

RENAL MODULE

MCQs

DIRECTIONS: Each item below contains a question or incomplete statement followed by suggested responses. Select the one best response to each question.

1. Spongy part of the male urethra drains via which lymph nodes?

- A. Superficial inguinal lymph nodes.
- B. External Iliac lymph nodes.
- C. Deep inguinal lymph nodes.
- D. Aortic lymph nodes.
- E. Paraaortic lymph nodes.

2. Which of the following statements best explains the external urethral sphincter?

- A. Smooth muscle.
- B. Innervated by the perineal nerve.
- C. Lying between the perineal membrane and Colles' fascia.
- D. Part of the pelvic diaphragm.
- E. It is formed of two parts in females.

3. The narrowest part of male urethra is:

- A. Prostatic part.
- B. Membranous part.
- C. External urethral meatus.
- D. Internal urethral orifice.
- E. Spongy part.

4. In the human kidney, the renal papilla projects directly into the:

- A. Renal pyramid.
- B. Ureter.
- C. Major calyx.
- D. Renal columns.
- E. Minor calyx.

5. In the male, the membranous urethra:

- A. Is that part within the prostate gland.
- B. Starts at the trigone of the bladder.
- C. Is that part within the urogenital diaphragm.
- D. Is that part within the corpus spongiosum.
- E. Is called the ejaculatory duct.

6. The left renal vein:

- A. Is crossed anteriorly by superior mesenteric artery.
- B. Lies behind the left renal artery.
- C. Joins the portal vein behind the pancreas.
- D. Receives the inferior mesenteric vein.
- E. None of the above.

7. The following are related to the anterolateral surface of the right kidney EXCEPT:

- A. Body of pancreas.
- B. Second part of duodenum.
- C. Right lobe of liver.
- D. Right suprarenal gland.
- E. Coils of the small intestine.

8. The posterior relations of kidney include the following EXCEPT:

- A. Psoas major muscle.
- B. Diaphragm.
- C. Internal oblique muscle.
- D. Quadratus lumborum muscle.
- E. Transversus abdominis muscle.

9. The covering of the kidney include the following EXCEPT:

- A. Fibrous capsule.
- B. Thoracolumbar fascia.
- C. Perirenal fat.
- D. Renal fascia.
- E. Pararenal fat.

10. The ureter is supplied by the following arteries EXCEPT:

- A. Renal artery.

- B. Abdominal aorta.
- C. Gonadal artery.
- D. Splenic artery.
- E. Common iliac artery.

11. The female urethra is:

- A. 6 cm long.
- B. 8 Cm long.
- C. 4 cm long.
- D. 10 cm long.
- E. 20 cm long.

12. The vas deferens is connected to the prostatic urethra by:

- A. The prostatic utricle.
- B. Gartner's duct.
- C. The ejaculatory duct.
- D. The urachus.
- E. None of the above.

13. The following are FALSE about urinary bladder EXCEPT:

- A. Is a pelvic organ in the infant.
- B. Has peritoneum on its anterior surface when full.
- C. Is firm musculo-glandular organ.
- D. Its muscular walls are pierced obliquely by the ureters.
- E. The urachus is a safety valve allowing overflow when the urethra is obstructed.

14. Which structure belong to renal cortex?

- A. Minor renal calices.
- B. Renal column.
- C. Renal papillae.
- D. Renal pelvis.
- E. Renal pyramid.

15. The upper pole of kidney is in neighborhood of

- A. Diaphragm.
- B. Superior portion of duodenum.
- C. Head of pancreas.

D. Suprarenal gland.

E. Pylorus.

16. The female ureter crosses:

A. Above uterine artery.

B. Under uterine artery.

C. In front of uterine artery.

D. Inside uterine artery.

E. Lateral to uterine artery.

17. The trigone of bladder lies:

A. In internal surface of fundus of bladder.

B. Below apex of urinary bladder.

C. Body of bladder.

D. Below neck of bladder.

E. In base of prostate.

18. Second constriction of male urethra lies in:

A. Prostatic portion of urethra.

B. Membranous part.

C. Cavernous part.

D. External orifice of urethra.

E. Internal urethral orifice.

19. The following structures lie in front of right kidney EXCEPT:

A. Right lobe of liver.

B. Right colic flexure.

C. Second part of duodenum.

D. Right suprarenal gland.

E. Pancreas.

20. The following structures lie in front of left kidney EXCEPT:

A. Stomach.

B. Pancreas.

C. Jejunum.

D. Left colic flexure.

E. Second part of duodenum.

21. The following are False about urinary bladder EXCEPT:

- A. May rise into the peritoneal cavity when it is filled with urine.
- B. Contacts with prostate posteriorly (male).
- C. Contacts with posterior part of fornix of vagina (female).
- D. Contacts with the urogenital diaphragm at the apex.
- E. Is entirely within the lesser pelvis when it is empty.

22. The mark to find the ureteric orifice in urinary bladder is:

- A. Trigone of bladder.
- B. Internal urethral orifice.
- C. Interureteric fold.
- D. Urethral ridge.
- E. Vesical uvula.

23. The following are FALSE about the pelvic part of ureter EXCEPT:

- A. Descends immediately behind the internal iliac artery.
- B. Crosses lateral to the external vessels, umbilical artery, obturator nerve and vessels.
- C. Crosses posteriorly over the ductus deferens (male).
- D. Passes lateral to the fornix of the vagina and is crossed by uterine artery.
- E. Ends on the inferior of the urinary bladder as the internal urethral orifice.

24. The second stricture of male urethra is at:

- A. Internal orifice urethra.
- B. Prostatic part.
- C. Cavernous part.
- D. Membranous part.
- E. External orifice urethra.

25. The following muscles are related to the posterior surface of kidney EXCEPT:

- A. Quadratus lumborum muscle.
- B. Psoas major muscle.
- C. Diaphragm.

- D. Internal oblique muscle.
- E. Transversus abdominis muscle.

26. Which of the following gives rise to all structures of the kidney?

- A. Somitic mesoderm.
- B. Intermediate mesoderm.
- C. Splanchnic lateral plate mesoderm.
- D. Somatic lateral plate mesoderm.
- E. Neural crest.

27. The following is WRONG about ureteric bud:

- A. Endodermal derivative.
- B. Arises from Wolffian duct.
- C. Forms collecting tubules.
- D. Penetrates metanephric tissue.
- E. Present in both males and females.

28. An organ or structure that is not a component of the urinary system is the:

- A. Urethra.
- B. Urinary bladder.
- C. Ureter.
- D. Adrenal gland.
- E. Kidney.

29. The structure that connects a kidney to the urinary bladder is the

- A. Ureter.
- B. Urethra.
- C. Renal pelvis.
- D. Collecting duct.
- E. Glomerulus.

30. Which of the following statements concerning the kidneys is false?

- A. They are retroperitoneal.
- B. They each contain 8 to 15 renal pyramids.
- C. They each have a distinct renal cortex and renal medulla region.
- D. They are positioned between the third and fifth lumbar.
- E. They developed from intermediate mesoderm.

31. Which of the following is the correct sequence in which urine flows through the kidney toward the urinary bladder?

- A. Renal pelvis, major calyx, minor calyx, papillary duct, ureter.
- B. Papillary duct, minor calyx, major calyx, renal pelvis, ureter.
- C. Minor calyx, major calyx, papillary duct, renal pelvis, ureter.
- D. Papillary duct, major calyx, minor calyx, ureter, renal pelvis.

32. All of the following statements are True related to the urethra of a male except:

- A. It serves both the urinary and reproductive systems.
- B. It contains a single urethral sphincter near the neck of the urinary bladder.
- C. It receives secretions from the bulbourethral glands.
- D. It consists of three distinct regions.
- E. It is approximately 20 cm long in an adult.

33. The apex of the renal pyramid is called the:

- A. Major calyx.
- B. Minor calyx
- C. Renal papilla.
- D. Renal pelvis.
- E. Ureter.

34. Inferiorly, the posterior surfaces of the kidney are related to all of the following structures EXCEPT:

- A. Subcostal nerve
- B. Iliohypogastric nerve
- C. Ilioinguinal nerve
- D. 2nd portion of the duodenum
- E. Quadratus lumborum

35. The renal papillae empty into which of the following structures?

- A. Renal vein
- B. Ureter
- C. Minor calyces
- D. Renal pyramid
- E. Renal column

36. All of the following statements concerning the renal hilum are correct EXCEPT:

- A. The renal vein is anterior to the renal artery
- B. The renal artery is anterior to the renal pelvis
- C. It is the entrance to the renal sinus

- D. It is located on the concave medial margin of the kidney
- E. It contains the renal pyramids

37. The nerves of the kidneys and suprarenal glands are derived from which of the following plexuses?

- A. Celiac
- B. Lumbar
- C. Inferior mesenteric
- D. Sacral
- E. Inferior hypogastric

38. All of the following statements concerning the ureters are correct EXCEPT:

- A. They are retroperitoneal.
- B. They cross the pelvic brim anterior to the bifurcation of the common iliac arteries.
- C. They are fibrous tubes connecting the kidneys to the urinary bladder.
- D. Their superior halves lie in the abdomen and the inferior halves lie in the pelvis.
- E. Their oblique passage through the bladder wall forms a one-way "flap valve."

39. The uvula of the bladder is located in which of the following locations?

- A. Retropubic space
- B. Trigone of the bladder
- C. Apex of the bladder
- D. Fundus of the bladder
- E. Pubovesical ligament

40. Parasympathetic fibers to the bladder are derived from which of the following nerves?

- A. Pelvic splanchnic
- B. Greater splanchnic
- C. T11-L2
- D. Superior hypogastric plexus
- E. Sacral plexus

41. Which of the following parts of the male urethra is the widest and most dilatable?

- A. Preprostatic
- B. Prostatic
- C. Membranous

- D. Spongy
- E. External urethral meatus

42. Which of the following structures opens into the prostatic sinus?

- A. Prostatic utricle
- B. Ejaculatory ducts
- C. Prostatic ductules
- D. Seminal vesicles
- E. Bulbourethral glands

43. The paraurethral glands open into which of the following structures?

- A. Near the external urethral orifice
- B. In the neck of the bladder
- C. In the prostatic utricle
- D. In the seminal colliculus
- E. In the ejaculatory ducts

44. The navicular fossa is located in which of the following structures?

- A. Glans penis
- B. Prostate
- C. Bladder
- D. Seminal vesicle
- E. Expanded in the clitoris

45. Which of the following structures separates the bladder from the pubic bones in females?

- A. Rectouterine fold
- B. Vesicouterine pouch
- C. Trigone of the bladder
- D. Median umbilical fold
- E. Retropubic space

46. The membranous part of the male urethra is located in which of the following structures?

- A. Bladder
- B. Prostate
- C. External urethral sphincter
- D. Bulb of penis
- E. Glans penis

47. The paraurethral glands are homologues to which of the following structures?

- A. Testes
- B. Prostate
- C. Seminal vesicles
- D. Bulbourethral glands
- E. Epididymis

48. The renal pyramids are located within the ____.

- A. Column
- B. Cortex
- C. Medulla
- D. Pelvis
- E. Ureter

49. Each minor calyx receives urine from the ____.

- A. Renal papillae
- B. Pelvis
- C. Ureter
- D. Columns
- E. Major calyx

50. Male urethra is approximately ____ long.

- A. 30cm-35cm
- B. 15cm-20cm
- C. 10cm-15cm
- D. 5cm-10cm
- E. 25-30cm

51. In female the urethra is ____ long.

- A. 4cm
- B. 2cm
- C. 6cm
- D. 10cm
- E. 8cm

52. The urinary system develops from:

- A. Lateral plate mesoderm
- B. Endoderm

- C. Splanchnic mesoderm
- D. Intermediate mesoderm
- E. Ectoderm

53. The urachus is a remnant of:

- A. Urogenital sinus
- B. Urogenital ridge
- C. Allantois
- D. Cloaca
- E. mesonephric duct

54. An urachal cyst is a remnant of the:

- A. Urogenital sinus
- B. Urogenital ridge
- C. Cloaca
- D. Allantois
- E. Mesonephric duc

55. The urinary bladder (except the trigone) is derived from tissue associated with the:

- A. Metanephric blastema
- B. Mesonephric ducts
- C. Paramesonephric ducts
- D. Cloaca / urogenital sinus
- E. Paraaxial mesoderm

56. The glomeruli of the kidney are derived from the:

- A. Ureteric bud
- B. Metanephric blastema
- C. Paramesonephric ducts
- D. Mesonephric ducts
- E. Cloaca

57. The developing kidneys can sometimes fuse into a single, horseshoe-shaped organ that will usually be found:

- A. In the pelvic cavity, wrapped around a right or left common iliac artery
- B. In the abdominal cavity, at the level of the inferior mesenteric artery
- C. In the abdominal cavity, at the level of the superior mesenteric artery
- D. In the abdominal cavity, at the level of the celiac artery

- E. In its normal location in the abdominal cavity, but almost always with supernumerary arteries

58. The ductus deferens is derived from the:

- A. Ureteric bud
- B. Metanephric blastema
- C. Paramesonephric ducts
- D. Mesonephric ducts
- E. Allantois

59. Polycystic kidney disease:

- A. Arises due to defects in development of the mesonephric ducts.
- B. Usually results in polyhydramnios.
- C. Is often associated with abnormal persistence and subsequent formation of cysts within the allantois.
- D. Can arise due to errors in apical versus basal polarization of epithelium in the kidney tubules.
- E. ALL of the above

60. The collecting tubules of the kidney are derived from the:

- A. Ureteric bud
- B. Metanephric blastema
- C. Mesonephric ducts
- D. Paramesonephric duct
- E. Allantois

Q	A	Q	A	Q	Q
1	C	21	E	41	B
2	B	22	C	42	C
3	C	23	D	43	A
4	E	24	D	44	A
5	C	25	D	45	E
6	A	26	B	46	C
7	A	27	A	47	B
8	C	28	D	48	C
9	B	29	A	49	A
10	D	30	D	50	B
11	C	31	B	51	A
12	C	32	B	52	D
13	D	33	B	53	C
14	B	34	D	54	D
15	D	35	C	55	D
16	A	36	E	56	B
17	A	37	A	57	B
18	B	38	C	58	D
19	E	39	B	59	D
20	E	40	A	60	A