

• Q17. Which factor shifts the K^+ inside the principle cells in late distal & collecting tubule.

- A. Insulin deficiency
- B. Decreased Aldosterone secretion
- C. Increased Aldosterone secretion
- D. Acidosis
- E. Cell lysis

- Q. Which type of Nephrons are involved in formation of concentrated urine & why?

• Q19. Which part of nephron act as Counter Current exchanger which preserve Hyperosmolarity of renal medulla.

- A. Loop of Henle
- B. Collecting ducts
- C. Vasa recta
- D. Distal convoluted tubules
- E. Proximal convoluted tubules

- Q4. The following data is obtained from an arterial blood sample who had prolonged history of vomiting
- $\text{PH} = 7.5$, $\text{Pco}_2 = 49 \text{ mm Hg}$, $[\text{HCO}_3] = 38 \text{ mEq/L}$. this patients arterial blood findings are diagnosis of :
 - A. Compensated respiratory alkalosis
 - B. Compensating Metabolic alkalosis
 - C. Metabolic acidosis
 - D. Respiratory acidosis
 - E. Both metabolic & respiratory acidosis

• Q6. The only factor by which excretion of Ca^{++} is enhanced is?

- A. \uparrow plasma phosphate
- B. \downarrow Blood pressure
- C. Metabolic acidosis
- D. \downarrow PTH
- E. \uparrow PTH

- Q8. Condition that causes decreased colloidal osmotic pressure leading to severe edema is
 - A. Varicose vein
 - B. Nephrotic syndrome
 - C. Congestive heart failure
 - D. Valvular heart disease

- Q13. H^+ ion secretion in kidney causes:
 - A. Excretion of potassium
 - B. Excretion of Na
 - C. Reabsorption of Ca^{+}
 - D. Reabsorption of HCO_3
 - E. Excretion of HCO_3

• Q18. In Hypokalemia what is the most probable mechanism of reabsorption of K^+ from intercalated cells?

- A. Passive diffusion
- B. Na- K^+ ATPase pump
- C. By concentration gradient
- D. Hydrogen Potassium ATPase
- E. Increased K^+ secretion

• Q9. Hydrogen ions are secreted into tubular lumen by intercalated cells of late distal & collecting tubules by:

- A. Primary active transport
- B. Secondary active transport
- C. simple diffusion
- D. Facilitated diffusion
- E. Secondary active counter transport

• Q7. Which of the following is the cause of chronic renal failure

A. Hemorrhage

B. Diarrhea

C. Burn

D. Myocardial infarction

E. Diabetes mellitus

• Q5. Conn's Syndrome (increased Aldosterone) is mostly associated with?

A. Hyperkalemia

B. Hypocalcemia

C. Hypokalemia

D. Hyponatremia

E. Decrease in Blood volume

• Q12. The passive secretion of urea into thin loop of Henle is facilitated by urea transporter

A. UT-A1

B. UT-A2

C. UT-A3

D. UT-A4

UT-A5

• Q16. Most effective intracellular buffer is?

A. Bicarbonate buffer

B. Phosphate buffer

C. Ammonia buffer

D. Proteins

E. none of above

• Q. The thick segment of ascending Limb of loop of Henle is:

- A. Highly permeable to water
- B. Impermeable to all solute
- C. Impermeable to water
- D. A part of JG apparatus
- E. Highly convoluted

• Q2. In case of persistence diarrhea, there would be decrease in

A. Anion Gap

B. Plasma HCO_3^- concentration

C. H^+ secretion

D. Ammonia production

E. Production of new HCO_3^- by distal tubules

- Q15. Most efficient renal epithelial cell buffer is
 - A. Phosphate buffer because its pK is 6.8
 - B. Phosphate buffer because it is rapidly reabsorbed in tubular cells
 - C. Ammonia buffer as it governs pH changes, & is produced in acidosis
 - D. Because its pK is 9.2
 - E. Both A&B

• Q3. The person who has metabolic acidosis & Anion Gap is Normal, the cause of metabolic acidosis will be

- A. Methanol poisoning
- B. Diabetes mellitus (Ketoacidosis)
- C. Renal tubular acidosis
- D. Lactic acidosis
- E. Aspirin poisoning

- Q20. Patients with chronic renal failure develop
 - Osteomalacia, the cause of this disease is decreased
- A. PTH
 - B. Phosphorus
 - C. 25Hydroxy cholecalciferol
 - D. Cholecalciferol
 - E. 1,25 dihydrocholecalciferol

• Q10. If more H^+ ions are filtered & secreted, in your opinion what will be the mechanism by which the kidney will remove excess hydrogen ions from renal tubules

- A. Free H^+ ions
- B. Phosphate buffer mechanism
- C. Ammonia buffer mechanism
- D. Both B & C
- E. Only A

- Q. Counter current multiplier mechanism
- A. Increases solute concentration in renal medulla
- B. Increases solvent concentration in renal medulla
- C. decreases solute concentration in renal medulla
- D. Both A&B
- E. None of above