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| (a) | Name substance R in Diagram 4.  *Namakan bahan R dalam Rajah 4.*  Substance R/ Bahan R :  .......................................................................................................................................[1 mark] |
| (b)(i) | Nitrogen is converted into nitrate through process P.  *Nitrogen ditukarkan ke bentuk nitrat melalui proses P*  Name process P  *Namakan proses P*  ........................................................................................................................................  [1 mark] |
| (ii) | Explain how process P occur in Leguminous plant.  *Terangkan bagaimana proses P berlaku dalam tumbuhan Legum.*  ................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................[3 marks] |

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| (c) | Denitrifying bacteria plays an important role in carrying out Process Q in nitrogen cycle.  *Bakteria pendenitritan memainkan peranan utama dalam menjalan proses Q di dalam kitar nitrogen.*    Explain what will happen if denitrifying bacteria is absent.  *Terangkan apa yang akan berlaku sekiranya tiada bakteria pendenitritan*.  ................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................[3 marks] |
| (d) | Chemical fertilizer is used to increase nitrate content in soil.  *Baja kimia digunakan untuk meningkatkan kandungan nitrat dalam tanah.*  Explain the effect of using excessive fertilisers in agriculture on the environment.  *Terangkan kesan penggunaan baja yang berlebihan dalam bidang pertanian ke atas alam sekitar*.  ........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................  [4 marks] |

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| 5 | Diagram 5.1 shows the formation of two pairs of twins.  *Rajah 5.1 menunjukkan pembentukan dua pasang anak kembar*  Picture 010  Diagram 5.1  *Rajah 5.1* |
| (a)(i) | Name the type of Twins P and Twins Q  *Namakan jenis anak kembar P dan jenis anak kembar Q*  Twin P / *Kembar P*: ...…………………………………………………………………  Twin Q / *Kembar Q* : ...……………………………………….…………….…………  [2 marks] |
| (ii) | Explain how twin Q is formed.  *Terangkan bagaimana anak kembar Q terbentuk.*  ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………....  [3 marks] |

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| (b) | Explain how twin Q is formed.  *Terangkan bagaimana anak kembar Q terbentuk.*  ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………....  [3 marks] |
| (c) | Diagram 5.2 shows another two pairs of twins.  *Rajah 5.2 menunjukkan dua pasang anak kembar yang lain.*  Twin R  Twin S  Diagram 5.2  *Rajah 5.2* |
|  | Explain why there are differences between Twin R and S.  *Terangkan mengapa wujud perbezaan di antara kembar R dan S.*  …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………  [4 marks] |