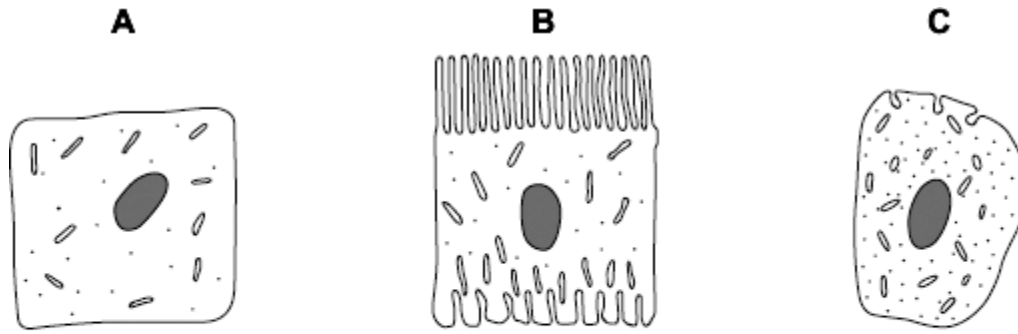


1

Diagrams **A**, **B** and **C** show cells from different parts of the human body, all drawn to the same scale.



Key
- Mitochondrion
· Ribosome

(a) Which cell, **A**, **B** or **C**, appears to have adaptations to increase diffusion into or out of

the cell?

Give **one** reason for your choice.

.....
.....

(1)

(b) (i) Cell **C** is found in the pancreas.

Name **one** useful substance produced by the pancreas.

.....

(1)

- (ii) Use information from the diagram to explain how cell **C** is adapted for producing this substance.

.....

.....

.....

.....

(2)
(Total 4 marks)

Mark schemes

1

(a) B

no mark for "B", alone

large(r) surface / area **or** large(r) membrane

accept reference to microvilli

accept reasonable descriptions of the surface

*do **not** accept wall / cell wall*

ignore villi / hairs / cilia

1

(b) (i) any **one** from:

- insulin / hormone

if named hormone / enzyme must be correct for pancreas

- enzyme / named enzyme

1

(ii) many ribosomes

1

(ribosomes) produce protein

accept insulin / hormone / enzyme named is (made of) protein

or

allow many mitochondria (1)

provide energy to build protein **or** to make protein (1)

accept ATP for energy

1

[4]