Memory Test - Renal System_Class Test_ Online_Davidson Plus-1_Batch

Total Mark: 60
Time: 30 Min

1. Factors that has stimulatory effect on renin secretion
A) Increased sympathetic activity via renal nerves
B) PGs
C) Vasopressin
D) Increased AA pressure
E) □ circulating catacholamines
Answer: T, T, F, F, T
Discussion: [Ganong/25th/P-703]
Reference:

2. Features of acute post streptococcal glomerulonephritis are
A) Hypertension
B) 24 hours urinary protein above 0.5g/day
C) Polyuria
D) Hematuria
E) Hypervolemia
Answer: T, F, F, T, T
Discussion: Explanation: C. Oliguria
Reference: [Ref : Davidson 22nd Table : 17.11]

3. GFR is regulated by
A) Glomerular capillary hydrostatic pressure.
B) Glomerular capillary blood flow.
C) Plasma collidal osmotic pressure.
D) Effective filtration pressure.
E) Antidiuretic hormone.
Answer: T, T, T, T, F
Discussion: [Ganong/25th/P-677 + Guyton/13th/P-335-338]
Reference:

4. In proximal convoluted tubule
A) About 90% of filtered water is reabsorbed.
B) Renin is produced.
C) Glucose is completely reabsorbed under normal conditions.
D) K+is reabsorbed.
E) PAH is actively reabsorbed.
Answer: F, F, T, T, F
Discussion: [abc bio/7th/P-280]
Reference:

5. Kidney regulate acid base balance by
A) Secretion of HCO-3
B) Reabsorption of HCO-3
C) Secretion H+
D) Reabsorption of H+
E) Generation of new HCO-3
Answer: F, T, T, F, T
Discussion: [abc bio/7th/P-307-309]
Reference:

6. Most suitable factor for increase renal blood flow is-
A) Angiotensin-2
B) High protein diet
C) Endothelin
D) Vasoactive NO
E) Epinephrine & nor-epinephrine
Answer: F, F, F, T, F
Discussion:
Reference: [Ref:Guyton 13 th /p-339/B-27.4]

7. Where in the kidney tubule does active re-absorption of Na+ Occur
A) Collecting duct.
B) Distal tubule.
C) Ascending limb of loop of Henle.
D) Proximal tubule.
E) Thin segment of loop of Henle.
Answer: T, T, T, T, F
Discussion: [abc bio/7th/P-288]
Reference:

8. Aldosterone---
A) Is a steroid hormone secreted by the adrenal medulla
B) Production ceases following removal of kidneys and their juxtaglomerular cells
C) Production decreases in treatment with drugs which blocks angiotensin converting enzyme
D) Secretion results in increased potassium reabsorption by the nephron
E) Secretion results in a fall in urinary PH
Answer: F, F, T, F, T
Discussion:
Reference:

9. Angiotensin-ii
A) Is autocoid
B) Is formed in lungs
C) Is a vasodilator
D) Increases tubular Na+ reabsorption
E) Increases baro-reflex sensitivity
Answer: F, T, F, T, F
Discussion: [Ganong/25th/P-700,701]
Reference:

10. Dehydration increases plasma concentration all of the following hormone except -
A) vasopressin
B) anglotansin II
C) Aldosterone
D) Norepinephrine
E) ANP
Answer: F, F, F, F, T
Discussion: (dehydration causes 2 things – a) hypovalumia, b) hypotension, So hormones produces opposite to these effect will release , ANP is only exception) [Genesis Sheet]
Reference:

11. Diluted urine is formed
A) When plasma osmolarity increases
B) In SIADH
C) Urinary osmolarity remains more than 100 mOsm/L
D) In diabetes mellitus
E) In cranial diabetes insipidus
Answer: F, T, F, T, T
Discussion: [abc bio/7th/P-296]
Reference:

12. Following factors that increase ADH secretion

A) Increased plasma osmolarity
B) Hyperglycaemia
C) Hypervolaemia
D) Hypertension
E) Angiotensin II
Answer: T, T, F, F, T
Discussion: [Ganong/25th/P-696]
Reference:

13. Kidney secrets
A) Erythropoietin
B) Renin
C) Angiotensin
D) Vitamin D
E) Prostaglandins
Answer: T, T, F, T, T
Discussion: [abc bio/7th/P-267]
Reference:

14. Substances completely absorbed from kidney-

A) Glucose
B) Aminoacid
C) Urea
D) Vitamin
E) Uric acid

Answer: T, T, F, T, F
Discussion: [abc bio/7th/P-281]
Reference:

15. The late distal convoluted tubules of kidney [Basic, MD, MS March 18]
A) Secrete H+ into tubular lumen
B) Reabsorb urea
C) Form NH4+ ion
D) Reabsorb Na+ in exchange of K+
E) Determine the final composition of urine
Answer: T, F, T, T, F
Discussion:
Reference: [Ref: Rodde/6th/Q-405/P-173 + Vision P- 278)

16. 39 year old lady undergoes a laparoscopic cholecystectomy as a daycase. The operation is more difficult than anticipated and the surgeon places a drain to the liver bed. In recovery 1.5 litres of blood is seen to enter the drain. Which of the following substances is the first to be released in this situation?
A) Angiotensinogen
B) Renin
C) Angiotensin I
D) Angiotensin II
E) Aldosterone
Answer: B
Discussion: The decrease in blood pressure will be sensed by the juxtaglomerular cells in the kidney. This will cause renin secretion.
Reference:

17. Aldosterone is not regulated by -
A) K concentration in ECF
B) Renin angiotensin mechanism
C) Osmoreceptor mechanism
D) Na concentration in ECF
E) ACTH from pituitary
Answer: D
Discussion: [abc bio/7th/P-286]
Reference:

18. Completely reabsorbed substance from renal tubule
A) HCO3-
B) Amino acid
C) Na+
D) K+
E) H2O
Answer: B
Discussion:
Reference:

19. Highest amount of H+ secretion occurs in which part of nephron
A) PCT
B) ALLH
C) DCT
D) CD
E) CT
Answer: A
Discussion: (ABC biochemistry) [abc bio/7th/P-281]
Reference:

20. In an experiment the renal site characterized by low water permeability under normal circumstances was selectively destroyed. Which of the following renal sites is characterized by low water permeability under normal circumstances?

A) Collecting duct
B) Glomerulus
C) Juxtaglomerular apparatus
D) Proximal tubule
E) Thick ascending limb of the loop of Henle
Answer: E
Discussion: (Ganong-686) [abc bio/7th/P-283]
Reference:

21. In the absence of vasopressin , the greatest fraction of filtered water is absorbed in the
A) DCT
B) PCT
C) ALLH
D) DLLH
E) CD
Answer: B
Discussion: [Explanation: 60-70% water absorbed in the PCT]
Reference: [Ref: Ganong/25th/P-685]

22. In the presence of vasopressin, the greatest fraction of filtered water is absorbed in the
A) Proximal tubule
B) Loop of Henle
C) Distal tubule
D) Cortical collecting duct
E) Medullary collecting duct
Answer: A
Discussion:
Reference: [Ref: Ganong 25th/P-693]

23. Kidney regulates acid base balance by 3 fundamental mechanisms of which
A) Reabsorption of H+
B) Secretion of HCO3-
C) Reabsorption of filtered HCO3-
D) Generation of new NH4
E) Generation of new H+
Answer: C
Discussion: [Explanation: others two are: - secretion of H+ ion - formation of new HCO3-] BODY FLUID_DR. ARSHAD
Reference:

24. Transmembrane potassium Efflux occurs by
A) Acidosis
B) Insulin
C) Aldosterone
D) Alkalosis
E) Acute potassium excess
Answer: A
Discussion: Explanation: factor regulating transmembrane potassium are: - glucagon - □ blocker - acidosis - □- agonist - acute potassium deficit - ECF hyperosmolarity
Reference: (Ref: ABC Bio 7th /Page-347)

25. Which of the following cell type acts as a Chemoreceptor?
A) Juxtaglomerular cells
B) Mesangial cells
C) Bowmen's capsule
D) Macula Densa
E) Peritubular capillary
Answer: D
Discussion:
Reference: (Ref Ganong25th, P-702)

26. Angiottensin secretion is increased in
A) Decreased sympathetic activity
B) Decrease vagal discharge
C) Increase Na in ECF
D) Decreased blood volume
E) Increased K+ in ECF
Answer: D
Discussion: [Ganong/25th/P-700-702]
Reference:

27. Causes of atonic bladder are followings except
A) Crush injury in sacral region
B) Tabetic bladder
C) Damage of sensory nerve fibre from bladder
D) Constrictive fibrosis around sacral dorsal root nerve fibre
E) Damage of spinal cord above sacral region
Answer: E
Discussion: [Guyton/13th/P-330]
Reference:

28. Ethacrynic acid acts by inhibiting-
A) Na-Cl cotransporter
B) Na-K-2Cl co transporter
C) Na-K counter transport
D) Na-H counter transport
E) Na channel
Answer: C
Discussion:
Reference: (Ref: Ganong/ 25th/P-690)

29. The distal convoluted tubule (DCT) is a portion of nephron between the loop of Henle and the collecting duct system DCT:
A) Forms part of the juxtaglomerular complex
B) Is capable of reabsorbing hydrogen ions by a mechanism that involves carbonic anhydrase
C) Is capable of secreting sodium ions in exchange for potassium ions
D) Is capable of secreting Ca2+ in response to parathyroid hormone
E) Reabsorbs approximately 50% of the water in the glomerular filtrate
Answer: A
Discussion: Forms part of juxtaglomerular complex [Ganong/25th/P-703]
Reference:

30. Which of the following is not a source of erythropoietin ?
A) Kidney
B) Uterus
C) Perivenous hepatocytc
D) Oviducts
E) Spiral cord .
Answer: E
Discussion: [Ganong/25th/P-706]
Reference: