**Section B**

***Bahagian B***

***(40 Marks)***

Answer **any two** question

*Jawab* ***mana-mana dua*** *soalan*

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| 6(a)(i) | Leaf is the main organ for photosynthesis.  *Daun merupakan organ terpenting untuk proses fotosintesis.*  Based on the above statement, explain the adaptation in leave tissues in order to maximise its function.  *Berdasarkan pernyataan di atas, terangkan penyesuaian tisu pada daun dalam memaksimakan fungsinya*.  [4 marks] |
| (ii) | Diagram 6.1 shows the changes in atmospheric carbon dioxide concentration in a  forest for a period of 24 hours.  *Rajah 6.1 menunjukkan perubahan kepekatan karbon dioksida dalam atmosfera di kawasan hutan untuk tempoh 24 jam.*    Diagram 6.1  Rajah 6.1  Based on diagram 6.1 , explain the different in carbon dioxide cencentration through out the day.  *Berdasarkan Rajah 6.1, terangkan perbezaan kepekatan karbon dioksida di dalam atmosfera sepanjang hari tersebut.*  [10 marks] |

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| (b) | Diagram 6.2 shows two type of animal, P and Q. Animal P and Q have different ways of digesting food.  *Rajah 6.2 menunjukkan dua jenis haiwan, P dan Q. Haiwan P dan Q mempunyai cara yang berbeza dalam mencernakan makanan.*    Diagram 6.2  *Rajah 6.2*  Based on the above statement, compare the digestion occur in alimentary canal of animal P and Q.  *Berdasarkan pernyataan di atas, bandingkan pencernaan yang berlaku di dalam salur pencernaan haiwan P dan Q.*  [6 marks] |

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| 7 | Diagram 7 shows the gases exchange and transportation of gases in human.  *Rajah 7 menunjukkan proses pertukaran dan pengangkutan gas di dalam manusia.*    Diagram 7  *Rajah 7* |
| (a)(i) | Describe the adaptive characteristics of X in order to maximise its function.  *Huraikan ciri-ciri penyesuaian struktur X untuk memaksimakan fungsinya*  [6 marks] |
| (ii) | Describe the gases exchange that occur in Region Y.  *Huraikan proses pertukaran gas yang berlaku dalam kawasan Y.*  [6 marks] |
| (b) | Salleh is a sprinter. After finishing the 100 meter event, he feels tired and experienced panthing.  *Salleh ialah seorang pelari pecut, Selepas menghabiskan larian 100 meter, dia berasa letih dan nafasnya tercungap-cungap.*  Explain why Salleh experience those situation  *Terangkan mengapa Salleh mengalami keadaan tersebut*.  [8 marks] |

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| 8 | Diagram 8.1 shows the process of succession which takes place in a disused pond.  *Rajah 8.1 menunjukkan proses penyesaran yang berlaku di dalam kolam terbiar.*  Diagram 8.1  *Rajah 8.1*  Diagram 8.1  *Rajah 8.1*  Based on Diagram 8.1, describe the colonisation and succession occur in a disused pond until a climax community is formed.  *Berdasarkan Rajah 8.1 huraikan proses pengkolonian dan sesaran yang berlaku pada kolam sehingga terbentuknya komuniti klimaks.*  [10 marks] |

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| 9(a) | Ali came to a doctor when cut in his leg could not stop bleeding. The diagnosis showed that he is suffering from haemophilia. Diagram 9.1 shows the pedigree diagram of his family.  *Ali telah bertemu doktor apabila dia mendapati darah yang mengalir keluar dari*  *luka di kakinya tidak berhenti mengalir. Diagnosis menunjukkan dia menghidapi*  *hemofilia. Rajah 9.1 menunjukkan rajah pedigree keluarganya*    Diagram 9.1  *Rajah 9.1*  By using a schematic diagrams, discuss this genetic disorder and show how it occurs in Ali.  *Dengan bantuan gambarajah skema, huraikan penyakit genetik ini dan tunjukkan bagaimana Ali mewarisi penyakit ini.*  [8 marks] |
| (b) | Table 9.1 and 9.2 shows the blood group and height variations of a students in a secondary school.  *Jadual 9.1 dan 9.2 menunjukkan variasi dalam kumpulan darah dan ketinggian di satu sekolah menengah.*   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Blood group  *Kumpulan darah* | A | B | AB | O | | Number of students  *Bilangan pelajar* | 15 | 4 | 13 | 15 |   Table 9.1  *Jadual 9.1* |

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|  | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Heights / cm  *Ketinggian / cm* | 135 - 139 | 140 - 144 | 145 - 149 | 150 - 154 | 155 - 159 | 160 - 164 | | Number of students  *Bilangan pelajar* | 2 | 7 | 9 | 15 | 7 | 4 |   Table 9.2  *Jadual 9.2*  Based on Table 9.1 and 9.2, state the type of variation for both characteristics. Compare the two types of variation mentioned.  *Berdasarkan Jadual 9.1 dan 9.2, nyatakan jenis variasi yang ditunjukkan oleh kedua-dua ciri. Bandingkan kedua-dua jenis variasi yang dinyatakan.*  [6 marks] |
| (c) | The diagram 9.2 shows the sequence of bases on a gene represented by the different shapes.  *Rajah 9.2 menunjukkan susunan bes di dalam satu gene yang ditunjukkan dengan menggunakan bentuk yang pelbagai.*  Diagram 9.2  *Rajah 9.2*  Gene mutation can take place at any loci on the chromosome. If a gene mutation takes place at the locus shown by the arrow (↓), describe the different types of gene mutations that can take place and the consequences of the gene mutations on an organism.  *Mutasi gen boleh berlaku pada mana-mana lokus di atas kromosom. Sekiranya mutasi gen berlaku pada lokus yang ditunjukkan oleh anak panah (↓), huraikan mutasi gen yang berbeza yang boleh berlaku pada kormosom tersebut. Huraikan kesan mutasi gen kepada organism.*  [6 marks] |

KERTAS SOALAN TAMAT