

Marks

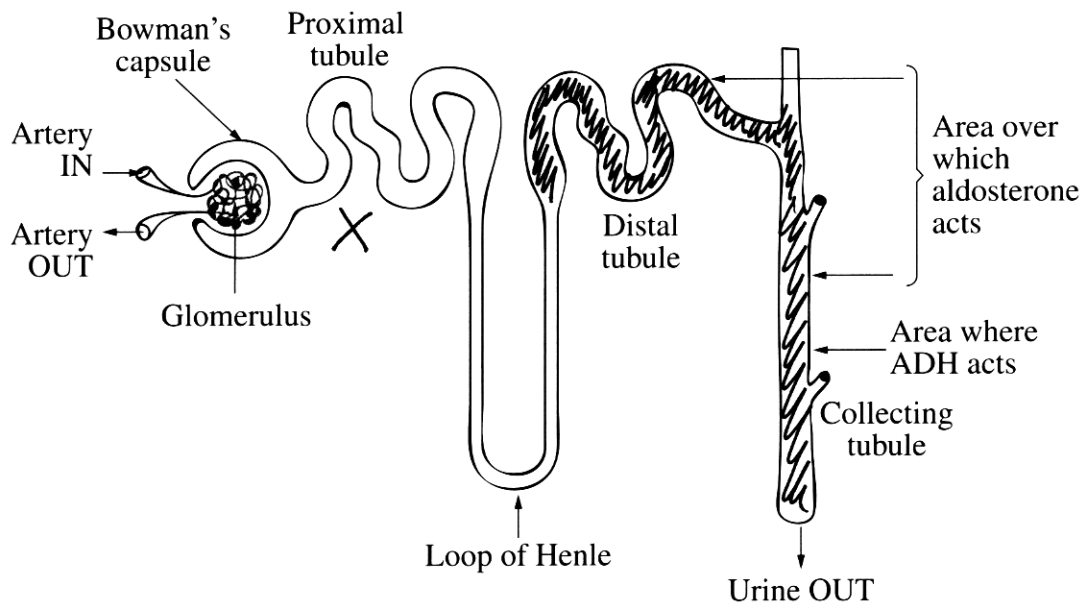
Question 23 (6 marks)

The diagram represents a nephron which is the functional unit of the kidney.

Nephrons make urine by:

- filtering small molecules and ions from the blood;
- reabsorbing the needed amounts of useful materials.

Surplus or waste molecules and ions flow out as urine.



- (a) Identify the area where filtration occurs, by marking it with an X on the diagram. **1**
- (b) Identify the area where reabsorption occurs, by shading it on the diagram. **1**
- (c) Discuss the importance of hormone replacement therapy for people who cannot secrete aldosterone. **4**

hormone replacement therapy involves injections of aldosterone to patients who cannot produce aldosterone. Aldosterone controls the salt and ^{blood pressure} ~~potassium~~ ^{constant} levels in the blood which in turn changes osmotic pressure. Lack of aldosterone ~~who~~ would lead to a low ~~blo~~ or varying blood pressure which would not allow the kidney to function properly as excretory products will not be produced ~~and~~ leading to a build up of toxins in the blood.