

Question 3

Maximum mark

- (a) ii Mitochondrion / mitochondria ;
- iii Ribosomes / rough endoplasmic reticulum / RER;
- iv Golgi body / golgi apparatus / smooth endoplasmic reticulum / SER;
- v Vacuole ;
- vi Centriole ;

5 marks

- (b) A description to include two from:

1. pits contain plasmodesmata / pass through pits ;
2. (plasmodesmata) are strands of cytoplasm (which connect plant cells) ;
3. pits are holes through (cell) walls ;
[Accept thinning of wall / eq]
4. {plasmodesmata / pits} allow {substances / named appropriate substance} to pass between (plant) cells / eq ;

2 marks

- (c) Any two from:

1. (prokaryotic cell) has no nuclear membrane (whilst a eukaryotic cell does) / DNA not enclosed in a {nuclear membrane / nucleus} ;
2. (prokaryotic cell) has circular chromosome (whereas eukaryotic cell has linear ones) / (prokaryotic cell) has single chromosome whereas eukaryotic cells have {many / several} ;
3. (prokaryotic cells) do not have {mitochondria / chloroplasts / endoplasmic reticulum / golgi body / centriole / lysosomes / membrane bound organelle / structure within cell} (whereas eukaryotic cells can have) ;
4. (prokaryotic cells) can have {plasmids / pili / slime} capsule (eukaryotic cells do not) ;
[Reject flagellum]
5. (prokaryotic cells) are much smaller (than eukaryotic cells) ;
6. (prokaryotic cells) always have a cell wall (only some eukaryotic cells have cell wall) ;

[To gain a mark there must be no ambiguity about whether the candidate is referring to a prokaryotic or eukaryotic cell]

2 marks

Total 9 marks