

Activity 4 – Biology

Question 1

(iii) Amylase is a protein.

Describe how protein is made in a cell.

(5)

Question 2

(b) A kangaroo rat is a mammal that lives in hot desert regions of America.

(i) In kangaroo rats, the tissue surrounding the collecting duct contains a high concentration of ions.

Explain how this feature enables kangaroo rats to survive in the desert.

(3)

Question Number	Answer	Mark
3(a)(iii)	<p>A description that makes reference to five of the following points:</p> <ul style="list-style-type: none"> • <u>transcription</u> / <u>transcripts</u> / <u>transcribes</u> (1) • mRNA/messenger RNA and leaves <u>nucleus</u> / mRNA/messenger RNA and enters <u>cytoplasm</u> (1) • ribosomes (1) • tRNA/transfer RNA (brings) attached amino acids (1) • codons / anticodons / complementary bases (1) • <u>translation</u> / <u>translated</u> / <u>translates</u> / amino acid chain / polypeptide chain (1) 	5

Question Number	Answer	Mark
4(b)(i)	<p>An explanation that makes reference to the three of following points:</p> <ul style="list-style-type: none"> • water <u>reabsorbed</u> / water into <u>blood</u> (1) • osmosis (1) • concentrated <u>urine</u> / less water in <u>urine</u> / less <u>urine</u> (1) 	3