



**SNS COLLEGE OF NURSING
APPLIED ANATOMY AND PHYSIOLOGY
OBJECTIVE TYPE QUESTIONS**

UNIT- 5 RENAL SYSTEM

1. The last part of a nephron is the _____.

- A) Collecting Duct
- B) Renal papilla
- C) Distal convoluted tubule
- D) Glomerulus

2. Which area actually secretes renin into the blood?

- A) Macula densa
- B) Juxtaglomerular apparatus
- C) Juxtaglomerular cells
- D) Cortical nephron

3. Which blood vessel conveys blood out of the nephron?

- A) Efferent arteriole
- B) Vasa recta
- C) Peritubular capillary
- D) Interlobular vein

4. Which blood vessels surround the loops of Henle?

- A) Vasa recta
- B) Peritubular capillaries
- C) Interlobular arteries
- D) Efferent arterioles



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5. Which of the following are not found in the glomerular filtrate?

- A) Glucose
- B) Protein
- C) Uric acid
- D) Creatinine

6. Which muscle metabolism waste product is eliminated by the kidneys?

- A) Urea
- B) Uric acid
- C) Creatine
- D) Creatinine

7. Which of these has the highest concentration in the urine?

- A) Glucose
- B) Sodium
- C) Uric acid
- D) Phosphate

8. Which ion is reabsorbed in exchange for sodium?

- A) Chloride
- B) Potassium
- C) Calcium
- D) Magnesium

9. What is the average glomerular filtration rate?



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- A) 10 L per day
- B) 180 L per day
- C) 1,500 ml per day
- D) 1 ml per minute

10. Which of the following is usually not found in the urine?

- A) Magnesium
- B) Urea
- C) Uric acid
- D) Glucose

11. How much urine is formed in 24 hours?

- A) 12 liters
- B) 100 ml
- C) 1.5 L
- D) 3,000 cc

12. Renin acts on _____ to convert it to angiotensin I.

- A) Angiotensin II
- B) Angiotensinogen
- C) ACE
- D) Aldosterone

13. The targets of angiotensin II are blood vessels and _____.



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- A) Nerves
- B) Adrenal cortex
- C) Adrenal medulla
- D) Kidney nephron

14. Tubular re-absorption occurs from the nephron tubules into the _____.

- A) Loop of Henle
- B) Peritubular capillaries
- C) Renal corpuscle
- D) Renal pyramid

15. Most tubular re-absorption occurs at the _____.

- A) Loop of Henle
- B) Distal convoluted tubule
- C) Proximal convoluted tubule
- D) Glomerulus

16. Where are most micro-villi found?

- A) Loop of Henle
- B) Distal convoluted tubule
- C) Loop of Henle
- D) Proximal convoluted tubule

17. Which of the following occurred by active transport?



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- A) Albumin in the urine
- B) Creatinine in the urine
- C) Re-absorption of water at the proximal tubule
- D) Re-absorption of amino acids

18. Which of these does not operate under a renal threshold mechanism?

- A) Creatinine
- B) Ascorbic acid
- C) Sodium
- D) Citric acid

19. The action of aldosterone is to increase _____.

- A) Sodium elimination
- B) Sodium reabsorption
- C) Potassium reabsorption
- D) Chloride excretion

21. The outermost covering of the kidney is the _____.

- A) Cortex
- B) Medulla
- C) Pelvis
- D) Capsule

22. The kidneys are located in the _____ space.



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- A) Pelvic cavity
- B) Peritoneal cavity
- C) Abdominal
- D) Retro-peritoneal

23. The entrance into the kidney is called the _____.

- A) Sinus
- B) Column
- C) Hilum
- D) Pyramid

24. Which structure is the first to collect the urine?

- A) Pelvis
- B) Calyx
- C) Ureter
- D) Urethra

26. The renal pyramids are located within the _____.

- A) Column
- B) Cortex
- C) Medulla
- D) Pelvis

27. The striated appearance of the pyramids is caused by _____.



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- A) Parallel blood vessels
- B) Micro-tubules
- C) Connective tissue
- D) Nerve fibers

28. The kidney secretes ____ for the purpose of stimulating bone marrow activity.

- A) Renin
- B) Aldosterone
- C) Erythropoietin
- D) Somatomedin

29. The kidney secretes ____, which is an enzyme hormone that raises blood pressure.

- A) Aldosterone
- B) Renin
- C) Angiotensinogen
- D) Angiotensin II

30. Uric acid results from _____ metabolism.

- A) Protein
- B) Carbohydrate
- C) Purine
- D) Pyrimidine

31. Renal secretion of a compound usually occurs from the _____ into the distal convoluted tubule.



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- A) Loop of Henle
- B) Glomerulus
- C) Vasa recta
- D) Peritubular capillaries

32. Which of these is not usually secreted by the kidneys?

- A) Creatine
- B) Creatinine
- C) H +
- D) Penicillin

33. The compound used to assess the function of the kidney at the level of the glomerulus is _____.

- A) Creatinine
- B) Insulin
- C) Para-aminohippuric acid
- D) Creatine

34. Which of these could appear in the urine from dieting or the utilization of excess lipids?

- A) Urea
- B) Uric acid
- C) Glycine
- D) Ketone

35. Vigorous exercise could release high amounts of _____ into the urine.



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- A) Glucose
- B) Uric acid
- C) Albumin
- D) Ascorbic acid

36. What causes urine to flow from the kidneys to the bladder?

- A) Gravity
- B) Hydrostatic pressure
- C) Peristalsis
- D) Osmotic pressure

37. Renal calculi are usually comprised of the following except which one?

- A) Calcium oxalate
- B) Cholesterol
- C) Uric acid
- D) Magnesium phosphate

38. The mucosa of the bladder is comprised of _____.

- A) Smooth muscle
- B) Squamous epithelium
- C) Transitional epithelium
- D) Simple columnar epithelium

39. Which of these is under voluntary control?



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- A) Urethra
- B) Detrusor muscle
- C) Internal sphincter
- D) External sphincter

40. The micturition reflex is centered in the _____.

- A) Medulla
- B) Sacral cord
- C) Hypothalamus
- D) Lumbar cord

41. What is the function of the renal system?

- A) Maintain blood pH
- B) Regulate blood pressure
- C) Control blood concentration
- D) All of these

42. How much of the cardiac output passes through the kidneys?

- A) 10%
- B) 25%
- C) 50%
- D) 65%

43. Which blood vessel delivers blood to the cortex?



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- A) Interlobular artery
- B) Arcuate artery
- C) Interlobar artery
- D) Efferent arteriole

44. The renal corpuscle is comprised of a glomerulus and _____.

- A) Proximal convoluted tubule
- B) Bowman's capsule
- C) Loop of Henle
- D) Distal convoluted tubule

45. Which section of the nephron is after the ascending limb of the loop of Henle?

- A) Descending limb of the loop
- B) Proximal convoluted tubule
- C) Distal convoluted tubule
- D) Collecting duct

49. What effect does ADH have on urine output?

- A) Minimal
- B) Increases
- C) Decreases
- D) Maintains

50. Where does ADH have its greatest effect?



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- A) Loop of Henle
- B) Proximal convoluted tubule
- C) Distal convoluted tubule
- D) Glomerulus

