

17. Inheritance

17.2 Mitosis

Paper 3 and 4

Marking Scheme

Q1.

(c)	statement	mitosis	meiosis	;	;	;	;	;	;	;	6 one mark for each correct row R each additional tick	
	a type of nuclear division	✓	✓	;								
	gives rise to genetically different cells		✓	;								
	important for the repair of damaged tissues	✓		;								
	needed for growth	✓		;								
	produces gametes		✓	;								
	used in asexual reproduction	✓		;								

Q2.

	description	meiosis	mitosis	;	;	;	;	;	;	;	5 one mark for each correct row	
	can result in growth		✓ ;									
	nuclear division	✓	✓ ;									
	occurs in asexual reproduction		✓ ;									
	produces egg cells	✓	(✓) ;									
	replaces damaged cells		✓ ;									

Q3.

(c)	any two from: unspecialised (cells) ; that divide by mitosis ; (to produce daughter cells) that become specialised (for specific functions) ;	2	

Q4.

(a)	repair ; asexual ; separate ; diploid ; zygote ; fertilisation ;	6	

Q5.

(a)	<u>helix</u> ; one / the same / equal / identical / maintained / constant ; <u>identical</u> ;	3	
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Q6.

(c)(i)	each chromosome is, duplicated / replication / doubled / copied ; to maintain the same number of chromosomes OR so all cells have the <u>same genetic information</u> / cells are all <u>genetically identical</u> ;	2	
(c)(ii)	cell membrane ; cell wall ; AVP ;	2	
(c)(iii)	(a diploid cell has) two sets of chromosomes ;	1	