

Cell division

Mark scheme

1.	(a)	characteristics	1	
	(b)	genes	1	
	(c)	chromosomes	1	
	(d)	mitosis	1	
	(e)	<u>a</u> sexual	1	
				[5]
2.	(a)	chromosomes	1	
	(b)	diagram showing four separate chromosomes two long and two short (as in diagram 1) <i>allow each chromosome shown as two joined chromatids</i> <i>do not allow if chromosomes touching each other</i>	1	
	(c)	(i) any two from: <ul style="list-style-type: none"> • can grow into any type of tissue / named tissue • used in medical research • used to treat human diseases • large numbers can be grown 	2	
		(ii) any two from: <ul style="list-style-type: none"> • expensive • grow out of control / ref cancers • may be rejected • need for drugs (for rest of life) 	2	
				[6]
3.	(a)	A = meiosis <i>accept 'mieosis'</i> <i>do not accept 'miosis'</i>	1	
		B = mitosis 1 <i>do not accept 'meitosis' etc</i>		
	(b)	fertilisation allow conception	1	
	(c)	(i) 23	1	
		(ii) 46	1	
				[5]