

**Answer ALL questions.**

**Some questions must be answered with a cross . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .**

**1** The details of the ultrastructure of a cell can be seen using an electron microscope.

(a) Complete the table below. If the organelle can be present, place a tick (✓) in the box and if the organelle could not be present, place a cross (✗) in the box.

(4)

Organelles	Prokaryotic cell	Eukaryotic cell
centrioles		
flagella		
Golgi apparatus		
ribosomes		

(b) Place a cross  in the box next to the correct word or words to complete each of the following statements.

(i) Plant and animal cells may both contain

(1)

- A** amyloplasts, centrioles and mitochondria
- B** centrioles, mitochondria and rough endoplasmic reticulum
- C** chloroplasts, mitochondria and rough endoplasmic reticulum
- D** mitochondria, rough endoplasmic reticulum and smooth endoplasmic reticulum

(ii) The cytoplasmic connections between one plant cell and another are known as

(1)

- A** middle lamellae
- B** plasmodesmata
- C** pits
- D** tonoplasts



(iii) Prokaryotic cells and plant cells both contain

(1)

- A** a cell membrane and chloroplasts
- B** a cell membrane and mesosomes
- C** a cell wall and chloroplasts
- D** a cell wall and ribosomes

(iv) Woese suggested that there are three domains based on evidence from

(1)

- A** molecular pharmacology
- B** molecular phylogeny
- C** molecular physiology
- D** phenetic taxonomy

(v) The two domains that contain prokaryotic cells are

(1)

- A** Animalia and Bacteria
- B** Archaea and Bacteria
- C** Bacteria and Eukarya
- D** Bacteria and Plantae

**(Total for Question 1 = 9 marks)**



P 4 5 0 6 8 A 0 3 2 8