

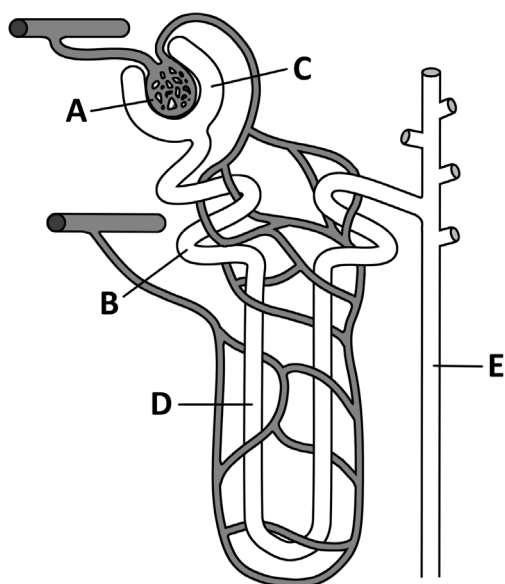
Name:

Class:



The diagram shows a nephron from a human kidney.

i. Name the structures labelled A, B, C, D and E



A = **Glomerulus.**

B = **Proximal convoluted tubule.**

C = **Bowmans capsule.**

D = **Loop of Henle.**

E = **Collecting duct.**

ii. Describe how glucose is reabsorbed from the filtrate.

Glucose is reabsorbed from the filtrate in the proximal convoluted tubule by active transport into the ciliated epithelial cells. From here it diffuses down its concentration from the epithelial cells to the blood capillary.

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

Test: Add a few drops of Benedict's solution to the sample. Heat the sample.

Positive result: A colour change indicates that reducing sugar is present.

Describe a test to show that a substance contains proteins.

Test: Add a few drops of Biuret solution to the sample.

Positive result: A colour change to lilac/purple indicates that protein is present.

State the name given to bacteria which remove nitrogen from the soil.

Denitrifying bacteria

State the name given to bacteria which fix nitrogen from the atmosphere.

Nitrogen fixing bacteria

Give **one** human activity that could cause the higher concentration of carbon dioxide in the winter.

Combustion

Give **one** biological process that could cause the lower concentration of carbon dioxide in the summer.

Photosynthesis

Describe how malaria is transmitted to humans.

Malaria is transmitted by the bite of an infected mosquito.

Accept vector instead of bite.