Corrected by:rahaf alfogaha

نجني سنسس

What is the primary function of the nephron in the context of urine formation?

(A) Storing filtered urine

(B) Filtering blood directly into the urinary bladder

(C) Storage of plasma proteins

(D) Glomerular filtration, tubular reabsorption, and tubular secretion

2. Which of the following does the glomerular filtrate contain?

(A) Only water and ions

(B) Only glucose and amino acids

(C)All plasma contents except plasma proteins

(D) All plasma proteins

3. How much urine is typically formed per day from the glomerular filtration rate?

(A) 25 L/day

(B) 180 L/day

(C) 8 L/day

(D) 12 L/day

4. What type of process is responsible for glomerular filtration?

(A) Active filtration

(B) Passive filtration

(C) Osmotic reabsorption

(D) Active secretion

5. Which glomerular force is responsible for filtering substances into the Bowman's capsule?
(A) Osmotic pressure
(B) Reabsorbing force
(C) Filtration force

(D) Blood pressure



- 6. What primarily determines the permeability of the glomerular membrane?
- (A) Rate of blood flow and protein content
- (B) Blood pressure and osmotic pressure
- (C) Temperature and pH level
- (D) Size of pores and molecular charge

7. Why are substances larger than 8 nm not filtered through the glomerular membrane?

- (A) Due to active transport mechanism
- (B) Because of negative charge
- (C) Due to osmotic pressure
- (D) Because of size restriction
- 8. Why do neural arteries have high glomerular capillary blood pressure?
- (A)Due to thick arterial walls
- (B)Because the renal artery is wide, short, and arises directly from the aorta
- (C)Because the renal artery is narrow and long
- (D)Due to slow blood flow through the kidneys

9. Why does plasma albumin not pass through the glomerular membrane despite its molecular diameter of 6 nm?

- (A) Because it is hydrophobic
- (B) Because it is hydrophilic
- (C) Because it is positively charged
- (D) Because it is negatively charged

10. How do the arterioles contribute to glomerular capillary blood pressure?

(A)Afferent arterioles are narrower than efferent ones

(B)Afferent arterioles are larger than efferent arterioles, creating resistance

(C)Efferent arterioles are larger, causing high pressure

(D)Both are of equal diameter, maintaining steady pressure



- 1.D Glomerular filtration, tubular reabsorption, and tubular secretion
- 2.C All plasma contents except plasma proteins
- 3.B 180 L/day
- 4.B Passive filtration
- 5.C Filtration force
- 6.D Size of pores and molecular charge
- 7.D Because of size restriction
- 8.B Because the renal artery is wide, short, and arises directly from the aorta
- 9.D Because it is negatively charged
- 10.B Afferent arterioles are larger than efferent arterioles, creating resistance



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نجني مبالاستان

1. What are the main functions of tubular reabsorption?

(A) The transport of substances from tubular fluid into blood to eliminate unimportant substances.

(B)The selective transport of substances from tubular fluid into blood to conserve important substances.

(C)The transport of substances from blood into tubular fluid to conserve important substances.

(D)The selective transport of substances from blood into tubular fluid to rapidly eliminate important substances.

2. Which substances are totally reabsorbed by the proximal tubules?

(A) Urea and creatinine.

(B) Glucose, amino acids, and uric acid.

(C) K+ and phosphate.

(D) Na+ and water.

3. What percentage of glucose is reabsorbed by the proximal tubules?
(A) 95%
(B) 50%
(C) 75%

(D) 100%

4. In the context of the loop of Henle, what role does the descending limb play?
(A) It is impermeable to water and permeable to NaCl, allowing NaCl to diffuse in.
(B) It actively transports NaCl out of the tubular fluid.
(C) It is impermeable to NaCl and actively transports water out.
(D) It is permeable to water and less permeable to NaCl and urea, allowing water to diffuse out.



- 5. What is the permeability characteristic of the thick ascending limb of the loop of Henle?
- (A) It is impermeable to water and actively transports NaCl out.
- (B)It is permeable to both water and NaCl.
- (C)It is permeable to water and impermeable to NaCl.
- (D)It is impermeable to both water and NaCl but allows passive diffusion of NaCl.

6. How does the presence of ADH affect urine concentration?

(A) ADH increases the permeability to NaCl, allowing more reabsorption and producing concentrated urine.

(B) ADH increases the permeability to water, allowing more reabsorption and producing concentrated urine.

(C) ADH decreases the permeability to water, reducing reabsorption and producing diluted urine.

(D) ADH has no effect on urine concentration.

7. In absence of ADH, what happens to the urine?

- (A) It becomes concentrated due to NaCl reabsorption.
- (B)It becomes concentrated due to water reabsorption.
- (C)It remains unchanged in concentration.
- (D)It becomes diluted due to lack of water reabsorption.

8. What mechanism involves the loop of Henle concentrating urine?

- (A) The tubular secretion mechanism.
- (B) The counter-current multiplier mechanism.
- (C) The hormonal adjustment mechanism.
- (D) The cortex regulation mechanism.

9. Which part of the renal tubules does ADH primarily influence for water reabsorption?

- (A) Distal tubule and collecting duct.
- (B) Glomerulus.
- (C) Loop of Henle.
- (D) Proximal tubule.

- 10. What triggers the micturition center to initiate urination in adults?
- (A) Appearance of cortical inhibitory impulses.
- (B)Absence of any impulse from the cerebral cortex.
- (C)Disappearance of cortical inhibitory impulses.
- (D) Constant inhibition by medulla.

Answers

1.B The selective transport of substances from tubular fluid into blood to conserve important substances.
2.B Glucose, amino acids, and uric acid.
3.D 100%
4.D It is permeable to water and less permeable to NaCl and urea, allowing water to diffuse out.
5.C It is permeable to water and impermeable to NaCl.
6.B ADH increases the permeability to water, allowing more reabsorption and producing concentrated urine.
7.B It becomes concentrated due to water reabsorption.
8.B The counter-current multiplier mechanism.
9.A
10.A Appearance of cortical inhibitory impulses.



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نجني سنسسابه

1. Describe the percentage of filtered Na+ that is reabsorbed in the renal tubules.

- (A) About 30–35%
- (B) About 95–99%
- (C) About 75–80%
- (D) About 50-60%

2. What is the primary mechanism for Na+ reabsorption at the basal border of the tubular cell?

(A) Secondary active transport

(B) Primary active transport (Na+-K+ pump)

(C) Facilitated diffusion with glucose

(D) Passive diffusion

3. How many liters of water are normally filtered through the glomeruli per day?
(A) 200 L
(B) 90 L
(C) 50 L
(D) 180 L
4. What is the average daily urine volume produced?
(A) 2 L
(B) 10 L
(C) 1 L
(D) 5 L



5. What percentage of filtered water is reabsorbed each day?
(A) 85%
(B) 95%
(C) 99.2%

(D)90%

6. Which type of water reabsorption is under the control of ADH?

- (A) Glomerular filtration
- (B) Obligatory reabsorption
- (C) Facultative reabsorption
- (D) Both obligatory and facultative reabsorption

7. In which parts of the nephron does obligatory water reabsorption primarily occur?

- (A) PCT and loop of Henle
- (B) Loop of Henle and collecting duct
- (C) PCT and DCT
- (D) DCT and collecting duct

8. What is the percentage of glucose reabsorbed in the nephron? (A) 30%

- (B) 80%
- (C) 50%
- (D) 100%

9. What type of transport is involved in glucose transport at the luminal border of the PCT cell?

- (A) Facilitated diffusion with Na+
- (B) Passive diffusion
- (C) Primary active transport
- (D) Secondary active cotransport by symport carrier



10. What aids in increasing the glucose transport by up to 10–20 times?
(A) Angiotensin II
(B) ADH (Antidiuretic Hormone)
(C) Insulin hormone
(D) Aldosterone

Answers

1.B About 95–99% 2.B Primary active transport (Na+-K+ pump) 3.D 180 L 4.C 1 L 5.C 99.2% 6.C 7.A PCT and loop of Henle 8.D 100% 9.D Secondary active cotransport by symport carrier 10.C Insulin hormone

