

Question Number	Answer	Mark
8 (a)	1. growth (of organism) / increase in cell numbers / eq ; 2. asexual reproduction / production of clones / eq ; 3. repair of tissues / replacement of cells / eq ; 4. idea of control of cell { growth / division / mitosis } ;	(2)

Question Number	Answer	Mark
8 (b) (i)	{ carcinogens / cigarettes / tobacco / eq } / { ionising radiation / X-rays } / asbestos ;	(1)

Question Number	Answer	Mark
8 (b) (ii)	1. shorter growth or G phase / shorter interphase ; 2. { shorter / faster } cycle; 3. idea of usual { controls/ 'stops' } not { working/effective } / cell divides uncontrollably ; 4. cells do not become specialised ;	(2)

Question Number	Answer	Mark
8 (c) (i)	30 ;	(1)

Question Number	Answer	Mark
8(c)(ii)	<ol style="list-style-type: none"> 1. idea of positive correlation ; 2. non-linear increase described / exponential increase / eq ; 3. credit manipulation of data ; 	(3)

Question Number	Answer	Mark
8(c)(iii)	Mitosis ;	(1)

Question Number	Answer	Mark
8(d)	<ol style="list-style-type: none"> 1. idea of correct stimulus e.g. chemical ; 2. some genes active / some genes inactive / eq ; 3. only the active genes are transcribed / eq ; 4. mRNA made (only at active genes) / eq ; 5. protein made / eq ; 6. cell {structure / function} determined / cell permanently modified / eq ; 	(3)