

Question		Expected Answers	Marks	
4	(a)	<p><i>DNA</i></p> <p>mutation ; altered protein synthesis ; problem with, DNA replication / cell division ; ref. cancer ;</p> <p><i>proteins</i></p> <p>denatured ; altered, 3D / tertiary / quaternary, shape ; ref. active site / specificity ; ref. protein function or named protein ; (e.g. enzyme / receptor / hormone) (max 3 either section)</p>	4 max	
	(b)	(i)	<p>not supported ; mole rat has, low reduced:oxidized ratio / low % reduced ; ora for mouse (mole rat) high / more, free radicals / damage ; ora for mouse</p>	3
		(ii)	<p>D mice and mole rats different ages ; E mole rats had more time to, metabolise / experience free radical damage ;</p> <p>D mole rats usually live, underground / in low O₂ conditions ; E exposed to abnormally high O₂ in lab ;</p> <p>D organisms not perfectly matched for, size / hair cover ; E mole rats have lower BMR ;</p> <p>E not, comparable / fair test ; A once with any stated difference</p>	4 max
	(c)		<p>curve drawn to the left of mouse ;</p>	1
			[Total: 12]	