

Urinary system

Multiple Choice. Select the best answer and write the letter of your choice to the left of each number.

1. The organ that forms urine is the:

- a. gallbladder
- b. cystic duct
- c. bladder
- d. kidney

2. The tube that carries urine out of the body is the:

- a. pylorus
- b. appendix
- c. urethra
- d. peristalsis

3. The hormone erythropoietin stimulates production of:

- a. red blood cells
- b. platelets
- c. leukocytes
- d. saliva

4. Micturition is the scientific term for:

- a. urination
- b. digestion
- c. breathing
- d. retention

5. With reference to the urinary system, the root *cyst/o* means:

- a. ureter
- b. urinary bladder
- c. urinary stasis
- d. kidney

6. Nephritis is inflammation of the:

- a. liver
- b. intestine
- c. bladder
- d. kidney

7. Separation of substances by passage through a membrane is termed:

- a. centrifugation
- b. absorption
- c. deglutition
- d. dialysis**

8. A substance that promotes urinary output is a(n):

- a. hypertensive
- b. diuretic**
- c. channel blocker
- d. enzyme

9. The term *perfusion* means:

- a. size
- b. shape
- c. passage of fluid**
- d. surrounding tissue
- e. metabolism

10. The term *percutaneous* means:

- a. under the skin
- b. on the surface
- c. with a catheter
- d. by chemicals
- e. through the skin**

11. M.C.'s chronic glomerulonephritis means that he has had:

- a. long-term kidney stones
- b. an acute bout of kidney infection
- c. short-term bladder inflammation
- d. a long-term kidney infection**
- e. dysuria for 13 years

12. Renal dialysis can be performed by shunting venous blood through a dialysis machine and returning the blood to the patient's arterial system. This procedure is called:

- a. hemodialysis**
- b. arteriovenous transplant
- c. CAPD
- d. phlebotomy
- e. glomerular filtration rate

Use the root *ren/o* to write a word for the following:

1. behind (post-) the kidney _____
2. before or in front of (pre-) the kidney _____
3. between the kidneys _____
4. around the kidneys _____

Use the root *nephro* to write a word for the following:

5. study of the kidney _____
6. any disease of the kidney _____
7. poisonous or toxic to the kidney _____
8. softening of the kidney _____
9. surgical removal of the kidney _____

Use the appropriate root to write a word for the following:

10. inflammation of a glomerulus _____
11. dilatation of a renal calyx _____
12. plastic repair of the renal pelvis _____
13. radiograph of the renal pelvis _____
14. radiographic study (-graphy) of the kidney _____
15. incision of a renal calyx _____
16. hardening of a glomerulus _____
17. inflammation of the renal pelvis and kidney _____

Answers

1. **postrenal**
2. **prerenal**
3. **interrenal**
4. **perirenal ; circumrenal**
5. **nephrology**
6. **nephropathy**
7. **nephrotoxic**
8. **nephromalacia**
9. **nephrectomy**
10. **glomerulitis**
11. **caliectasis; calicectasis**
12. **pyeloplasty**
13. **pyelogram**

14. renography; nephrography

15. calicotomy; caliotomy

16. glomerulosclerosis

17. pyelonephritis

Use the root *ur/o* to write a word for the following:

1. study of the urinary tract _____
2. radiography of the urinary tract _____
3. a urinary calculus (stone) _____
4. presence of urinary waste products in the blood _____

The root *ur/o-* is used in the suffix *-uria*, which means “condition of urine or of urination.” Use *-uria* to write a word for the following:

5. lack of urine _____
6. painful or difficult urination _____
7. formation of excess (poly-) urine _____
8. presence of cells in the urine _____
9. presence of blood (hemat/o) in the urine _____

The suffix *-uresis* means “urination.” Use *-uresis* to write a word for the following:

10. increased excretion of urine _____
11. lack of urination _____
12. excretion of sodium (natri-) in the urine _____
13. excretion of potassium (kali-) in the urine _____

The adjective ending for the above words is *-uretic*, as in *diuretic* (pertaining to diuresis) and *natriuretic* (pertaining to the excretion of sodium in the urine).

Use the appropriate root to write a word for the following:

14. surgical fixation of the urethra _____
15. surgical creation of an opening in the ureter _____
16. a ureteral calculus _____
17. endoscopic examination of the urethra _____

Use the root *cyst/o* to write a word for the following:

18. inflammation of the urinary bladder _____
19. surgical fixation of the urinary bladder _____

20. an instrument for examining the interior of the bladder _____
21. incision of the bladder _____

Use the root *vesic/o* to write a word for the following:

22. above the urinary bladder _____
23. pertaining to the urethra and bladder _____

Define the following terms:

24. cystalgia _____
25. ureterotomy _____
26. transurethral _____
27. uropoiesis _____

Answers

1. urology
2. urography
3. urolith
4. uremia
5. anuria
6. dysuria
7. polyuria
8. cyturia
9. hematuria
10. diuresis
11. anuresis
12. natriuresis
13. kaliuresis
14. urethropexy
15. ureterostomy
16. ureterolith
17. urethroscopy
18. cystitis
19. cystopexy
20. cystoscope

- 21. cystotomy
- 22. supravescical
- 23. urethrovesical
- 24. pain in the urinary bladder
- 25. surgical incision of the ureter
- 26. through the urethra
- 27. formation of urine

MATCHING

Match the following terms and write the appropriate letter to the left of each number:

- | | |
|------------------------|--|
| 1. hematuria | a. abnormal color of urine |
| 2. oliguria | b. pus in the urine |
| 3. chromaturia | c. elimination of small amounts of urine |
| 4. albuminuria | d. blood in the urine |
| 5. pyuria | e. proteinuria |
| 6. trigone | a. absence of a bladder |
| 7. catheterization | b. stagnation, as of urine |
| 8. stasis | c. deficiency of urine |
| 9. acystia | d. triangle at the base of the bladder |
| 10. uropenia | e. introduction of a tube |
| 11. aldosterone | a. urination during the night |
| 12. diabetes insipidus | b. condition caused by lack of ADH |
| 13. incontinence | c. nitrogenous metabolic waste |
| 14. nocturia | d. hormone that regulates electrolytes |
| 15. creatinine | e. inability to retain urine |
| 16. anuresis | a. excessive thirst |
| 17. epispadias | b. bed-wetting |
| 18. polydipsia | c. presence of excess nitrogenous waste in the urine |
| 19. enuresis | d. congenital misplacement of the ureteral opening |
| 20. azoturia | e. lack of urination |

FILL IN THE BLANKS

21. A microscopic working unit of the kidney is called a(n) _____
22. The cluster of capillaries within the glomerular capsule is the _____
23. An enzyme released by the kidneys that acts to increase blood pressure _____
24. Micturition is the scientific term for _____
25. Laboratory study of the urine is a(n) _____
26. The main nitrogenous waste product in urine is _____
27. inability to retain urine is termed urinary _____
28. A midstream urine sample collected after thorough cleansing of the urethral opening is called a(n) _____
29. Endoscopic examination of the urinary bladder is termed _____

TRUE-FALSE

Examine the following statements. If the statement is true, write T in the first blank. If the statement is false, write F in the first blank and correct the statement by replacing the underlined word in the second blank.

30. A reniform structure is shaped like the bladder. _____
31. Pyelitis is inflammation of the renal pelvis. _____
32. A nephrotropic substance acts on the kidney. _____
33. The outer portion of the kidney is the medulla. _____
34. The tube that carries urine out of the body is the ureter. _____
35. EPO stimulates the production of red blood cells. _____
36. A lithotomy is an incision to remove a calculus. _____
37. Kaliuresis refers to the excretion of sodium in the urine. _____

DEFINITIONS

Define the following words:

38. pararenal _____
39. dysuria _____
40. nephrotoxic _____
41. juxtaglomerular _____
42. calicectomy _____
43. urethrostenosis _____

Write a word for the following definitions:

44. dilatation of the renal pelvis and calices _____
45. softening of a kidney (nephr/o) _____
46. excision of the bladder (cyst/o) _____
47. any disease of the kidney (nephr/o) _____
48. radiograph of the bladder (cyst/o) and urethra _____
49. plastic repair of a ureter and renal pelvis _____
50. inflammation of the renal pelvis and the kidney _____
51. surgical creation of an opening between a ureter and the sigmoid colon _____

ELIMINATIONS

In each of the sets below, underline the word that does not fit in with the rest and explain the reason for your choice:

52. capsule — cast — pyramid — nephron — cortex
53. nephron loop — distal convoluted tubule — glomerular capsule — calyx — proximal convoluted tubule
54. ileal conduit — specific gravity — dialysis — cystoscopy — lithotripsy

OPPOSITES

Write a word that means the opposite of the following:

55. hydration _____
56. hypervolemia _____
57. diuretic _____
58. hyponatremia _____
59. uresis _____

PLURALS

Write the plural form of the following:

67. pelvis _____
68. calyx _____
69. glomerulus _____

WORD BUILDING

Write a word for the following definitions.

70. radiographic study of the urinary tract _____
71. pertaining to the kidney _____
72. within the kidney _____
73. radiographic study of the kidney _____
74. within the bladder _____

75. above the kidney _____
76. study of the urinary tract _____
77. between the kidneys _____
78. pertaining to the bladder _____
79. a urinary tract stone _____

ABBREVIATIONS

Write the meaning of the following abbreviations:

80. IVP _____
81. ADH _____
82. EPO _____
83. IVU _____
84. Na _____
85. GFR _____
86. UA _____

WORD ANALYSIS

Define the following words and give the meaning of the word parts in each. Use a dictionary if necessary.

87. hemodialysis: _____
a. hem/o _____
b. dia _____
c. lysis _____
88. cystometrography: _____
a. cyst/o _____
b. metr/o _____
c. -graphy _____
89. ureteroneocystostomy: _____
a. ureter/o _____
b. neo _____
c. cyst/o _____
d. -stomy _____

Answers

1. d
2. c
3. a
4. e
5. b
6. d
7. e
8. b
9. a
10. c
11. d
12. b
13. e
14. a
15. c
16. e
17. d
18. a
19. b
20. c
21. nephron
22. glomerulus
23. renin
24. urination; voiding of urine
25. urinalysis
26. urea
27. incontinence;
28. clean-catch specimen
29. cystoscopy
30. F; kidney
31. T
32. T
33. F; cortex
34. F; urethra

35. T
36. T
37. F; potassium
38. near the kidney
39. painful or difficult urination
40. toxic or poisonous to the kidney
41. near the glomerulus
42. surgical removal of a calyx
43. narrowing of a urethra
44. pyelocaliectasis; pyelocalicectasis
45. nephromalacia
46. cystectomy
47. nephropathy
48. cystourethrogram
49. ureteropyeloplasty
50. pyelonephritis
51. ureterosigmoidostomy
52. cast; A *cast* is a solid mold of a renal nephron; the others are parts of the kidney.
53. calyx; A *calyx* is a collecting region for urine in the kidney; the others are parts of a nephron.
54. specific gravity; *Specific gravity* is a measure of density; the others are treatment procedures for the urinary system.
55. dehydration
56. hypovolemia
57. antidiuretic
58. hypernatremia
59. anuresis
67. pelves
68. calyces
69. glomeruli
70. urography
71. renal
72. intrarenal
73. renography
74. intravesical
75. suprarenal
76. urology

- 77. interrenal**
- 78. vesical**
- 79. urolith**
- 80. intravenous pyelography**
- 81. antidiuretic hormone**
- 82. erythropoietin**
- 83. intravenous urography**
- 84. sodium**
- 85. glomerular filtration rate**
- 86. urinalysis**
- 87. removal of substances from the blood by passage through a semipermeable membrane**
 - a. blood**
 - b. through**
 - c. separation**
- 88. test that measures and records bladder function**
 - a. urinary bladder**
 - b. measure**
 - c. act of recording data**
- 89. surgical creation of a new passage between a ureter and the bladder**
 - a. ureter**
 - b. new**
 - c. bladder**
 - d. surgical creation of an opening**