

Section B
Bahagian B

[40 marks / 40 markah]

Answer any two questions from this section
Jawab mana-mana dua soalan daripada bahagian ini.

6. (a) Diagram 6.1 shows the part of the regulatory mechanism of carbon dioxide contents in the body.

Rajah 6.1 menunjukkan bahagian mekanisma pengawalatur kandungan karbon dioksida di dalam badan manusia

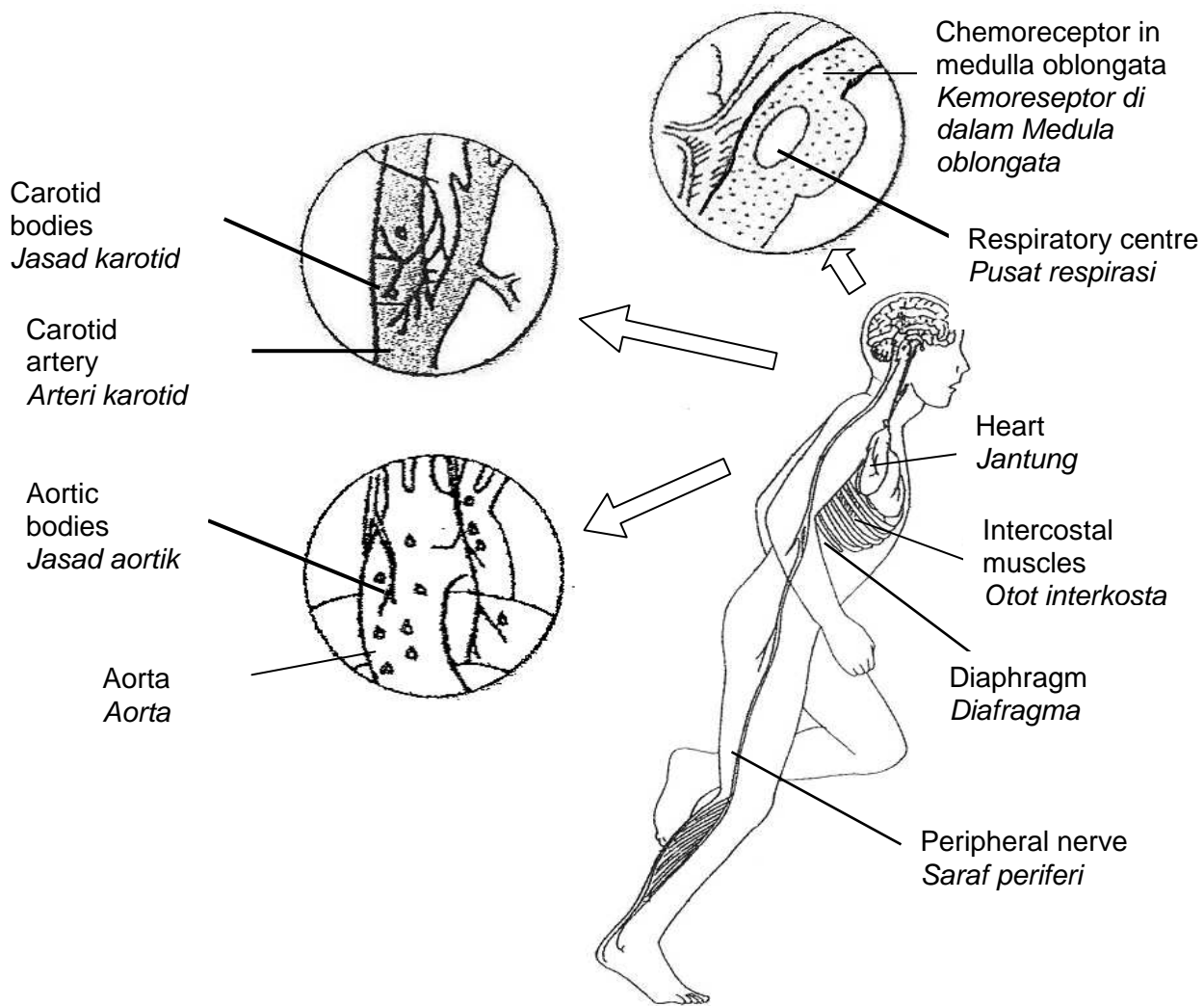


Diagram 6.1
Rajah 6.1

- (i) Based on the diagram, explain how the concentration of carbon dioxide in the blood is regulated during a vigorous activity.

Berdasarkan rajah tersebut, terangkan bagaimana kepekatan karbon dioksida di dalam darah dikawalatur semasa melakukan aktiviti cergas.

[10 marks/ markah]

- (b) (i) Diagram 6.2(a) shows a water treatment system which is used to treat hormone imbalance during childhood
Explain the importance of this water treatment system to the children.

*Rajah 6.2(a) menunjukkan satu sistem rawatan air yang digunakan untuk mencegah ketidakseimbangan hormon kepada kanak-kanak..
Terangkan kepentingan sistem rawatan air ini kepada kanak-kanak.*

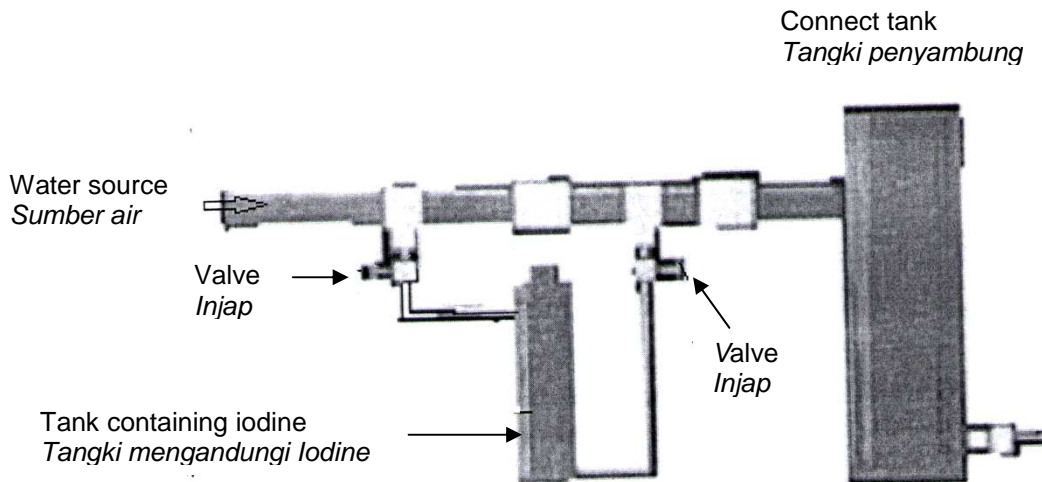


Diagram 6.2 (a)
Rajah 6.2 (a)

[5 marks / markah]

- (ii) Diagram 6.2 (b) shows a symptom of a disease cause by the hormone imbalance in human

Rajah 6.2 (b) menunjukkan simptom suatu penyakit berkaitan dengan ketidakseimbangan hormon pada manusia

Doctor, I have noticed lately that I've got extreme fatigue, numbness in the hands and feet, frequent urinating, abruptly drops body weight, increased thirst and difficult to heal recurrent infection.

Doktor, akhir-akhir ini saya mendapati saya cepat letih, mengalami kebas pada tangan dan kaki, kerap buang air kecil, berat badan turun mendadak, kerap merasa haus dan luka lambat sembuh

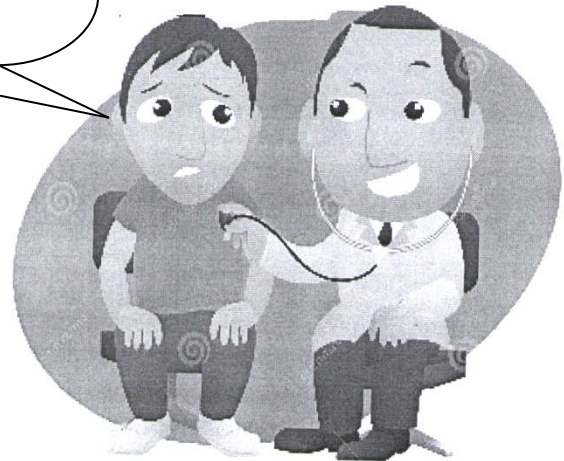


Diagram 6.2 (b)
Rajah 6.2 (b)

Based on Diagram 6.2 (b), discuss the condition of the patient which is related to the hormone imbalance.

Berdasarkan Rajah 6.2 (b), bincangkan keadaan yang berkaitan dengan ketidakseimbangan hormon pada pesakit di atas.

[5 marks/ markah]

7. (a) Diagram 7.1 shows the involvement of microorganisms in nitrogen cycle.
Rajah 7.1 menunjukkan penglibatan mikroorganisma dalam kitar nitrogen.

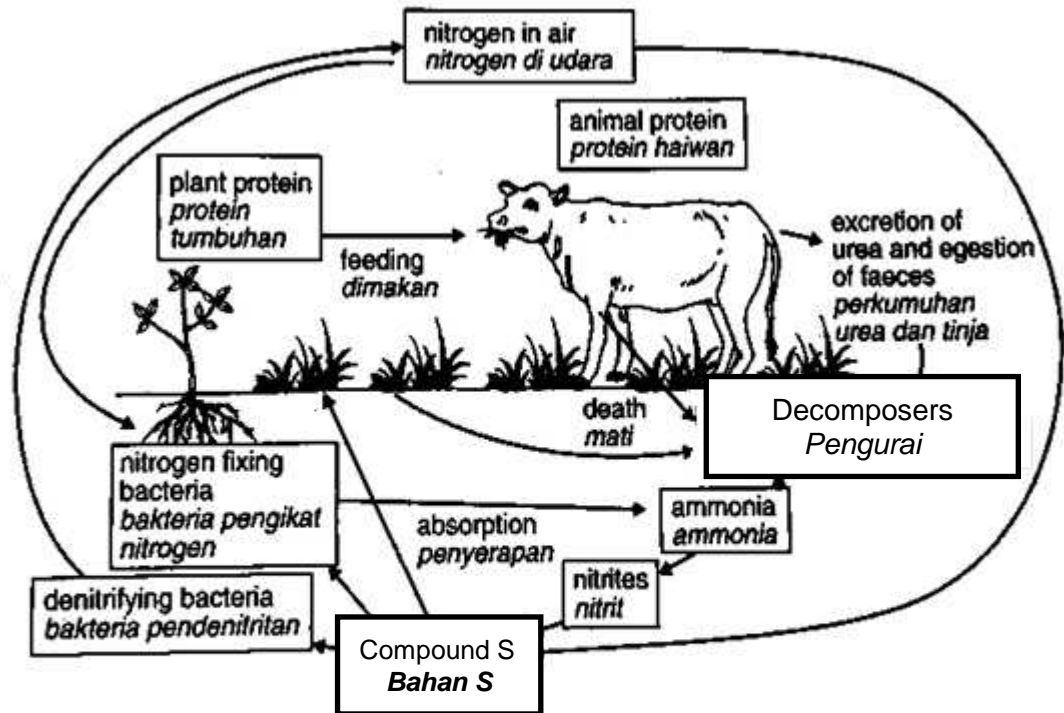


Diagram 7.1
Rajah 7.1

- (i) Based on Diagram 7.1, explain how the microorganisms maintain the content of compound S in the soil.

Berdasarkan kepada Rajah 7.1, terangkan bagaimana mikroorganisma mengekalkan kandungan bahan S dalam tanah.

[7 marks/markah]

- (II) Explain what will happen to the ecosystem if the decomposers die.

Terangkan apakah yang akan berlaku kepada ekosistem sekiranya pengurai mati

[3 marks/markah]

Diagram 7.2 and 7.3 shows Paya Indah Wetlands which is the Malaysia's premier eco-tourism park covering approximately 3100 hectares located in Kuala Langat, Selangor

Rajah 7.2 dan 7.3 menunjukkan Paya Indah Wetland yang merupakan kawasan utama ekopelancongan di Malaysia meliputi kawasan seluas 3100 hektar yang terletak di Daerah Kuala Langat, Selangor.



Diagram 7.2
Rajah 7.2



Diagram 7.3
Rajah 7.3

Based on the diagram, discuss why the ecosystem in Paya Indah Wetlands has to be maintained.

Berdasarkan rajah, bincangkan kenapa ekosistem di Paya Indah Wetlands perlu dikekalkan.

[10 marks/markah]

8. (a) Diagram 8 shows the changes in the size of ozone hole in the year of 1978 compared to the year of 2015. The ozone hole keep on increasing in size because of human activity.

Rajah 8 menunjukkan perubahan size lubang ozon pada tahun 1978 berbanding tahun 2015. Saiz lubang ozon semakin bertambah disebabkan oleh aktiviti manusia.

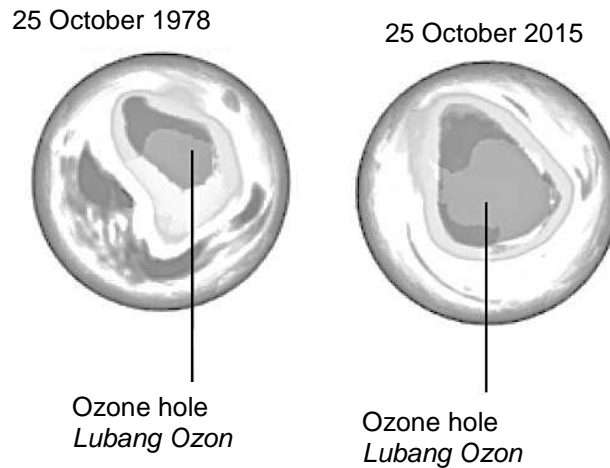


Diagram 8
Rajah 8

- (i) Explain the thinning of ozone layer that leads to the changes of the size of ozone hole over Antarctica.

Terangkan proses penipisan lapisan ozon yang menyebabkan perubahan saiz lubang ozon di antartika.

[5 marks/ markah]

- (ii) Explain the effects of thinning of ozone layer to the environment and to the living organisms.

Terangkan kesan penipisan lapisan ozon kepada alam sekitar dan organism-organisma hidup.

[5 marks/ markah]

- (b) A group of students carries out an investigation to find out the level of water pollution in three different river which are river A, B and C.

Table 1 shows the results of their investigation.

Beberapa orang pelajar telah membuat kajian untuk mengetahui tahap pencemaran air di tiga buah sungai iaitu sungai A, B dan C.

Jadual 1 menunjukkan hasil dapatan kajian mereka

River Sungai	Organic substance <i>Bahan Organik</i>	Solid Suspension <i>Pepejal Terampai</i>	Nitrate and Phosphate <i>Nitrat dan fosfat</i>	Heavy metal Logam Berat	Soil and sediment <i>Tanah dan sedimen</i>
A	√	√	√	X	√
B	√	X	X	X	√
C	X	√	X	X	√

Table 1
Jadual 1

Which river is the most polluted and explain the effects of the pollution to the ecosystems.

Sungai manakah yang paling tercemar dan terangkan kesan pencemaran kepada ekosistem

[10 marks/ markah]

9. (a) Diagram 9.1 shows two types of animals with different type of skeletons.
Rajah 9.1 menunjukkan dua jenis haiwan yang mempunyai jenis rangka yang berbeza.



Diagram 9.1
Rajah 9.1

Based on the above diagram, explain the importance of the skeletons to the respective animals.

Berdasarkan rajah di atas, terangkan kepentingan rangka-rangka tersebut kepada haiwan-haiwan ini.

[6 marks/ markah]

- (b) (i) Diagram 9.2 shows the mechanism of locomotion in a frog.
Rajah 9.2 menunjukkan mekanisme pergerakan pada seekor katak.

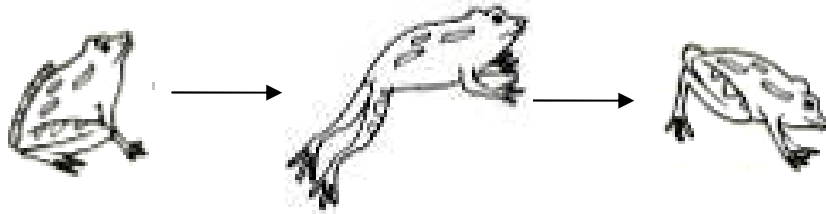


Diagram 9.2
Rajah 9.2

Based on Diagram 9.2, explain the action of the antagonistic muscles and adaptation of the rear legs to enable the frog to jump.

Berdasarkan Rajah 9.2, terangkan tindakan otot-otot antagonistik dan penyesuaian pada kaki belakang katak bagi membolehkannya melompat.

[4 marks/ markah]

- (ii) Diagram 9.3 shows the web structure between the toes in a hind leg of frog.
Rajah 9.3 menunjukkan struktur selaput di antara jari pada kaki belakang katak.

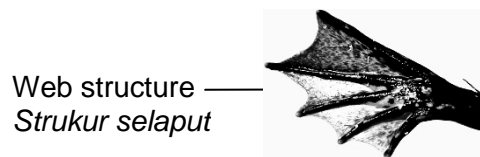


Diagram 9.3
Rajah 9.3

Based on Diagram 9.3, explain the functions of the structure in locomotion of a frog.

Berdasarkan Rajah 9.3, terangkan fungsi struktur tersebut dalam pergerakan seekor katak.

[4 marks / markah]

- (c) Diagram 9.4 shows the effects for a woman who loves to wear high-heeled shoes while walking.

Rajah 9.4 menunjukkan kesan-kesan bagi seorang perempuan yang suka memakai kasut tumit tinggi ketika berjalan.

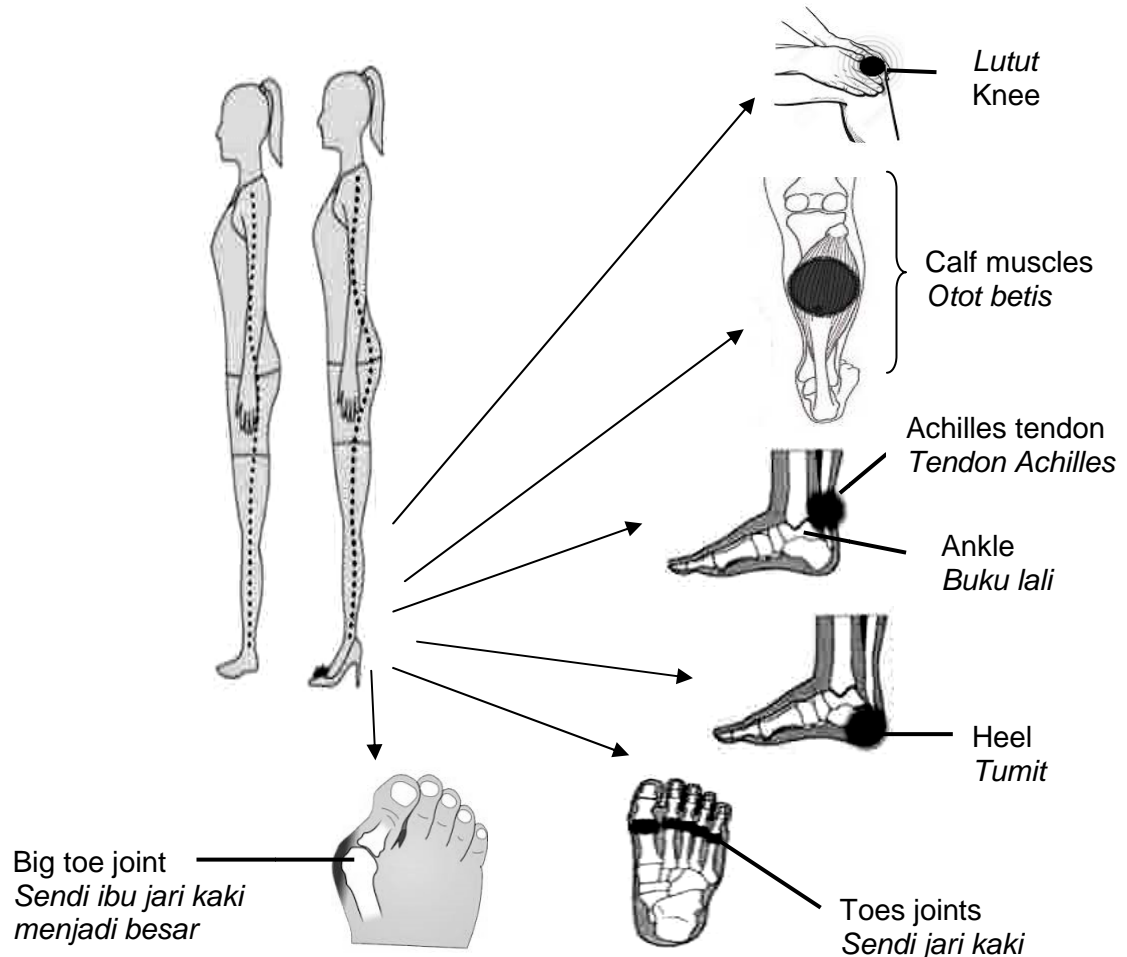


Diagram 9.4
Rajah 9.4

Based on Diagram 9.4, explain the bad effects experience by that woman?

Berdasarkan Rajah 9.4, terangkan kesan-kesan buruk yang dialami oleh perempuan tersebut?

[6 marks /markah]