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MBBS-F7-020

Time = 20 mins  
Select Single best answer, all questions carry equal marks.

UNIT TEST: Kidney II  
Date: 17-01-19

ROLL NO: A 11 NAME: Ahmed

**INSTRUCTIONS**  
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins  
2-Any cutting and overwriting in objective part will not be accepted

Q1. A 50 years old male with history of chronic obstructive lung disease had the following laboratory tests ;arterial PH=7.25, Pco2=78 mmHg & HCO3 30 mEq /L. The acid base disturbances present in this patient is diagnostic of :

- A. Metabolic alkalosis
- B. Metabolic acidosis
- C. Mixed acidosis & alkalosis
- D. Respiratory acidosis
- E. Respiratory alkalosis

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

- A. Anion Gap
- B. Plasma HCO3 concentration
- C. H+ secretion
- D. Ammonia production
- E. Production of new HCO3 by distal tubules

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

Q4. The following data is obtained from an arterial blood sample who had prolonged history of vomiting

PH= 7.5, Pco2=49mm Hg, [HCO3]= 38mEq/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

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

- A. Hyperkalemia
- B. Hypocalcemia
- C. Hypokalemia
- D. Hyponatremia
- E. Decrease in Blood volume

Q6. The only factor by which excretion of Ca<sup>2+</sup> is enhanced is?

- A. ↑ plasma phosphate
- B. ↓ Blood pressure
- C. Metabolic acidosis
- D. ↓ PTH
- E. ↑ PTH

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

- A. Hemorrhage
- B. Diarrhea
- C. Burn
- D. Myocardial infarction
- E. Diabetes mellitus

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
- E. Congenital abnormality of the

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

Q10. If more H<sup>+</sup> 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<sup>+</sup> ions
- B. Phosphate buffer mechanism
- C. Ammonia buffer mechanism
- D. Both B & C
- E. Only A

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Q11. Increased  $\text{Na}^+$  intake causes increased blood pressure it would lead to increased excretion of sodium and chloride by:

- A.  $\uparrow$  Angiotensin II
- B.  $\downarrow$  Angiotensin II
- C.  $\downarrow$  Aldosterone
- D. Both B & C
- E. Cortisol

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
- E. UT-A5

Q13.  $\text{H}^+$  ion secretion in kidney causes:

- A. Excretion of potassium
- B. Excretion of Na
- C. Reabsorption of  $\text{Ca}^{2+}$
- D. Reabsorption of  $\text{HCO}_3^-$
- E. Excretion of  $\text{HCO}_3^-$

Q14. In the renal tubules about 65% of the filtered  $\text{Na}^+$  is reabsorbed in:

- A. Ascending limb of loop of Henle
- B. Collecting tubule
- C. Descending limb of loop of Henle
- D. Distal tubule
- E. Proximal tubule

Q15. Most efficient renal epithelial cell buffer is

- A. Phosphate buffer because its  $\text{pK}$  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  $\text{pK}$  is 9.2
- E. Both A & B

Q16. Most effective intracellular buffer is?

- A. Bicarbonate buffer
- B. Phosphate buffer
- C. Ammonia buffer
- D. Proteins
- E. none of above

Q17. Which factor shift the  $\text{K}^+$  inside the principal cells in late distal & collecting tubule.

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

Q18. In Hypokalemia what is the most probable mechanism of reabsorption of  $\text{K}^+$  from intercalated cells?

- A. Passive diffusion
- B.  $\text{Na}^+/\text{K}^+$  ATPase pump
- C. By concentration gradient
- D. Hydrogen Potassium ATPase
- E. Increased  $\text{K}^+$  secretion

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

Q20. Patients with chronic renal failure develop Osteomalacia, the cause of this disease is decrease

- A. PTH
- B. Phosphorus
- C. 25 Hydroxy cholecalciferol
- D. Cholecalciferol
- E. 1,25 dihydrocholecalciferol