Memory Test - Renal System_Class Test_Online_Foundation_1

Total Mark: 60
Time: 50 Min

1. Factor increases renin secretion
A) Increased sympathetic activity
B) Increased circulatory catecholamines
C) Angiotensin-II
D) Vasopressin
E) Prostaglandins
Answer: T, T, F, F, T
Discussion:
Reference: (Ref: Ganong/25th/ P-703)

2. ADH acts on the following parts of kidney
A) DCT
B) Thin ALLH
C) DLLOH
D) DCT
E) Collecting duct
Answer: F, F, F, T, T
Discussion: (ADH acts on later DCT and cortical collecting duct)
Reference: (Ref-Ganong 25th, Page-696)

3. Agents causing relaxation of mesangial cells
A) PDGF
B) ANP
C) Dopamine
D) PGE2
E) cAMP
Answer: F, T, T, T, T
Discussion:
Reference: (Ref: Ganong-25th Page-678)

4. Glucose reabsorption
A) With Na+ in the early portion of PCT
B) Filtered at a rate of 100mg/min
C) Few milligrams appear in the urine per 24 hours
D) The amount of reabsorbed is not proportional to the amount of filtered
E) TmG is about 375 mg/min in men & 300mg/min in women
Answer: T, T, T, F, T
Discussion:
Reference: (Ref: Ganong 25th Papge-680)

5. Hydrostatic pressure in renal glomerular capillaries
A) Is lower than pressure in efferent arterioles
B) Rises when afferent arterioles constrict
C) Is higher than in most capillaries at heart level
D) Falls by 10 percent when arterial pressure falls by 10 percent
E) Falls along the length of the capillary
Answer: F, F, T, F, T
Discussion:
Reference: (Ref: Rodde book qus 395)

6. Regarding erythropoietin, true statements are
A) In adult, more than 90% comes from kidney
B) Also extracted from spleen & salivary glands
C) When renal mass is reduced, the liver compensates the situation
D) Produced by interstitial cells in the peritubular capillary bed of the kidney & veins of the liver
E) It is a circulating glycoprotein that contains 165 AA
Answer: F, T, F, F, T
Discussion: (85%)TFF(Perivenous hepatocytes) T
Reference: (Ref: Ganong/25th/ P-706)

7. Substances that are freely filtered but not reabsorbed by the kidney are
A) Creatinine
B) Urea
C) Glucose
D) Bicarbonate
E) Inulin
Answer: T, F, F, F, T
Discussion:
Reference: (Ref: Ganong 25th, Page-679)

8. The cells of the distal convoluted tubule
A) Reabsorb about 50 per cent of the water filtered by the glomeruli
B) Secrete hydrogen ions into the tubular lumen.
C) Form NH4ions
D) Reabsorb sodium in exchange for hydrogen or potassium ions
E) Determine the final composition of urine
Answer: F, T, T, T, F
Discussion:
Reference: (Ref: Ganong 25th, Page671)

9. The proximal convoluted tubules
A) Reabsorb most of the sodium ions in glomerular filtrate
B) Reabsorb most of the chloride ions in glomerular filtrate
C) Reabsorb most of the potassium ions in glomerular filtrate
D) Contain juxtaglomerular cells which secrete rennin
E) Contain the main target cells for antidiuretic hormone
Answer: T, T, T, F, F
Discussion:
Reference: (Rodde/Q-410/P-175)

10. Effects of adrenocortical hormone
A) Aldosterone leads to Na+ reabsorption Cl-

B) In adrenalectomized patient, when aldosterone is injected a latent period of 2-3 days occur before functioning
C) Mineralocorticoid acts primarily in the collecting duct
D) These are steroid hormone
E) Liddle syndrome leads to Na+ retention & hypertension
Answer: T, F, T, T, T
Discussion: TF (10-30 mins) TTT
Reference: (Ref: Ganong 25th, Page-688)

11. Factors are responsible for increase vasopressin secretion
A) Standing
B) Increased ECF volume
C) Decrease effective osmotic pressure
D) Pain emotion
E) Nausea & vomiting
Answer: T, F, F, T, T
Discussion: TFF (Increase) TT
Reference: (Ref: Ganong 25th, P-696)

12. Following statements are true Regarding apical transporter
A) Na+-glucose cotransporter- proximal tubule
B) Na+-amino acid – Distal tubule cotransporter

C) Na+-H+ exchanges – collecting duct
D) Na+- channel collecting duct
E) Na-K-2Cl cotransporter-Thin ascending limb of LOH
Answer: T, F, F, T, F
Discussion: TF (PCT)F(PCT) TF (Thick Ascending limb)
Reference: (Ref: Ganong 25th, Page-680)

13. Following statements are true regarding M/A of various diuretics
A) Acetazolamide Decrease K+ secretion
B) Thiazide inhibits Na-Cl cotransport in the early portion of DCT
C) Loop diuretics inhibit Na+-K+ Cotransporter in the TALLH
D) Spironolactone inhibit Na+-K+ exchange in the collecting tubule by inhibiting the action of Aldosterone
E) Caffcin Decreases tubular reabsorption of K+

Answer: F, T, F, F, F
Discussion: (H+) TFF (Collecting duct)F (only Na+)
Reference: (Ref: Ganong 25th Page-690)

14. Following statements are true, regarding kidney
A) Have an abundant lymphatic supply that drains directly in left subclavian vein
B) Renal capsule is thick and tough that limit the swelling of kidney during AKI
C) The nerve travel along the renal blood vessels
D) Kidney receives 15% of cardiac output per minutes
E) The GER in women are 10% lower than men

Answer: F, F, T, F, T
Discussion: F (Thoracic duct) F (Thin) TF (20%)T
Reference: (Ref: Ganong-25th, P-676)

15. Na+ can be transported across the luminal membrane of renal tubular cells by
A) Co-transport with organic solutes
B) Sodium potassium ATPase system
C) Sodium channels
D) Counter transport with H+
E) Counter transport with Ca+
Answer: T, F, F, T, F
Discussion:
Reference: (Ref: Ganong/25th/ P-680)

16. After vomiting which of the followings will not be increased?
A) Vasopessin
B) Aldosterone
C) Norepinephrine
D) Angiotensin-II
E) ANP
Answer: E
Discussion:
Reference: (Ref: Ganong/ 25th /P-706)

17. Aldosterone exert its greatest effect-
A) Bowmen's capsule
B) PCT
C) DCT
D) Loop of Henle
E) Cortical collecting duct
Answer: E
Discussion:
Reference: (Ref Ganong 25th page-692)

18. Erythropoietin is secreted by
A) Cells in the macula dense
B) Cells in the proximal tubules
C) Cells in the distal tubule
D) Granular cells in the juxtaglomerular apparatus
E) Cells in the peritubular capillary bed
Answer: E
Discussion:
Reference: [Ref: Ganong 25th/P-707]

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

20. In the presence of vasopressin, the greatest fraction of filtered water is absorbed in the?
A) Proximal tubules
B) Loop of henle
C) Distal tubules
D) Cortical collecting duct
E) Medullary collecting duct
Answer: A
Discussion:
Reference: (Ref: Ganong 25th Page-693)

21. 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:

22. Renin secretion is increased by
A) Vasopressin
B) Angiotensin□□
C) Increased afferent arteriolar pressure
D) Increased Na/Cl reabsorption
E) Increased circulatory catecholamines
Answer: E
Discussion:
Reference: (Ref: Ganong 25th /P-703)

23. The commonest cause of SIADH is-
A) Idiopathic
B) Tumours
C) Anticonvulsant
D) TB
E) Psychosis
Answer: B
Discussion:
Reference: (Ref: Ganong/ 25th /P-698)

24. Where Acetoacetate is reabsorbed?
A) PCT
B) DCT
C) LOH
D) Cortical collecting duct
E) Cortical collecting tubule
Answer: A
Discussion:
Reference: (Ref: Ganong 25th, P-690)

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. Which of the following renal functions will be assessed if you are measuring the urine specific gravity?
A) Blood flow
B) Concentration
C) Filtration
D) Reabsorbtion
E) Secretion
Answer: B
Discussion:
Reference: (SBAs Pathology/Q-9.5/P-130)

27. Which one of the apical transporter is present in the collecting duct
A) Na/glucose CT
B) Na/Lactate CT
C) K+ channels
D) Na+ channels
E) Na/H excharge
Answer: D
Discussion:
Reference: [Ref: Ganong 25th/P-680]

28. Which one of the following causes decreased Vasopressin secretion?
A) Pain
B) Decreased ECF volume
C) Standing
D) Stress
E) Alcohol
Answer: E
Discussion:
Reference: (Ref: Ganong 25th p-696)

29. Which one of the followings has the lowest clearance value?
A) Urea
B) Inulin
C) Creatinine
D) PAH
E) Glucose
Answer: E
Discussion:
Reference: [Ref: Ganong 25th/P-677]

30. Which of the following does not decrease GFR?
A) Endothelins
B) Vasopressin
C) TXA2
D) Histamine
E) PGE2
Answer: E
Discussion:
Reference: (Ref: Ganong 25th p-678)