

| Question Number | Answer | Mark |
|-----------------|--|----------------|
| 4(a)(i) | 1. idea that {cell B / eq} can give rise to {many / eq} cell types ; 2. idea that cell B cannot give rise to {embryonic cells / eq} ; | max (2) |

| Question Number | Answer | Mark |
|-----------------|--|------------|
| 4(a)(ii) | (red) bone marrow (of long bones / ribs) ; | (1) |

| Question Number | Answer | Mark |
|-----------------|--|----------------|
| 4(a)(iii) | 1. different genes active in different cells / different genes active at different times / some genes {active / inactive} / eq ; 2. active genes make mRNA / eq ; 3. active genes make proteins / polypeptides / eq ; 4. (proteins) control cell {processes / eq} ; 5. idea of permanent change (to cell) / eq ; | max (3) |

| Question Number | Answer | Mark |
|-----------------|---|------------|
| 4(b) | the gender of turtles is determined by the temperature of the ground in which the eggs are laid ; | (1) |