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| (b) | Diagram 2.2 shows the condition of red blood cells when it is placed in solution A and solution B.  *Rajah 2.2 menunjukkan keadaan sel darah merah apabila diletakkan di dalam larutan A dan larutan B*.      Diagram 2.2  *Rajah 2.2*  Solution B  *Larutan B*  Solution A  *Larutan B*  Diagram 2.2  *Rajah 2.2* |
| (i) | State the type of solution A and B.  *Nyatakan jenis larutan A dan B*  Solution A / *Larutan A* :  ……………………………………………………………………................................  Solution B / *Larutan B* :  ………………………………………………………………………………................  [2 marks] |
| (ii) | Explain your answer in b(i)  *Terangkan jawapan anda di b(i)*  ……………………………………………………………………………………………………………………………………………………………………………………………………………………........................................................................................  .[2 marks] |

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| (c) | Explain why fish can be kept longer when it is preserved in concentrated salt solution.  *Terangkan mengapa ikan dapat disimpan lama apabila diawet di dalam larutan garam yang pekat.*  ................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................  [3 marks] |
| (d) | Diagram 3.1 shows the endocrine system in the body of a human.  *Rajah 3.1 menunjukkan sistem endokrin manusia.*  R  Q  P  Diagram 3.1  *Rajah 3.1* |
| (i) | Name the hormones secreted by gland P and Q  *Namakan hormone yang dirembeskan oleh kelenjar P dan Q.*  P : .……………………………………………............................................................  Q :…………………………………………………………………………………….  [2 marks] |

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| (b)(i) | Some people have their gland Q grow two or three times its size.  *Sesetengah orang mempunyai kelenjar Q yang membesar sehingga dua atau tiga kali saiz sebenar.*  Name the condition mentioned above  *Namakan keadaan yang dinyatakan di atas.*  …………………………………………………………………………………………  [1 *mark*] |
| (ii) | Suggest how to overcome the above problem.  *Cadangkan bagaimana untuk mengatasi masalah diatas.*  ……………………………………………………………………………..………......  [1 *mark*] |
| (c) | In diagram 3.1, label the adrenal gland with letter S.  *Di dalam rajah 3.1 , labelkan kelenjar pituitary dengan huruf S.*  [1 *mark*] |
| (d) | An individual X drinks a glass of glucose solution. Table 1 shows the changes the concentration of blood glucose in individual X .  *Di dalam satu kajian yang dijalankan, seorang individu telah meminum segelas larutan glukosa. Jadual 1 menunjukkan perubahan didalam kepekatan kandungan gula di dalam darah individu tersebut.*   |  |  | | --- | --- | | Time / min  *Masa / min* | The concentration of blood glucose / g dm -1  *Kepekatan gula dalam darah* | | 0 | 90 | | 30 | 130 | | 60 | 162 | | 90 | 90 | | 120 | 84 | | 150 | 74 | | 180 | 88 |   Table 1  *Jadual 1* |

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|  | Based on Table 1 , explain the role of gland R in regulating the person blood glucose concentration from 0 minute to 90 minutes.  *Berdasarkan jadual 3, jelaskan tugas kelenjar R di dalam mengawalatur kepekatan gula dalam darah dari minit 0 hingga minit ke 90.*  ....………………………………….…………………………….....……..............................................................................................................................................................................................................................................................................................................................................................................................................................................  [3 *marks*] |
| (e) | Diagram 3.2 shows a person who is sweating under a hot sun.  *Rajah 3.2 menunjukkan orang yang sedang berpeluh ketika berada di bawah panas matahari.*    Diagram 3.2  *Rajah 3.2* |
| (i) | State what will happen to his blood osmotic pressure in the person’s body.  *Nyatakan apakah yang akan berlaku kepada tekanan osmosis darah lelaki tersebut*  ………………………………………………………………………………………......  [1 *mark*] |

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| (ii) | Explain how gland P involves in returning the osmotic pressure of the blood to normal levels.  *Terangkan bagaimana kelenjar P terlibat didalam mengembalikan tekanan osmosis darah kepada normal.*  …………………………………………………………………………………………………………………………………………………….....…………………………………………………………………………......………......................................................................................................................................................................................  [3 *marks*] |
| 4 | Diagram 4 shows a part of a Nitrogen cycle.  *Rajah 4 menunjukkan sebahagian daripada satu Kitar Nitrogen.*    Diagram 4  *Rajah 4* |