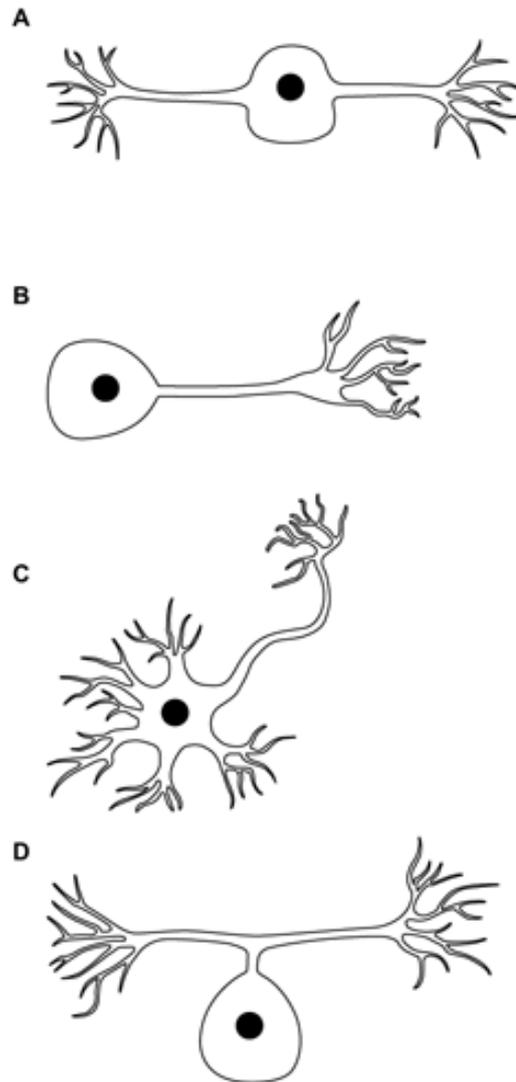


1. Which of the diagrams shows a neurone that connects to an effector?



Your answer

[1]

2. The Pacinian corpuscle is a type of sensory receptor that detects pressure.

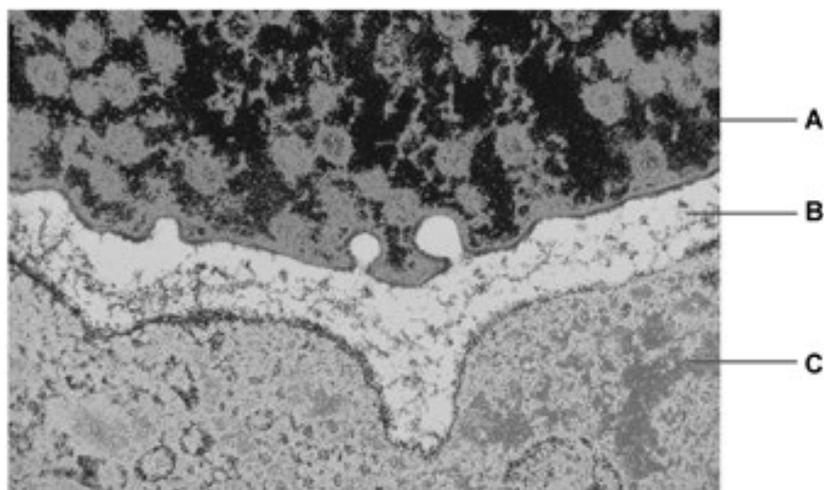
Which of the options describes the action of a Pacinian corpuscle?

- A** A strong stimulus at a Pacinian corpuscle produces a generator potential that exceeds a threshold value.
- B** A strong stimulus at a Pacinian corpuscle produces a larger action potential.
- C** Pressure on the Pacinian corpuscle causes the neurone membrane to become less permeable to sodium ions.
- D** The Pacinian corpuscle is a transducer that converts pressure into chemical energy.

Your answer

[1]

3. The electron micrograph shows the junction between two neurones.



i. State the name given to the region labelled **B**.

----- [1]

ii. Identify whether structure **A** or structure **C** is the first neurone in the pathway. Use **one** piece of evidence visible in the electron micrograph to explain your choice.

----- [1]

iii. Complete the sentences about the action potential.

The action potential involves rapid opening of voltage-gated sodium ion channels.

This is an example offeedback. During the action potential, the inside of the neurone becomes more positive than the outside. This is known asof the membrane.

[2]

END OF QUESTION PAPER