

# 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	
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Q4.

(a)	repair ; asexual ; separate ; diploid ; zygote ; fertilisation ;	6	
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**Q5.**

(a)	<u>helix</u> ; one / the same / equal / identical / maintained / constant ; <u>identical</u> ;	<b>3</b>	
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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> ;	<b>2</b>	
(c)(ii)	cell membrane ; cell wall ; AVP ;	<b>2</b>	
(c)(iii)	(a diploid cell has) two sets of chromosomes ;	<b>1</b>	