

AQA, OCR, Edexcel

A Level

A Level Biology

Cell Cycle Answers

Name:

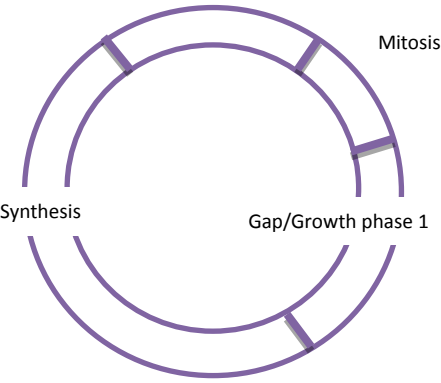
M

M

E

Mathsmadeeasy.co.uk

Total Marks: /28

Answer	Marks
<p>1. A)</p> <p>i) Mitosis</p> <p>ii)</p>  <p>iii) Interphase</p>	<p>1 mark</p> <p>5 marks 3 for correct labels 1 for correct order 1 for accurate spacing</p> <p>1 mark</p>
<p>2.A)</p> <p>i) – DNA Helicase -breaks the hydrogen bonds between the two DNA strands (Free DNA nucleotides complimentary base pair) -DNA polymerase – forms phosphodiester bonds between adjacent nucleotides.</p> <p>ii) Nucleotide</p> <p>iii) – The two original strands of DNA act as template for the new strands to form -In the two molecules of DNA formed, each has a conserved original strand and a new strand</p> <p>iv) Identifies and removes any mutations in the DNA strands</p>	<p>4 marks</p> <p>1 mark</p> <p>2 marks</p> <p>1 mark</p>

<p>3. A) i) A - Chromatid B – Centromere</p> <p>ii) A – Telophase - Chromatids reach the poles, nuclear envelope reforms, cytoplasm divides and two separate cells are formed. B – Metaphase - Chromosomes line up along the centre of the cell. Centromere attaches to spindle fibres C – Prophase - Chromosomes condense, nuclear envelope breaks down D – Anaphase - Spindle fibres contract pulling pairs of chromatids towards the poles.</p> <p>b) i) – DNA is checked for mutations before it is replicated - If the DNA is damaged the cell destroys itself</p> <p>ii) Tumour cells divide faster than healthy cells</p>	<p>2 marks</p> <p>8 marks</p> <p>2 marks</p> <p>1 mark</p>
--	--