

Question Number	Answer	Additional guidance	Mark
8(a)	<p>The correct answer is C Y</p> <p><i>A is incorrect because the nucleus contains the genetic information used in the synthesis of acrosomal enzymes</i></p> <p><i>B is incorrect because the nucleus contains the genetic information used in the synthesis of acrosomal enzymes</i></p> <p><i>D is incorrect because the nucleus contains the genetic information used in the synthesis of acrosomal enzymes</i></p>		(1)

Question Number	Answer	Additional guidance	Mark
8 (b)	<ul style="list-style-type: none"> • morula 		(1)

Question Number	Answer	Additional guidance	Mark
8(c)(i)	<p>A description that makes reference to one of the following pairs:</p> <p>Either:</p> <ul style="list-style-type: none"> • DNA methylation / adds methyl groups to DNA (1) • (DNA methylation) causes the {switching off / silencing} of gene(s) (1) <p>Or:</p> <ul style="list-style-type: none"> • histone modification / {methylation / phosphorylation/ acetylation} of histone (1) • (histone modification) causes the {switching off / silencing / activation} of gene(s) / (1) 	<p>Accept prevents {transcription / expression} of gene(s)</p> <p>Accept activates genes</p> <p>Accept ubiquitylation / sumoylation</p> <p>Accept prevents {transcription / expression} of gene(s) / allows {transcription / expression} of gene(s)</p>	(2)

Question Number	Answer	Additional guidance	Mark
8(c)(ii)	<p>An explanation that makes reference to the following:</p> <ul style="list-style-type: none"> • transcription of active genes / active mRNA produced (1) • therefore {certain / specific} proteins produced / (1) • these proteins {determine / change} cell {structure / function} (1) 	<p>Accept named example</p> <p>Accept translation at the ribosomes produces proteins</p> <p>Accept description</p> <p>Ignore modifies the cell unqualified</p>	(3)