P4 – Suhu persekitaran meningkat. P5 – Menjana kepada kesan rumah hijau.  Mana-mana 3	1 1 1 1 1	3												

QUESTION NO			MARKING CRITERIA	SUB MARKS	TOTAL MARKS
2	(a)	(i)	<p>Able to name</p> <p>Answer:</p> <ul style="list-style-type: none"> <li>Phase S : Prophase 1</li> <li>Process U : Crossing over</li> </ul>	1 1	2
		(ii)	<p>Able to explain importance of the chromosomal behavior during phase S.</p> <p>Sample Answer:</p> <p>P1-Exchange of genetic material between homologous chromosome</p> <p>P2- produce new genetic combination</p> <p>P3-(crossing over) causes variation</p> <p>P4-This will enhance the ability of survival in different environment.</p> <p style="text-align: right;">Any 3</p>	1 1 1 1	3
	(b)	(i)	<p>Able to complete the diagram of the daughter cells and explain the occurrence</p> <p>Sample answer</p> <div style="text-align: center;"> <p style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>V</span> <span>W</span> </p> </div> <ul style="list-style-type: none"> <li>Drawing : V</li> <li>Drawing : W</li> </ul>	1 1	2
		(ii)	<p>P1-During anaphase II</p> <p>P2-Sister chromatids ( of one chromosome) is not separated</p> <p>P3- Sister chromatid is not pulled by spindle fibre</p> <p>P4- nondisjunction occur</p> <p style="text-align: right;">Any 2</p>	1 1 1 1	2



QUESTION NO		MARKING CRITERIA	SUB MARKS	TOTAL MARKS
3.	(a)	(i) : 50kJ (ii) : 5 kJ	1 1	2
		Tenaga hilang kepersekitaran melalui P1 - proses respirasi P2 - pembuangan bahan kumuh melalui air kencing P3 – pembuangan bahan kumuh melalui penyahtinjaan  Mana-mana 2	1 1 1	2
	(b) (i)	Komponen Biotik :Tumbuhan, ikan, penyu, katak, alga – mana –mana 2  Komponen abiotic :Udara, Air, cahayamatahari, pH tanah- Mana-mana 2	1  1	2
	(ii)	<pre> graph TD     Rumpun --&gt; Papatung     Rumpun --&gt; Ikan_kecil[Ikan kecil]     Rumpun --&gt; Cacing     Papatung --&gt; Katak     Ikan_kecil --&gt; Ikan_besar[Ikan besar]     Cacing --&gt; Ikan_besar     Katak --&gt; Burung     Ikan_besar --&gt; Burung     Rumpun --&gt; Burung   </pre>		3
	(c)	P1 – Pertumbuhan alga menghalang kemasukan cahaya matahari ke dalam sungai  P2- Menghalang proses fotosintesis P3-Oksigen akan berkurang P4-Organisma akan mati  Mana-mana 3	1  1 1 1	3
		Total		12

QUESTION NO		MARKING CRITERIA	SUB MARKS	TOTAL MARKS												
4	(a)	Organism P: Double closed circulatory system Organism Q: Single closed circulatory system	1+1	2												
	(b)	<table border="1"> <thead> <tr> <th></th> <th>Organism P</th> <th>Organism Q</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>Heart has 4 chambers</td> <td>Heart has 2 chambers</td> </tr> <tr> <td>P2</td> <td>has two atriums and two ventricles // has right atrium, left atrium, right ventricle and left ventricle</td> <td>has one ventricle and one atrium // has ventricle and an atrium</td> </tr> <tr> <td>P3</td> <td>heart receives both oxygenated blood and deoxygenated separately</td> <td>heart receives the mixed oxygenated blood and deoxygenated blood.</td> </tr> </tbody> </table> <p style="text-align: right;"><i>Any 1</i></p>		Organism P	Organism Q	P1	Heart has 4 chambers	Heart has 2 chambers	P2	has two atriums and two ventricles // has right atrium, left atrium, right ventricle and left ventricle	has one ventricle and one atrium // has ventricle and an atrium	P3	heart receives both oxygenated blood and deoxygenated separately	heart receives the mixed oxygenated blood and deoxygenated blood.	1	1
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P1	Heart has 4 chambers	Heart has 2 chambers														
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P3	heart receives both oxygenated blood and deoxygenated separately	heart receives the mixed oxygenated blood and deoxygenated blood.														
	(c)	F : contraction of ventricle/ heart E1: generates a (high) pressure E2: (to) propel/ force/ pump the blood flow from the heart/ ventricle to vessel A  <i>Any 2</i>	1 1 1	2												
	(d) (i)	Individual A: Artificial/ (Acquired) active immunity Individual B: Artificial/ (Acquired) passive immunity	1 1	2												
	(ii)	P1 : The first dose results the production of low level of Antibody // the concentration of antibody still not reach the immunity level P2: Second dose is needed to stimulate lymphocyte to produce more antibodies P3: until it reaches the immunity level. P3: that protects the person against the disease.  <i>Any 2</i>	1 1 1 1	2												

	(e)		P1 : HIV weakens the immune system P2 : By attacking helper T cell (which coordinates the immune system.) P3 : Helper T cells are essential to activate other lymphocytes in the body immunity. P4 : HIV also attack the central nervous system P5 : Decrease in the function of nervous system. P6 : The patient can expose himself to secondary infections. <i>Any 3</i>	1 1 1 1 1 1	3
			Total		12 m
5	(a)	(i)	Ultrafiltration	1	1
		(ii)	F: High hydrostatic pressure	1	2
			P1: caused by the bigger diameter of the afferent arteriole compared to the efferent arteriole	1	
			P2: many constituents of the blood to be filtered out into the Bowman's capsule.	1	
			<i>Any two</i>		
	(b)		P1: Glucose and amino acids are reabsorbed at Q. P2: Glucose / amino acid is present in Q but absent in R. P3: R contain more urea / uric acid / ammonia compared to Q. <i>Any 2</i>	1 1 1	2
	(c)	(i)	ADH // Antidiuretic hormone	1	1
		(ii)	During hot day, more sweat is produced	1	3
			the blood osmotic pressure is high	1	
			More ADH is secreted by pituitary gland	1	
			Increases the permeability of collecting duct to water	1	
			More water is reabsorbed	1	
			Blood osmotic pressure back to normal.	1	
			Less urine produced // urine becomes more concentrated	1	
			<i>Any 3</i>		
	(d)		The concentration of urea and salts are higher in the blood compared to dialysis fluid	1	3
			As the blood flow through the coiled tubing / dialysis machine, excess urea and salts diffuse across the tubing walls into dialysis fluid	1	
			Therefore, urea and excess salts can be removed from the patient's blood	1	
			Osmotic pressure can be maintained at normal level	1	
			<i>Any 3</i>		
			Total:		12 m