Question Number	Answer
*6(b)	Answers will be credited according to candidate's deployment of knowledge and understanding of the material in relation to the qualities and skills outlined in the generic mark scheme. The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Additional content included in the response must be scientific and relevant. length of middle region • increased length of mid region size increases swimming speed (I) • due to more mitochondria supplying more {energy/ ATP} to move the flagella (I) • increased chance of that male's sperm {reaching the egg cell(s) first / fertilising the egg cell(s)} / reproductive success for that male} (R) • selection pressure / males with alleles for longer mid sections will have an advantage over other males (R) • more offspring will {have the same father/ inherit same alleles} (G) • leading to possible reduction in genetic diversity (G) • many males and many egg cells could lead to an increased genetic diversity of offspring (G) spermatophore • spermatophore contains sperm cells for fertilisation of egg (I) • nutrients will be used by female to produce {egg cells with more nutrients / more egg cells} (R) • {chemicals / pheromones} reduce chances of other males mating with the female (R) • increased chance of that male's sperm {reaching the egg cells(s) first / fertilising the egg cell(s)} / reproductive success for that male} (R) • more offspring will {have the same father/ inherit same alleles} (G) • leading to possible reduction in genetic diversity (G) storage of sperm • {fertilised eggs / offspring} can be produced in absence of a mate (I) • increased reproductive success for {that female / males that mated} (R) • increased chance that offspring will {have different father/ inherit different alleles} (G) • leading to possible increase in genetic diversity (G) • not mating with (new) males every year could reduce genetic diversity (G) (6)

			Additional guidance
Level 0	0	No awardable content	
Level 1	1-2	Limited number of the most important or relevant scientific factors from the data/information provided are synthesised. No judgement is made.	1 mark – either R or G for one mating strategy 2 marks – either R+G for one mating strategy OR either R or G for two mating strategies OR 1 mark - basic information (I) given 2 marks - basic information (I) given + 1 or 2 x {R or G}
Level 2	3-4	Some of the most important or relevant scientific factors from the data/information provided are synthesised. A limited accurate judgement is made.	3 marks – 3 x (R or G) considered 4 marks = 4 x (R or G) considered
Level 3	5-6	Most of the important or relevant scientific factors from the data/information provided are synthesised. A detailed and accurate judgement is made.	5 marks = either reproductive success for all strategies considered plus genetic diversity of two strategies considered OR genetic diversity for all strategies considered plus reproductive success of two strategies considered 6 marks genetic diversity and reproductive success considered for all strategies