

Name:

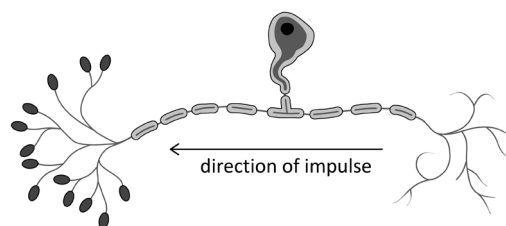
Class:



Which enzyme is involved in the process of transcription?

- A DNA ligase
- B Lysozyme
- C RNA polymerase**
- D Restriction endonuclease

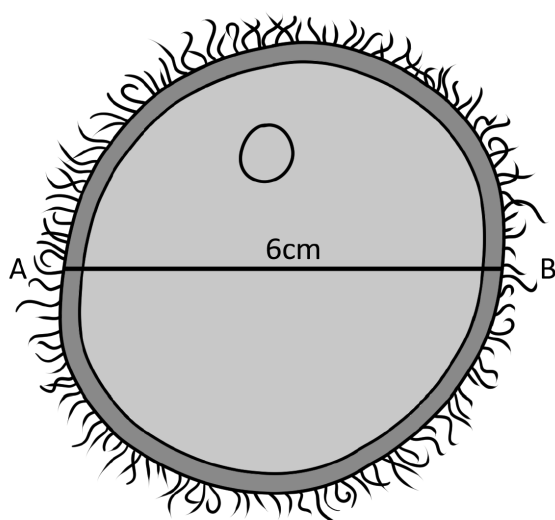
Identify the neurone shown in the figure below.



Sensory neurone

The figure below shows a cyanobacterium magnified 50 000 times.

The line AB shows the diameter of the bacterial cell.



- i. Calculate the actual diameter of the cyanobacterium.

Give your answer in micrometres (μm).

$$6 \text{ cm} = 60 \text{ mm} = 60000 \mu\text{m}$$

$$60000 \div 50000 = 1.2 \mu\text{m}$$

$$1.2 \mu\text{m}$$

- ii. Bacterial cells contain plasmids. Describe **three** other features of a bacterial cell.

An answer including three of the following:

- No nucleus /chromosomal DNA.
- Presence of ribosomes.
- Cell wall.
- No membrane bound organelles / no mitochondria.
- Flagellum.

Describe the process of osmosis.

Osmosis is the movement of water from an area of high water concentration to an area of lower water concentration through a partially permeable membrane.

Describe a test to show that a substance contains reducing sugars.

Test: Add Benedict's solution to sample and the mixture and heat.

Positive result: A colour change indicates that reducing sugars are present.
Accept Red or brick red as the change.

State where glucagon is produced and state its effect on cells of the liver.

Produced by the: Pancreas. Accept alpha cells of the pancreas.

Effect: it causes the cells of the liver to breakdown stored glycogen and release it into the blood as glucose.