

Course 4 - Questions for Oral Examination from Function

You will draw one common question (physiology + biochemistry)

1. Internal environment and kidney functions, osmolarity
2. Renal blood-flow, energy metabolism of kidneys
3. Regulation of renal functions
4. Processes taking place on particular nephron levels - overview
5. Glomerular filtration, proteinuria
6. Tubular reabsorption and secretion
7. Renal clearance
8. Countercurrent systems in kidneys
9. Kidneys as an endocrine organ
10. Effect of kidneys on urine concentration, water excretion
11. Sodium and potassium management in kidneys
12. Calcium and phosphate management in kidneys
13. Glucose, amino acids and protein management in kidneys
14. Excretion of nitrogen-containing waste products of metabolism, kidney failure
15. Transport of urine and micturition, chemical examination of urine
16. Composition of primary and definitive urine
17. Role of kidneys in maintenance of acid-base balance (ABB)
18. Connection between metabolism and acid-base balance - role of kidneys
19. Role of buffers in maintenance of acid-base balance, buffers of urine
20. Examination of ABB, changes in ion concentrations in connection to ABB, role of kidneys
21. Acid-base balance disorders - respiratory, compensation by kidneys
22. Acid-base balance disorders - metabolic, role of kidneys