Question number	Answer	Notes	Marks
1 (a)	cell membrane; cytoplasm; plasmid; nucleoid / chromosome / DNA once;	reject nucleus / nucleolus ignore vacuole / ribosomes / mitochondria	3
(b) (i)	enzymes; optimum; denatured / destroyed / eq;	ignore references to low pH and high pH	2
(ii)	amino acids; protein / DNA;		2
(iii)	active transport / active uptake; low to high conc. / against conc. gradient / eq; respiration / energy / ATP; root hair (cells); large surface area / eq;		3
(c) (i)	X at 100;	allow any indication at 100	1
(ii)	11.1%;; allow one mark for 8000 or 7200 or 800 in working		2
(iii)	nitrate (already) in soil / nitrogen fixing bacteria / nitrification / organic material in soil / eq;		1
		Total	15

Question number	Answer	Notes	Marks
2 (a)	A lens; B cornea; C retina;	A. llow lense C. ignore rods/cones/receptors/fovea	3
(b) (i)	same/similar cells / cells with the same function / all muscle <u>cells</u> / eq;	ignore group of cells alone allow group of cells working together	1
(ii)	1. radial muscles contract / circular muscles relax; 2. <u>pupil</u> dilates / widens / gets bigger / <u>iris</u> gets smaller / eq; 3. more light can enter;		3

(Total for Question = 7 marks)