

Bahagian B

9a.i	Dapat menamakan struktur T dan nyatakan fungsinya. <i>Able to name structure T and state the function correctly</i> Jawapan <i>Answer</i> T : Nodus sinoatrium (SAN) <i>Sinoatrium node</i> Fungsi Menjana impuls saraf <i>Generates nerve impulses</i>	1 1	2
9a.ii	Dapat membincangkan bagaimana T berfungsi dalam pengepaman jantung. <i>Able to discuss how T works in the pumping of the heart.</i> Contoh jawapan <i>Sample answers</i> P1:Nodus sinoatrium menjana impuls saraf. <i>Sinoatrium node generates nerve impulses</i> P2:Impuls saraf merebak dengan cepat dalam kedua-dua atrium <i>Nerve impulses spread rapidly in both atria</i> P3:Atrium mengecut secara serentak <i>Both atria contract simultaneously</i>	1 1 1	

Terima kasih kepada follower channel telegram
 @soalanpercubaanspm atas perkongsian.

	P4: Pengecutan atrium membantu mengepam darah ke dalam ventrikel <i>Contraction of atria helps pump blood into ventricles.</i> P5: Impuls saraf merebak dari bahagian apeks jantung ke seluruh dinding ventrikel. <i>Nerve impulses spread from the apex from the heart to the entire ventricle wall.</i> P6: Ventrikel mengecut untuk mengepam darah keluar ke paru-paru dan badan <i>The ventricles contract to pump blood out to the lungs and body.</i> Mana mana empat P Any four P	1	
		1	
		1	
			4
9b	Dapat menerangkan tentang punca-punca penyakit kardiovaskular <i>Able to explain the causes of cardiovascular disease.</i> Contoh jawapan <i>Sample answers</i> P1: Merokok meningkatkan risiko menghidap penyakit kardiovaskular. <i>Smoking increases the risk of developing cardiovascular diseases.</i> P2: Asap rokok mengandungi nikotina <i>Cigarette smoke contain nicotine</i> P3: boleh merosakkan dan menyempitkan salur arteri. <i>Can damage and narrows the arteries</i> P4: Sekiranya arteri koronari menjadi sempit, kekurangan bekalan oksigen ke otot jantung, boleh menyebabkan angina <i>If the coronary arteries become narrow, lack of oxygen supply to the heart muscles, can cause angina.</i> P5: Asap rokok mengandungi karbon monoksida. <i>Cigarette smoke contain carbon monoxide.</i> P6: Karbon monoksida bersaing dengan oksigen untuk bergabung dengan hemoglobin membentuk karboksihemoglobin. <i>Carbon monoxide competes with oxygen to combine with hemoglobin to form carboxyhemoglobin.</i> P7: Menjejaskan kecekapan pengangkutan oksigen. <i>Affects oxygen transport efficiency.</i>	1	
		1	
		1	
		1	
		1	
		1	
		1	
		1	
		1	

	P8:Diet yang tidak seimbang ialah makanan yang kaya dengan lemak dan karbohidrat. <i>Unbalanced diet are foods rich with fats and carbohydrates.</i> P9:Pengambilan diet yang tidak seimbang menyebabkan obesiti. <i>Unbalanced diet cause obesity.</i> P10:Kolesterol membentuk plak pada dinding arteri boleh menyebabkan aterosklerosis. <i>Cholesterol forms plaques on the artery walls which can cause atherosclerosis.</i> P11: Serangan jantung dan strok berlaku apabila darah tidak dapat dihantar ke otak dan jantung. <i>Heart attacks and strokes occur when blood cannot be delivered to the brain and heart.</i> P12:Kurang senaman fizikal dan gaya hidup yang kurang pergerakan. <i>Lack of physical exercise and a sedentary lifestyle.</i> P13:Menyebabkan obesity /stress/ tekanan darah tinggi / serangan jantung. <i>Causes obesity / stress / high blood pressure / heart attack.</i> Mana mana 10P Any 10P	1	
		1	
		1	
		1	
		1	
			10
c.	Dapat membanding dan membezakan antara bendalir tisu dengan limfa. <i>Able to compare and contrast between tissue fluid and lymph.</i> Contoh jawapan <i>Sample answers</i> Persamaan <i>Similarities</i> S1:Kedua-duanya mengandungi plasma tanpa protein plasma <i>Both contain plasma without plasma proteins.</i> S2:Kedua-duanya tidak mengandungi eritrosit. <i>Both have no erythrocytes.</i> S3:Kedua-duanya tidak mengandungi platlet. <i>Both have no platelets.</i>	1	
		1	
		1	

	Perbezaan <i>Differences</i>			
	Limfa / <i>Lymph</i>	Bendalir tisu/ <i>Tissue fluid</i>	1	
	D1. Kandungan lemak dan bahan larut lemak yang lebih tinggi. <i>Higher fat and fat soluble content.</i>	D1. Kandungan lemak dan bahan larut lemak yang rendah. <i>Lower fat and fat soluble content.</i>	1	
	D2. Kandungan limfosit yang tinggi. <i>High lymphocyte content.</i>	D2. Kandungan limfosit yang rendah. <i>Low lymphocyte content.</i>		4
	2S+2D 3S+1D Jumlah			20

SOALAN 8

No.	Mark Scheme Skema Markah	Markah Mark	Jumlah Total										
(a)	Dapat menyatakan peranan R untuk memastikan jantung berfungsi dengan cekap. <i>Able to state the role of R to ensure the heart functioning efficiently.</i> Sample Answer: <i>Contoh Jawapan:</i> P1: Memisahkan bahagian jantung kiri dan jantung kanan. <i>Separate the left heart and right heart.</i> P2: Memastikan darah beroksigen dan darah terdeoksigen tidak bercampur <i>Ensure oxygenated blood and deoxygenated blood do not mix</i> Mana-mana satu <i>Any one</i>	1 1	1										
(b)(i)	Dapat menerangkan bagaimana darah beroksigen diangkut dari jantung ke seluruh badan dengan betul. <i>Able to explain how oxygenated blood is transported from the heart to the whole body correctly.</i> Sample Answers: <i>Contoh Jawapan:</i> <table border="1"><tr><td>P1:</td><td>Vena pulmonari/P mengangkut darah beroksigen dari peparu ke atrium kiri. <i>The pulmonary vein/ P transports oxygenated blood from the lungs to the left atrium.</i></td></tr><tr><td>P2:</td><td>Melalui injap bikuspid yang terbuka. <i>Through the bicuspid valve that open.</i></td></tr><tr><td>P3:</td><td>Darah beroksigen memasuki ventrikel kiri <i>Oxygenated blood enters the left ventricle.</i></td></tr><tr><td>P4:</td><td>Dan melalui injap sabit yang terbuka. <i>And through the semilunar valve that open</i></td></tr><tr><td>P5:</td><td>Darah beroksigen dipam keluar ke seluruh badan melalui aorta. <i>Oxygenated blood is pumped out to the rest of the body through the aorta.</i></td></tr></table> Mana-mana 3 markah <i>Any 3 points</i>	P1:	Vena pulmonari/P mengangkut darah beroksigen dari peparu ke atrium kiri. <i>The pulmonary vein/ P transports oxygenated blood from the lungs to the left atrium.</i>	P2:	Melalui injap bikuspid yang terbuka. <i>Through the bicuspid valve that open.</i>	P3:	Darah beroksigen memasuki ventrikel kiri <i>Oxygenated blood enters the left ventricle.</i>	P4:	Dan melalui injap sabit yang terbuka. <i>And through the semilunar valve that open</i>	P5:	Darah beroksigen dipam keluar ke seluruh badan melalui aorta. <i>Oxygenated blood is pumped out to the rest of the body through the aorta.</i>	1 1 1 1 1	3
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(b) (ii)	Dapat menerangkan perbezaan antara salur darah P dan salur darah Q dengan betul. <i>Able to explain the difference between blood vessels P and Q correctly.</i> Contoh Jawapan: <i>Sample Answers:</i>		3										

	<table> <tr> <th></th> <th>Salur darah P <i>Blood vessel P</i></th> <th>Salur darah Q <i>Blood vessel Q</i></th> </tr> <tr> <td>P1:</td> <td>Salur darah P ialah vena pulmonari. <i>Blood vessel P is pulmonary veins</i></td> <td>Salur darah Q ialah arteri pulmonari. <i>Blood vessel Q is pulmonary artery.</i></td> </tr> <tr> <td>P2:</td> <td>Mengangkut darah beroksigen dari paru ke jantung. <i>Transport oxygenated blood from the lungs to the heart.</i></td> <td>Mengangkut darah terdeoksigen dari jantung ke paru. <i>Transport deoxygenated blood from the heart to the lungs.</i></td> </tr> <tr> <td>P3:</td> <td>Mempunyai dinding yang nipis /kurang elastik/ kurang kenyal/ kurang berotot <i>Has thin/ less elastic/less muscular wall</i></td> <td>Mempunyai dinding yang tebal /elastik/kenyal/berotot <i>Has thick/ elastic/ muscular wall</i></td> </tr> <tr> <td>P4:</td> <td>Mempunyai lumen yang besar <i>Has big lumen</i></td> <td>Mempunyai lumen yang kecil <i>Has small lumen</i></td> </tr> <tr> <td>P5:</td> <td>Tidak mempunyai injap sabit <i>Semilunar valves are absent.</i></td> <td>Mempunyai injap sabit. <i>Semilunar valves are present.</i></td> </tr> <tr> <td>P6:</td> <td>Mengangkut darah bertekanan rendah. <i>Transport the blood with low pressure.</i></td> <td>Mengangkut darah bertekanan tinggi. <i>Transport the blood with high pressure.</i></td> </tr> </table> Mana-mana 3 markah <i>Any 3 points</i>		Salur darah P <i>Blood vessel P</i>	Salur darah Q <i>Blood vessel Q</i>	P1:	Salur darah P ialah vena pulmonari. <i>Blood vessel P is pulmonary veins</i>	Salur darah Q ialah arteri pulmonari. <i>Blood vessel Q is pulmonary artery.</i>	P2:	Mengangkut darah beroksigen dari paru ke jantung. <i>Transport oxygenated blood from the lungs to the heart.</i>	Mengangkut darah terdeoksigen dari jantung ke paru. <i>Transport deoxygenated blood from the heart to the lungs.</i>	P3:	Mempunyai dinding yang nipis /kurang elastik/ kurang kenyal/ kurang berotot <i>Has thin/ less elastic/less muscular wall</i>	Mempunyai dinding yang tebal /elastik/kenyal/berotot <i>Has thick/ elastic/ muscular wall</i>	P4:	Mempunyai lumen yang besar <i>Has big lumen</i>	Mempunyai lumen yang kecil <i>Has small lumen</i>	P5:	Tidak mempunyai injap sabit <i>Semilunar valves are absent.</i>	Mempunyai injap sabit. <i>Semilunar valves are present.</i>	P6:	Mengangkut darah bertekanan rendah. <i>Transport the blood with low pressure.</i>	Mengangkut darah bertekanan tinggi. <i>Transport the blood with high pressure.</i>	1 1 1 1 1 1	
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(c)	Dapat mencadangkan bagaimana alat berfungsi untuk merawat masalah yang dialami oleh Puan Z dengan betul. <i>Able to suggest how this device functions to treat the problem faced by Madam Z correctly.</i> Contoh Jawapan: <i>Sample Answers:</i> P1: Medtronic Micra ialah perentak jantung buatan. <i>Medtronic Micra is an artificial pacemaker</i> P2: (Perentak jantung) menjana impuls (elektrik) <i>(Pacemaker) generates impulses (electrical)</i> P3: Merangsang pengecutan jantung <i>Stimulate the contraction of heart.</i> P4: Untuk meningkatkan kadar denyutan jantung/ Kadar denyutan jantung kembali normal <i>To increase the rate of heartbeat/ The rate of heartbeat back to normal</i>	1 1 1 1	2																					

SOALAN 8

No.	Skema pemarkahan <i>Marking scheme</i>	Markah <i>Mark</i>	Jumlah <i>Total</i>
(a) (i)	Dapat menyatakan fungsi sel T dengan betul. <i>Able to state the function of cell T correctly.</i> Jawapan: <i>Answer:</i> P : untuk pembekuan darah <i>For blood clotting</i>	1	1
(a) (ii)	Dapat membandingkan sel R dan sel S dengan betul. <i>Able to compare cell R and cell S correctly.</i> Jawapan: <i>Answer:</i> Persamaan: <i>Similarity:</i> Kedua-duanya adalah leukosit <i>Both are leucocytes</i>	1	3

	Perbezaan: <i>Differences:</i> <table><tr><td></td><td>Sel R <i>Cell R</i></td><td>Sel S <i>Cell S</i></td></tr><tr><td>P1</td><td>Sitoplasma bergranul /granulosit <i>Granular cytoplasm/granulocytes</i></td><td>Sitoplasma tidak bergranul / agranulosit <i>Non- granular cytoplasm/ agranulocytes</i></td></tr><tr><td>P2</td><td>Mempunyai nukleus berlobus <i>Has lobed nuclei</i></td><td>Nucleus tidak berlobus <i>Has not lobed nuclei</i></td></tr><tr><td>P3</td><td>Neutrophil <i>Neutrophil</i></td><td>Monosit/limfosit <i>Monocyte/lymphocyte</i></td></tr></table> 1 persamaan + 2P 1 <i>similarity</i> + 2P		Sel R <i>Cell R</i>	Sel S <i>Cell S</i>	P1	Sitoplasma bergranul /granulosit <i>Granular cytoplasm/granulocytes</i>	Sitoplasma tidak bergranul / agranulosit <i>Non- granular cytoplasm/ agranulocytes</i>	P2	Mempunyai nukleus berlobus <i>Has lobed nuclei</i>	Nucleus tidak berlobus <i>Has not lobed nuclei</i>	P3	Neutrophil <i>Neutrophil</i>	Monosit/limfosit <i>Monocyte/lymphocyte</i>	1 1 1	
	Sel R <i>Cell R</i>	Sel S <i>Cell S</i>													
P1	Sitoplasma bergranul /granulosit <i>Granular cytoplasm/granulocytes</i>	Sitoplasma tidak bergranul / agranulosit <i>Non- granular cytoplasm/ agranulocytes</i>													
P2	Mempunyai nukleus berlobus <i>Has lobed nuclei</i>	Nucleus tidak berlobus <i>Has not lobed nuclei</i>													
P3	Neutrophil <i>Neutrophil</i>	Monosit/limfosit <i>Monocyte/lymphocyte</i>													
(b)(i)	Dapat menjustifikasikan kepentingan prosedur tersebut kepada pesakit dengan betul. <i>Able to justify the benefits of this procedure to the patient correctly.</i> Contoh jawapan: <i>Sample answer:</i> P1: perlu dijalankan untuk meningkatkan aliran darah ke otot jantung <i>Should be carried out to increases blood flow to the heart muscle</i> P2: meningkatkan pengangkutan oksigen/nutrien <i>Increases transportation of oxygen/nutrient</i> P3: mengelakkan risiko serangan jantung/ penginfarkan miokardium <i>Prevent the risk of heart attack/myocardial infarction</i>	1 1 1	3												
(b) (ii)	Dapat memberikan cadangan menu bagi pesakit tersebut dengan betul. <i>Able to give suggestion an appropriate menu for the patient correctly.</i> Contoh jawapan: <i>Sample answer:</i> P1: ikan (tuna/salmon) kukus <i>Steamed (tuna/salmon) fish</i> P2: kaya dengan omega-3 untuk merendahkan kadar lemak trigliserida di dalam darah <i>rich with omega-3 to reduces triglycerides fat levels in the blood</i>	1 1	2												

	P3: Oat/bijirin/kacang pis/badam <i>Oats/cereals/peas/almonds</i> P4: untuk mengurangi kadar kolesterol LDL <i>To reduces levels of LDL cholesterol</i> P5: tomato dapat meningkatkan kadar kolesterol HDL/kolesterol baik//tomato mengandung likopen <i>Tomato to increases level of HDL cholesterol/good cholesterol//tomato contains lycopene</i> Mana-mana dua <i>Any two</i>	1 1 1	
	JUMLAH		9

Item Num.	Scoring Criteria	Mark	
10(a)(i)	Able to state the importance of blood clotting <i>Suggested answers:</i> P1- Stop excessive loss of blood// prevent continuous/ serious bleeding. P2- Prevent the entrance of pathogen into the body/ blood circulation. P3- Maintain normal blood pressure// prevent blood pressure drops P4- Maintain closed circulatory system	1 1 1 1	2
10(a)(ii)	Able to explain the effect of Haemophilia <i>Suggested answers:</i> P1- The disease known as Haemophilia P2- The blood hard to clot // take a long time to clot P3- Excessive of blood occur. P4- Blood pressure decrease/ drop P5- less oxygenated blood/ oxygen/ oxyhaemoglobin transported to the brain/ body cells P6- Mr A will faint/ fatigue	1 1 1 1 1 1	3

10(b)	Able to explain the role of HDL in treating disease Y. <i>Suggested answers:</i> P1- Y is atherosclerosis. P2- Due to deposition of (LDL) cholesterol/ bad cholesterol at lumen of artery. P3- HDL remove deposition of cholesterol (LDL) / plaque at artery wall. P4- Deposition of cholesterol which has detached then transported to the liver. P5- Lumen size return to normal // lumen less blocked P6- Blood flow smoothly P7- Blood pressure return to normal	1 1 1 1 1 1 1	5										
10(c)	Able to compare between human and frog circulatory system <i>Suggested answer:</i> Similarities : P1 – Both of circulation transport nutrient and waste product. P2- Both have closed circulatory system // blood flow in the closed vessel P3- Both have blood as a transport medium P4- Both have a heart to pump the blood. P5- Both heart have 2 atrium P6- Blood flow through heart twice// double circulatory system Differences : <table><thead><tr><th>Organism A</th><th>Organism B</th></tr></thead><tbody><tr><td>D1- (Closed) complete double circulatory system</td><td>D1- (Closed) incomplete double circulatory system</td></tr><tr><td>D2- Heart has 4 chambers // 2 atria and 2 ventricles</td><td>D2- Heart has 4 chambers // 2 atria and 1 ventricle</td></tr><tr><td>D3- Oxygenated and deoxygenated blood are not mixed in ventricle</td><td>D3- Oxygenated and deoxygenated blood are mixed in ventricle</td></tr><tr><td>D4- Has pulmonary circulation</td><td>D4- has pulmocutaneous circulation</td></tr></tbody></table>	Organism A	Organism B	D1- (Closed) complete double circulatory system	D1- (Closed) incomplete double circulatory system	D2- Heart has 4 chambers // 2 atria and 2 ventricles	D2- Heart has 4 chambers // 2 atria and 1 ventricle	D3- Oxygenated and deoxygenated blood are not mixed in ventricle	D3- Oxygenated and deoxygenated blood are mixed in ventricle	D4- Has pulmonary circulation	D4- has pulmocutaneous circulation	1 1 1 1 1 1	10
Organism A	Organism B												
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Total			20										

SOALAN 8

No	Kriteria pemarkahan Marking criteria	Markah Mark	Jumlah Total									
8(a) (i)	Dapat menamakan struktur J dengan betul. Able to name structure J correctly. Jawapan: Answer: Vena kava Vena cava	1	1									
(a) (ii)	Dapat menerangkan jenis peredaran darah organisma tersebut dengan betul. Able to explain the type of blood circulatory system correctly. Contoh jawapan: Sample answer: P1 : Sistem peredaran darah tertutup ganda dua (tak lengkap) (Incomplete) Double closed circulatory system P2 : Darah mengalir dalam salur darah dan melalui jantung sebanyak dua kali dalam satu peredaran lengkap Blood flows in the blood vessel and through the heart twice in a complete circulation P3 : Terdiri daripada dua atrium dan satu ventrikel Consists of two atria and one ventricle Mana-mana 2P Any 2P	1 1 1	2									
(a) (iii)	Dapat menerang satu perbezaan di antara sistem peredaran organisma tersebut berbanding sistem peredaran manusia dengan betul. Able to explain one difference between the circulatory system of the organism compared to the human circulatory system correctly. Contoh jawapan: Sample answer: <table border="1"><thead><tr><th></th><th>Amfibia Amphibia</th><th>Manusia Human</th></tr></thead><tbody><tr><td>F1</td><td>Mempunyai sistem peredaran ganda dua yang tidak lengkap Has incomplete double closed circulatory system</td><td>Mempunyai sistem peredaran ganda dua yang lengkap Has complete double closed circulatory system</td></tr><tr><td>P1</td><td>Terdapat percampuran darah beroksigen dan darah terdeoksigen</td><td>Tidak terdapat percampuran darah beroksigen dan darah terdeoksigen</td></tr></tbody></table>		Amfibia Amphibia	Manusia Human	F1	Mempunyai sistem peredaran ganda dua yang tidak lengkap Has incomplete double closed circulatory system	Mempunyai sistem peredaran ganda dua yang lengkap Has complete double closed circulatory system	P1	Terdapat percampuran darah beroksigen dan darah terdeoksigen	Tidak terdapat percampuran darah beroksigen dan darah terdeoksigen	1 1	2
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		<i>There is a mixture of oxygenated blood and deoxygenated blood</i>	<i>There is no mixture of oxygenated blood and deoxygenated blood</i>								
	F2	Mempunyai satu ventrikel <i>Because has one ventricle</i>	Mempunyai dua ventrikel <i>Because has two ventricles</i>	1							
	P2	Kerana tiada septum pada ventrikel <i>Because has no septum at the ventricle</i>	Kerana terdapat septum yang memisahkan ventrikel kanan dan kiri <i>Because there is septum that separates the right and left ventricles</i>	1							
	F3	Mempunyai peredaran pulmokutaneus <i>Has pulmocutaneous circulation</i>	Mempunyai peredaran pulmonari <i>Has pulmonary circulation</i>	1							
	P3	Campuran darah beroksigen dan darah terdeoksigen dipam keluar dari jantung ke peparu dan kulit <i>Mixture of oxygenated and deoxygenated blood pumped out of the heart to the lungs and skin</i>	Darah terdeoksigen dipam keluar dari jantung ke peparu <i>Deoxygenated blood is pumped to the lungs via the pulmonary circulation</i>	1							
	Mana-mana 1F + 1P Any 1F + 1P										
(b)(i)	Dapat menerangkan bagaimana enzim K bertindak membentuk jaringan L pada permukaan luka yang memerangkap eritrosit dan menutup luka tersebut dengan betul. <i>Able to explain how enzyme K acts to form network L on the wound surface to trap erythrocytes and close the wound.</i> Contoh jawapan: <i>Sample answer:</i> <table><tr><td>P1:</td><td>Enzim K ialah trombokinase <i>Enzyme K is thrombokinase</i></td></tr><tr><td>P2:</td><td>Yang menukarkan protrombin kepada trombin <i>That converts prothrombin to thrombin</i></td></tr><tr><td>P3:</td><td>Trombin seterusnya menukarkan fibrinogen kepada fibrin/L <i>Next thrombin converts fibrinogen to fibrin/L</i></td></tr></table>			P1:	Enzim K ialah trombokinase <i>Enzyme K is thrombokinase</i>	P2:	Yang menukarkan protrombin kepada trombin <i>That converts prothrombin to thrombin</i>	P3:	Trombin seterusnya menukarkan fibrinogen kepada fibrin/L <i>Next thrombin converts fibrinogen to fibrin/L</i>	1 1 1	2
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P3:	Trombin seterusnya menukarkan fibrinogen kepada fibrin/L <i>Next thrombin converts fibrinogen to fibrin/L</i>										
	Mana-mana 2P Any 2Ps										

(b)(ii)	Dapat menerangkan akibat jika mekanisme pembekuan darah tidak berfungsi dengan betul. <i>Able to explain the consequence if blood clotting mechanism fails to function.</i> Contoh jawapan: <i>Sample answer:</i> <table><tr><td>F1:</td><td>Boleh menyebabkan kemasukan patogen/ mikroorganisma/bakteria <i>Can cause entry of pathogens/microorganism/ bacteria</i></td><td>1</td></tr><tr><td>P1:</td><td>yang menyebabkan jangkitan/penyakit <i>that causes infection/penyakit</i></td><td>1</td></tr><tr><td>F2:</td><td>Menyebabkan kehilangan darah yang terlalu banyak <i>Causes excessive blood loss</i></td><td>1</td></tr><tr><td>P2:</td><td>Menyebabkan tekanan darah berkurang <i>Causes decrease in the blood pressure</i></td><td>1</td></tr></table> Mana-mana F + P yang sepadan <i>Any F + P that matched</i>	F1:	Boleh menyebabkan kemasukan patogen/ mikroorganisma/bakteria <i>Can cause entry of pathogens/microorganism/ bacteria</i>	1	P1:	yang menyebabkan jangkitan/penyakit <i>that causes infection/penyakit</i>	1	F2:	Menyebabkan kehilangan darah yang terlalu banyak <i>Causes excessive blood loss</i>	1	P2:	Menyebabkan tekanan darah berkurang <i>Causes decrease in the blood pressure</i>	1		2
F1:	Boleh menyebabkan kemasukan patogen/ mikroorganisma/bakteria <i>Can cause entry of pathogens/microorganism/ bacteria</i>	1													
P1:	yang menyebabkan jangkitan/penyakit <i>that causes infection/penyakit</i>	1													
F2:	Menyebabkan kehilangan darah yang terlalu banyak <i>Causes excessive blood loss</i>	1													
P2:	Menyebabkan tekanan darah berkurang <i>Causes decrease in the blood pressure</i>	1													
JUMLAH/TOTAL			9												

	P1: Semasa melahirkan anak pertama, serpihan sel darah merah fetus yang mengandungi antigen D merentasi plasenta dan masuk ke dalam sistem peredaran darah ibu <i>During the first child birth, fragments of foetal red blood cells that contain antigen D cross placenta and enter the blood circulatory system of mother</i> P2: Akibatnya, limfosit ibu menghasilkan antibodi anti-D <i>As a result, mother's lymphocyte produced anti-D antibodies</i> P3: Kemudian antibodi anti-D merentasi plasenta kembali ke dalam sistem peredaran fetus <i>Then anti-D antibodies cross the placenta to return to foetal circulatory system</i> P4: Antibodi tersebut memusnahkan sel darah merah fetus <i>The antibody destroys foetal red blood cell</i> P5: Namun begitu antibodi tersebut tidak cukup untuk memberi kesan kepada anak pertama /hanya menyebabkan anemia <i>However, the antibody is not enough to give effect to the first child/only cause anemia</i> P6: Kepekatan antibodi anti-D yang semakin bertambah dalam darah ibu (dalam kehamilan seterusnya) <i>The concentration of anti-D antibodies increases in mother's blood in (subsequent pregnancy)</i> P7: yang memusnahkan sel darah merah fetus dalam kehamilan seterusnya <i>that destroy foetal red blood cells in the second/third pregnancy</i> P8: Menyebabkan gejala penyakit <i>erythroblastosis fetalis</i>/penggumpalan/pengaglutinan sel darah merah <i>Causing symptoms of erythroblastosis fetalis/clumping/agglutination of red blood cells</i> P9: Boleh menyebabkan kematian/kecacatan akal <i>Can cause death of foetus/mental retardation</i> Mana-mana 6P Any 6P	1	
(c)	Dapat mencadangkan rawatan yang perlu diambil bagi mencegah masalah berkaitan faktor Rhesus semasa kehamilan akibat kumpulan darah ibu dan anak yang berbeza dengan betul. <i>Able to suggest the treatment that should be taken to prevent the problem related to rhesus factor during pregnancy due to different blood group of the mother and the child correctly.</i> Contoh jawapan: <i>Sample answers:</i>		4

	P1: Ibu diberi rawatan globulin anti-Rhesus <i>Mother is given anti-Rhesus globulin treatment</i> P2: Selepas kelahiran anak pertama <i>After giving birth to the first child</i> P3: Untuk mencegah pembentukan antibodi anti-D dalam darah ibu <i>To prevent the formation of anti-D antibody in mother's blood</i> P4: Oleh itu tiada antibodi anti-D yang akan merentasi plasenta pada kehamilan kedua <i>Therefore, no anti-D antibody will cross the placenta in second pregnancy</i> P5: <i>Erythroblastosis fetalis</i>/penggumpalan dapat dicegah dalam kehamilan seterusnya <i>Erythroblastosis fetalis/agglutination can be prevented in subsequent pregnancy</i> Mana-mana 4P Any 4P	1 1 1 1 1	
JUMLAH TOTAL			20

SKEMA PEMARKAHAN TAMAT
END OF ANSWER SCHEME