Renal physiology mcq and answers pdf

Dear readers, Welcome to renal physiology objective questions and answers have been designed specifically to introduce you to the nature of the questions that you may encounter during the renal physiology interview A few selection questions. These objective type of renal physiology issues are very important for campus test placement and interviewing. In my experience good interviewers hardly plan to ask any specific question during the interview, and these model questions are asked in online technical test and interviews of many medical industries. 1. Regarding renal ontology: A. pronephros is a transient kidney present during the embryonic life of all vertebrates B. mesonophros is a functional but transient kidney during the inetal life of mammals C. The main morphological difference between metatheros (permanent kidney) and mesonrosef, is the development of the Henle D. The main barrier, which excludes the free passage of albumin through the glomerular capillary walls, is formed: A. fenedified glomerular endothelium B. anion proteoglycan clusters in the glomerular membrane of the basement C. Filtering slits between visceral epital cells (subsotes) D. None of them is correct. As for the measurement of the flow of renal plasma (RPF) and the rate of glomerular filtration (GFR): A. inulin is a good marker of GFR, because it is freely filtered into the glomeruli and not absorbed, or secreted, kidney tubes B. inulin concentration in lupus proximal tube-murder increases gradually as water is absorbed in the nephron C segment. PAH (para-amine-gypuric acid) is a good marker of renal plasma flow because it is freely filtered and quickly excreted by the proxy. As a result, very few PAUs reaches the renal vein of D. A and C are correct E. All correct answer: E 4. Regarding functional kidney histology: A. surface nephrons have short Henle loops; Thus, they have a low ability to reabsorbion salt (salt loss of nephrons) B. Deep nephrons have long Henle loops; Thus, they have a high ability to reabsorbing salt and water C. when dehydrated, blood flow to deep nephrons tends to increase D. A and C are correct E. All is right Answer: E 5. The following factor (s) tends (s) to INCREASE rate of glomerular filtration (GFR): A. Reducing the concentration of albumin in plasma B. Vasodilation afferent (preglomerular) arterial C. vasocon efferve (postglomerary) arteriole D. A and C are correct E. All correct Answer: E 6. The following factor (s) tends (s) to increase the rate of glomerular filtration (GFR): A. sympathetic stimulation (norepinephrine) afferent arterial B. kidney tubes, ureters or C. C. C urethras. of the efferent arteriole D. None of them are correct E. All is correct Answer: D 7. As for the function of glomerular mezangal cells: A. mesangial cells can contract and cause some decrease in the overall area of glomerular filtration B. mezangial cells play an important role in systemic angiotensin II produced by C. Mesangial cells are phagocytic and play a role in cleaning proteins and immune deposits, in the trap of mesania D. A and C are correct E. All is correct Answer: D 8. Regarding the function of proximal tube- A. Most of the glomerular ultrafiltration is reabsorbed in a proximal tube-shaped form. B. THE concentration of PAH does not change much along the length of the proximal tubebies C. Under normal conditions, most of the filtered glucose and bicarbonate are reabsorbed in the proximal tube D. A and C are correct E. All correctly Answer: D 9. As for metabolic energy (in production) for renal transport: A. The main substrate for proximal tubes is glucose B. cortical PO2 is about 10 mmHg. Papillary tissues usually generate ATP through oxidative metabolism D. A and C are correct E. All correctly The answer is: B 10. As for the reabsorbion of the water of the proximal tube-murders: A. The main driving force behind water reabsorbion in the proximal tube is soluble absorption and oncotic pressure in peritubular capillaries B. A significant amount of water absorption in the proximal tube-shaped tube depends on the absorption of sodium by Na/H antiports present in their luminous membrane C. aquaporine-I (water channels) in abundance. A and C are the correct E. All the correct answer is: E 11. As for the thick loop Henle: A. The thick loop segment has a very powerful Na/K/2Cl pump that moves salt from tubular lumen to peritubular space B. Water and urea move freely through the epithelium of the thick upward segment of loop C. After the introduction of furosemide (lasix) large amounts of diluted urine D. A and C are correct E. As for urine concentration: A. The thick Henle loop generates most of the osmotic gradient needed to reabsorb the water in the collected duct B. Tubular urine reached by the collecting duct is usually hypotonic in relation to plasma C. In the absence of ADG urine is not concentrated along the length of the collection duct D. A and C are the correct answer to the E. Regarding the transportation of urea in different segments of nephron: A. The main tubular sound of urea is plasma through glomerular ultrafiltration B. Concentration of urea in lumen of cortical collectors increases as water is absorbed by C. Thin Henle loop and medullary collection Permeables for urea D. A and C are correct E. All correct Answer: E 14. Relatively Relatively macula densa: A. macula densa senses the total amount of sodium chloride (sodium chloride concentration) tubular urine, If the delivery of sodium chloride is lower than usual, the macula densa signals afferent arterial (preglomerular) to release renin C. renin causes intra-sucking formation of angiotensin and indirectly release of aldosterone D. A and C correct E. All correct response: E. As for angiotensin II: A. exocrine renin-angiotensin-aldosterone system includes angiotensinogen-produced liver, the secretion of the renin juxtaglomerate apparatus and angiotensin-transforming enzyme present on the glancial surface of the endothelial cells B. aldosterone, but not AII, stimulates thirst and salty appetite C. angiogiotenin II causes a noticeable increase in the reabsorbation of sodium loops Henle and collects the prot flow D. A and C are correct E. Within an hour of intravenous infusion of angiotensin II, the following is clinically evident: A. Increased sodium absorption in proximal tubular epithelium B. systemic vascularity C. Increased plasma aldosterone D and C are correct E. All correctly Answer: E 17. Within eight hours of a large intravenous infusion of aldoderon, the following is clinically evident: A. constant sodium reabsorbtion by collecting duct B. Reducing the release of potassium and hydrogen in the urine of C. hypernatremia (high levels of sodium in plasma), hypokalemia (low potassium in plasma) and alkalosis (low and hydrogen activity in plasma). A and C are true E. All correctly Answer: C 18. As for the regulation of blood pressure: A. prostaglandins and dopamine and bradytinin vasodilator B. ADH, angiotensin II and epinephrine vasocen-eating C. vasodilator/vasocon-absorbing ratio that regulates general peripheral resistance plus heart rate and heart rate are determinants of blood pressure D. As for cell volume regulation: A. Na/H and Cl/HCO3 antiports are involved in hypertensive regulation of cell volume B. Fast ephflux of cytoplasmic water is accompanied by a volume regulator KCL efflux. Intravenous introduction of 1.5 litre isotonic Ringer solution for a healthy adult may cause: A. Increased cardiac ejection and renal blood flow B. Increased GFR C. Increased atrial hydrotyuretic peptide and reduced renin in plasma D and C are correct E. All correct answer: E 21. Renin A. Increased reabsorbion H2O B. Reducing sodium reabsorbtion C. AII formation D. Increased sodium reabsorbtion E. Reduced phosphate reabsorbion Response: C 22. Atrial natriuretic A. Increase increase Reabsorbtion B. Reducing Sodium Reabsorbion C. AII Formation D. Increased Sodium Reabsorbtion E. Reducing phosphate reabsorbtion Response: B 23. ADH A. Increased reabsorbion H2O B. Reducing sodium reabsorbtion C. AII formation D. Increased sodium reabsorbtion E. Reduced phosphate reabsorbtion Response: A 24. AII A. Increased reabsorbion H2O B. Reducing sodium reabsorbtion C. AII formation D. Increased sodium reabsorbtion E. Reduced phosphate reabsorbion Response: D 25. PTH A. Increased reabsorbion H2O B. Reducing sodium reabsorbtion C. AII formation D. Increased sodium reabsorbtion E. Reduced phosphate reabsorbion Response: E 26. Which of the following is correct about non-velyl acids. A. They are not essential to eliminate B from the body. All the following occur within one hour of eating a large acid load EXCEPT: A. The acid load is immediately buffered by intracellular proteins and phosphates, as well as extracellular bicarbonate B. The lungs will begin to eliminate the CO2 generated by acid load C. The kidney will eliminate all non-malolytic acids and regenerate bicarbonate to replace all bicarbonate used in buffering D. hemoglobin will buffer some of the protons. If the pH is 7.60 (concentration of NZ 25 nEq/L) and pCO2 is 40 mm Hg. what HCO3-concentration is (in mEq/liter). Answer A. 10 B. 20 C. 30 D. 40 Answer: D 29. The patient takes an overdose of the drug and becomes comatose. His blood pCO2 was 40mm Hg. art ten minutes ago, but you'll find that it's now 80mmHg. Which of the following statements about this patient is true. A. the pH of his CSF is likely to fall more slowly than the pH of his blood B. the pH of his blood is likely to fall more slowly than the pH of his CSF C. blood pH and CSF will not change because it will quickly eliminate bicarbonate in urine in response to the growth of pCO2 D. pH blood and CSF will change in a similar degree during this time period. Which of the following statements is true with regard to proximal trumpeting. A. Exchange of NAH/CK ATPase drives sodium into the cell from the urine of the B. Exchange of Na'/H is largely a mechanism by which the secretion of hydrogen ions C. bicarbonate reabsorbtion does not depend on carbon anhydrous activity D. pH in the lumen of the proximal tube can reach approximately 5.0: 31. The patient swallows antifreeze and must eliminate the acid ingested. Renal elimination of protons in this excess acid is primarily carried out by which of the following mechanisms. A. Increased release of urinary tract ammonium B. Increased phosphate secretion C. D. Increased concentration of hydrogen sulfide ions in urine E. Increased sulfate secretion in urine Response: A 32. The secretion of renal ammonium ions increases by aldosterone, elevated blood pCO2 levels and acidemia A. true B. false Answer: A 33. Which of the following statements is correct with regard to the pure collection of hydrogen duct ions secretion. A. It is reduced by increasing the production of renal ammonia B. It increases by increasing sodium reabsorbion through the a viral sodium channel C. It is not affected by the presence or absence of titratated acids D. aldosterone does not alter the collection of duct ion ion secretion of hydrogen Answer: B B B