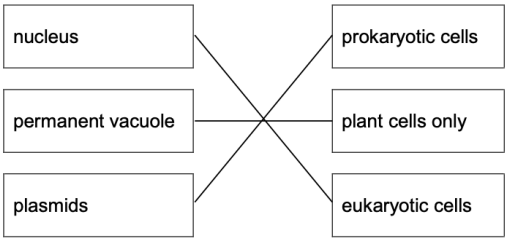
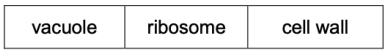
Cell structure (animal, plant, bacteria)

Q1. (2018)

01.1	 allow **1** mark for one or two correct links	2	AO1 4.1.1.1 4.1.1.2

Q2. (2018)

01.2	 tick box takes precedence if no tick is given, look at both the figure and the circling of words in the table if writing is seen on the figure and in the table both must be correct	1	AO1 4.1.1.2

Q3. (2019)

04.3	any **two** from: (bacterial cell): does not have a nucleus has plasmids is smaller	 allow DNA is free in cytoplasm allow has a single loop of DNA allow has a single strand of DNA allow description, e.g. (small) ring(s) of DNA allow bacterial cells do not have mitochondria **or** do not have membrane bound organelles allow bacteria have smaller ribosomes ignore bacterial cells do not have chloroplasts	2	AO1 4.1.1.1

Q4. (2020)

04.1	any **four** from: • bacterial cell is smaller (than a plant cell) • bacterial cell does **not** have chloroplasts (plant cell does) • bacterial cell does **not** have its DNA / genetic material inside a nucleus (plant cell does) • bacterial cell (may) have plasmids (plant cell does not) • bacterial cell does **not** have mitochondria (plant cell does) • cell wall in bacterial cells is **not** made of cellulose (cell wall in plant cells is) • bacterial cell does **not** have a large / permanent vacuole (plant cell does) • bacterial cell has smaller ribosomes (than plant cells)	allow converse statements 'it' refers to bacteria ignore chlorophyll allow bacterial cell does **not** have a nucleus (plant cell does) allow bacterial cell has DNA / genetic material in a ring / loop (plant cell does not) allow bacterial cell has DNA / genetic material free in cytoplasm do **not** accept idea that bacterial cells do not have ribosomes allow bacterial cell (may) have a flagellum (plant cells do not) allow bacterial cell (may) have a slime capsule (plant cell does not)	4	AO1 4.1.1.1 4.1.1.2

Q5. (2022)

01.1	both have a cell membrane both have cytoplasm		1 1	AO1 4.1.1.1

Q6. (2022)

02.1	gene chromosome nucleus cell	must be in this order	1	AO1 4.1.1.1 4.1.1.2 4.1.2.1

Q7. (2022)

02.2	differentiation	ignore specialisation	1	AO1 4.1.1.4

Q8. (2022)

02.3	4	allow 15	1	AO2 4.1.2.2

Q9. (2022)

02.4	46	allow 23 pairs (of chromosomes)	1	AO2 4.1.2.1 4.1.2.2

Q10. (2022)

02.5	**Stage 1** any **one** from: • (cell) growth • increase in number of sub-cellular structures • DNA replicates • chromosomes double / duplicate / replicate	 allow increase in number of organelles / ribosomes / mitochondria allow genetic material for DNA allow DNA doubles / duplicates	1	AO1 4.1.2.2
	Stage 2 any **one** from: • (one set of) chromosomes pulled to each end of cell • two nuclei form	ignore mitosis occurs allow chromosomes line up across the centre of the cell allow chromosomes move to opposite ends of the cell allow nucleus divides / splits (into two)	1	
	Stage 3 any **one** from: • cytoplasm / membrane divides • two identical cells formed	allow cytokinesis	1	

Q11. (2022)

02.7	repair of tissues **or** replacement of cells	ignore growth allow repair of organs ignore repair of cells allow replacement of tissues ignore replacement of organs	1	AO1 4.1.1.4

Q12. (2023)

07.1	any **one** from: • plasmid • chromosome • DNA / genes	 do **not** accept nucleus allow alleles allow genetic material	1	AO2 4.1.1.1 4.1.2.1 4.3.1.8

Q13. (2024)

05.2	any **three** from: (prokaryotic cell):	allow converse for eukaryotic cell if clearly stated	3	AO1 4.1.1.1 4.1.1.2
	• does not have a nucleus **or** DNA is free in the cytoplasm **or** genetic material is free in cytoplasm • does not have mitochondria	ignore genetic information if no other mark awarded, allow prokaryotic cell has no membrane-bound organelles		
	• has a single loop of DNA **or** has a single strand of DNA	ignore genetic information		
	• (has) plasmids	allow (small) rings of DNA		
	• (is) smaller	allow bacteria have smaller ribosomes		