بسم الله الرحمن الرحيم

﴿رَبِّ اشْرَحْ لِي صَدْرِي ۝ وَيَسِّرْ لِي أَمْرِي ﴾

1. Under normal circumstances in normal person; among the following substances, which one has the HIGHEST clearance:

A. Na+.
B. large proteins
C. urea.
D. creatinine.
E. glucose.

Ans: D

2. In estimating GFR (eGFR), what test is needed?

A. urine sample (spot urine).
B. 24-hour urine collection.
C. measuring plasma creatinine concentration.
D. measuring urine creatinine concentration.
E. tGFR is only performed in children and elderly while eGFR is used for all cases.

Ans: C

3. Filtered load of "x" is product of two variables, choose one among the following options:

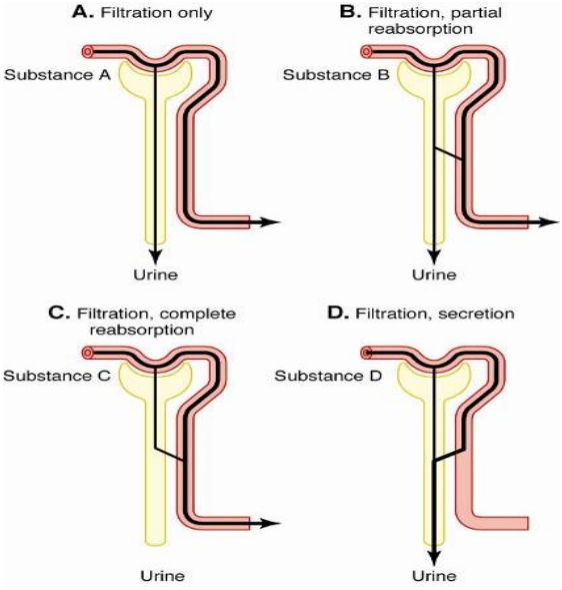
A. GFR and urine output (ml/min)
B. GFR and concentration of X in the urine
C. GFR and concentration of X in the plasma
D. concentration of X in the plasma and urine output (ml/min)
E. its excretion rate (mg/min)

Ans: C

4. Under normal circumstances, regarding plasma creatinine, which of the following is FALSE?

A. is directly proportional to GFR
B. presents in the urine.
C. presents in the blood
D. not reabsorbed
E. come from muscle protein breakdown.

Ans: A



5. In a normal individual, large proteins are represented by which of the associated figures?

A. Figure A
B. Figure B
C. Figure C
D. Figure D
E. none of the above figures

Ans: E

6. Regarding acid-base balance, choose the correct statement: DELETE

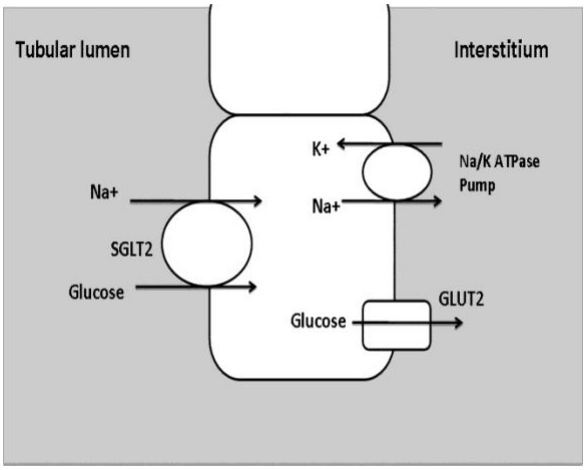
A. If [HCO3-] and PCO2 are known, pH can be calculated**.**
B. Our body has a tendency towards alkalosis.
C. In acidosis, kidneys make less of HCO3- per day
D. In metabolic acidosis, HCO3 – is higher than normal
E. Kidney injury (failure) causes metabolic alkalosis

Ans: A

7. If a patient is treated for rheumatoid arthritis and taking NSAID (Non-steroidal anti-inflammatory drugs (NSAIDs)) for long time; which of the following tests you should perform periodically?

A. urine creatinine level.
B. plasma creatinine level.
C. 24-hour urine collection.
D. urine analysis (routine and microscopy).
E. liver function tests.

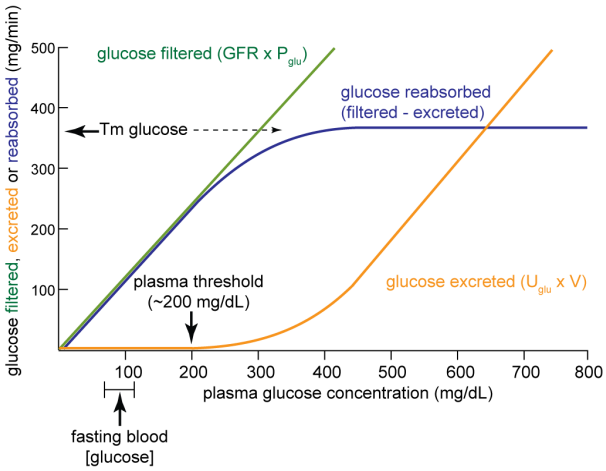
Ans: B



8. From the associated figure, regarding handling of glucose by the kidney, one statement is TRUE

A. The glucose carrier is located at all the parts of the nephron.
B. Glucose reabsorption occurs through primary active transport
C. One glucose is transported with two sodium
D. This type of transport can be inhibited by administering drug (Forxiga) in diabetic patients
E. Kidney handle glucose by filtration, reabsorption and secretion.

Ans: D



9. Using the associated figure, what information you can gain?

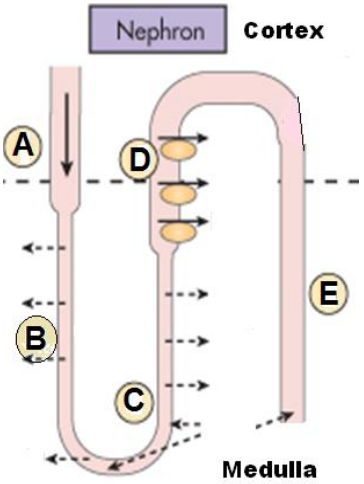
A. urine output
B. Threshold for glycosuria
C. concentration of glucose in the urine
D. Glucose excretion rate
E. GFR

Ans: B

10. Regarding Sprinolactone (aldactone), one of the following is TRUE

A. is potassium sparing diuretic
B. is aldosterone agonist
C. increases sodium reabsorption.
D. is the strongest diuretic known
E. decreases urine output

Ans: A



11. In the presence of high plasma ADH concentration, most of the filtered water is reabsorbed in:

A. A
B. B
C. C
D. D
E. E

Ans: A

12. Under normal circumstances (normal diet and normal physical activity), regarding normal urine, which of the following is CORRECT?

A. urine is hypertonic.
B. drinking sea water makes urine osmolarity more than 2000 mOsmole/l.
C. urine contains significant number of RBCs.
D. urine output equals 125 ml/min.
E. urine pH is alkaline.

Ans: A

13. Choose the correct statement. In a normal adult excreting 150 mEq of sodium per day in the urine, with a urine output of 1.5 lit/day. Which of the following statements is true? (Na plasma concentration equals 140mEq/l).

A. Clearance of Na+ can be calculated knowing its plasma concentration
B. Clearance of Na+ equals creatinine clearance.
C. Clearance of Na+ is more than creatinine clearance.
D. From the above data; Na+ concentration in the urine is equal to plasma Na+ concentration.
E. Clearance of Na+ is more than 1ml/min

Ans: A

14. Regarding furosemide diuretic (Lasix) one of the following statements is TRUE

A. increases urine concentrating ability.
B. mainly, it works at the distal tubule.
C. is the strongest diuretic.
D. is weak diuretic.
E. is contraindicated in hypertensive patients.

Ans: C

15. NSAID (non-steroidal anti-inflammatory drugs) which inhibit prostaglandins might decrease GFR in certain individuals because it:

A. constricts proximal tubule.
B. constricts afferent arteriole.
C. constricts glomerular capillaries.
D. constricts efferent arteriole.
E. dilates both afferent and efferent arterioles.

Ans: B

16. To make concentrated urine, you need:

A. Absence of diuretics
B. Hypoosmolar interstitium
C. Absence of ADH
D. High water permeability of the ascending loop of Henle
E. Absence of water channels in the collecting ducts

Ans: A

17. Regarding end-stage renal failure all the following are expected EXCEPT:

A. patient develop anemia
B. low urine output
C. hemodialysis is needed
D. blood pH goes above 7.45
E. osteoporosis

Ans: D

اللهـــمَّ لك الحمدُ بجميعِ محامدكَ كلها،
لك الحمدُ حمدًا يوافي نِعمَك، ويستزيدُ
فضلك، ويستمطـــــــــــــرُ رضوانك