

PELVIS

1. The following statements concerning the uterus are correct *except*:

- a) The fundus is part of the uterus above the openings of uterine tubes
- b) The long axis of the uterus is usually bent anteriorly on the long axis of the vagina (anteversion)
- c) The nerve supply of the uterus is from the inferior hypogastric plexuses
- d)** The anterior surface of the cervix is completely covered with peritoneum
- e) The uterine veins drain into the internal iliac veins

2. Concerning the vas deferens, all of the following statements are true *except*:

- a) It emerges from the deep inguinal ring and passes around the lateral margin of the inferior epigastric artery
- b) It crosses the ureter in the region of the ischial spine
- c) The terminal part is dilated to form the ampulla
- d)** It lies on the posterior surface of the prostate but is separated from it by peritoneum
- e) It joins the duct of the seminal vesicle to form the ejaculatory duct

3. Concerning the pelvic part of the ureter, the following statements are true *except*:

- a) It enters the pelvis in front of the bifurcation of the common iliac arteries
- b)** The ureter enters the bladder by passing directly through its wall, there being no valvular mechanism at its entrance
- c) It has a close relationship to the ischial spine before it turns medially toward the bladder
- d) The blood supply of the distal part of the ureter is from the superior vesical artery
- e) It enters the bladder at the upper lateral angle of the trigone

4. Concerning the seminal vesicle, the following statements are true *except*:

- a) The seminal vesicles are related posteriorly to the rectum and can be palpated through the rectal wall
- b)** The seminal vesicles are two lobulated organs that store spermatozoa
- c) The upper ends of the seminal vesicles are covered by peritoneum
- d) The function of the seminal vesicles is to produce a secretion that is added to the seminal fluid
- e) The seminal vesicles are related anteriorly to the bladder, and no peritoneum separates these structures

5. Concerning the ovary, the following statements are true *except*:

- a) The lymph drainage is into the para-aortic (lumbar) lymph nodes at the level of the first lumbar vertebra
- b) The round ligament of the ovary extends from the ovary to the upper end of the lateral wall of the body of the uterus
- c) The ovarian fossa is bounded above by the external iliac vessels and behind by the internal iliac vessels
- d)** The left ovarian artery is a branch of the left internal iliac artery
- e) The obturator nerve lies lateral to the ovary

6. Concerning the nerve supply to the urinary bladder, the following statements are true *except*:

- a) The sympathetic postganglionic fibers originate in the first and second lumbar ganglia
- b) The parasympathetic postganglionic fibers originate in the inferior hypogastric plexuses
- c) The afferent sensory fibers arising in the bladder wall reach the spinal cord via the pelvic splanchnic nerves and also travel with the sympathetic nerves
- d) The parasympathetic preganglionic fibers arise from the second, third and fourth sacral segments of the spinal cord
- e)** The parasympathetic postganglionic fibers are responsible for closing the vesical sphincter during ejaculation

7. Concerning the vagina, the following statements are true *except*:

- a) The area of the vaginal lumen around the cervix is divided into four fornices
- b) The upper part of the vagina is supported by the levator ani muscles and transverse cervical ligaments
- c) The perineal body lies posterior to and supports the lower part of the vagina
- d)** The upper part of the vagina is not covered with peritoneum
- e) The vaginal wall receives a branch of the uterine artery

8. Concerning the visceral layer of pelvic fascia in the female, the following statements are true *except*:

- a) In the region of the cervix of the uterus, it is called the parametrium
- b) It is condensed to form the pubocervical, transverse cervical, and sacrocervical ligaments of the uterus
- c)** It covers the obturator internus muscle
- d) It does not become continuous above with the fascia transversalis
- e) On the lateral wall of the pelvis, it fuses with the parietal layer of the pelvic fascia

9. The following statements concerning the lymphatic drainage of pelvic structures are correct *except*:

- a) Lymph from the cervix of the uterus drains into the internal and external iliac lymph nodes
- b)** Lymph from the prostate drains into the external iliac lymph nodes
- c) Lymph from the posterior fornix of the vagina drains into the internal and external iliac lymph nodes
- d) Lymph from the trigone of the bladder drains into the internal and external iliac lymph nodes
- e) Lymph from the fundus of the uterus drains into the para-aortic lymph nodes at the level of the first lumbar vertebrae

10. The following statements concerning the main venous drainage of pelvic structures are true *except*:

- a) The venous blood from the left ovary drains into the inferior vena cava
- b) The venous blood from the prostate drains into the internal iliac veins
- c) The venous blood from the urinary bladder drains into the internal iliac veins
- d) The venous blood from the mucous membrane of the rectum drains into the superior rectal vein
- e) The venous drainage of the seminal vesicles drains into the internal iliac veins

11. The following statements concerning the female urethra are true *except*:

- a) It lies immediately anterior to the vagina
- b) Its external orifice lies about 2 in. (5 cm) from the clitoris
- c) It is about 1.5 in (3.75 cm) long
- d) It pierces the urogenital diaphragm
- e) It is straight, and only minor resistance is felt as a catheter is passed through the urethral sphincter

12. The following structures can be palpated by a vaginal examination *except*:

- a) Sigmoid colon
- b) Ureters
- c) Perineal body
- d) Ischial spines
- e) Iliopectineal line

13. The following statements concerning the ischiorectal fossa are true *except*:

- a) The pudendal nerve lies in its lateral wall
- b) The floor is formed by the superficial fascia and skin
- c) The lateral wall is formed by the obturator internus muscle and its fascia
- d) The medial wall is formed in part by the levator ani muscle
- e) The roof is formed by the urogenital diaphragm

14. The following statements concerning the penis are true *except*:

- a) Its root is formed in the midline by the bulb of the penis which continues anteriorly as the corpus spongiosum
- b) Its roots laterally are formed by the crura, which continue anteriorly as the corpora cavernosa
- c) The penile urethra lies within the corpus spongiosum
- d) The glans penis is a distal expansion of the fused corpora cavernosa
- e) The penis is suspended from the lower part of the anterior abdominal wall by two condensations of deep fascia

15. The following statements concerning the perineal structures are correct *except*:

- a) The anorectal ring is formed by the subcutaneous, superficial and deep fibers of the external sphincter
- b) The urogenital diaphragm is attached laterally to the inferior ramus of the pubis and the ischial ramus
- c) The bulbourethral glands are situated in the deep perineal pouch
- d) The anococcygeal body is rarely damaged in child birth
- e) The lymph drainage of the skin around the anus is into the medial group of superficial inguinal nodes

16. The urogenital diaphragm is formed by the following structures *except*:

- a) Deep transverse perineal muscle
- b) Perineal membrane
- c) Sphincter urethrae
- d)** Colles' fascia (membranous layer of superficial fascia)
- e) Parietal pelvic fascia covering the upper surface of the sphincter urethrae muscle

17. In the male, the following structures can be palpated on rectal examination *except*:

- a) Bulb of the penis
- b) Urogenital diaphragm
- c) Anorectal ring
- d) The anterior surface of the rectum
- e)** Ureter

18. The following statements concerning the anal canal are true *except*:

- a) It is about 1.5 in (3.8 cm) long
- b)** It pierces the urogenital diaphragm
- c) It is related laterally to the external anal sphincter
- d) It is the site of an important portal-systemic anastomosis
- e) The mucous membrane of the lower half receives its arterial supply from the inferior rectal artery

19. The following statements concerning the subcutaneous part of the external anal sphincter are correct *except*:

- a) It encircles the anal canal
- b) It is not attached to the anococcygeal
- c) It is composed of striated muscle fibers
- d) It is not responsible for causing the anal canal and the rectum to join at an acute angle
- e)** It is innervated by the middle rectal nerve

20. The following statements concerning the defecation are true *except*:

- a) The act is often preceded by the entrance of the feces into the rectum, which gives rise to the desire to defecate
- b) The muscles of the anterior abdominal wall contract
- c) The external anal sphincters and the puborectalis relax
- d)** The internal sphincter contracts and causes the evacuation of the feces
- e) The mucous membrane of the lower part of the anal canal is extruded through the anus ahead of the fecal mass

21. The process of ejaculation depends on the following processes *except*:

- a) The sphincter of the bladder contracts
- b) The sympathetic preganglionic nerve fibers arising from the first and second lumbar segments of the spinal cord must be intact
- c) The smooth muscle of the epididymis, ductus (vas) deferens, seminal vesicles and prostate contracts
- d) The bulbourethral glands and the urethral glands are active
- e)** The bulbospongiosus muscles relax

22. The following structures receive innervation from the branches of the pudendal nerve *except*:

- a) Labia minora
- b) Urethral sphincter
- c) The posterior fornix of the vagina**
- d) Ischiocavernosus muscles
- e) Skin of the penis or clitoris

23. The following structures are closely related to the rectouterine pouch (pouch of Douglas) *except*:

- a) Anteriorly is situated in the posterior surface of the upper part of the vagina
- b) Posteriorly is situated the upper part of the rectum
- c) The trigone of the bladder is directly related to its anterior wall**
- d) Anteriorly is situated in the posterior surface of the body of the uterus
- e) Laterally is situated in the sacrocervical ligaments passing forward to the cervix

24. Support for the uterus either directly or indirectly, is provided by the following structures *except*:

- a) The perineal body
- b) The mesosalpinx**
- c) The transverse cervical (cardinal) ligaments
- d) The levator ani muscles
- e) The pubocervical ligaments

25. The following statements regarding the ovary are correct *except*:

- a) It is attached to the posterior layer of the broad ligament
- b) It ovulates an ovum into the peritoneal cavity
- c) It is attached to the lateral pelvic wall by the round ligament of the ovary**
- d) It normally is not related to the posterior fornix of the vagina
- e) The right ovarian vein drains into the inferior vena cava

26. The following statements regarding the urinary bladder are true *except*:

- a) It lies in the visceral layer of the pelvic fascia beneath the peritoneum
- b) When the bladder is empty, the internal surface is wrinkled except at the trigone, which is smooth
- c) Parasympathetic nerve fibers innervate the detrusor muscle
- d) The trigone is the area between the openings of the urethra and the two ureters
- e) In children, the bladder is located entirely within the pelvis**

27. The broad ligament contains all of the following *except*:

- a) The round ligament of the ovary
- b) The uterine artery
- c) The round ligament of the uterus
- d) The uterine tubes
- e) Ureters**

28. Malignant tumors of the trigone of the bladder spread (metastasize) to the following lymph nodes:

- a) Lumbar
- b) Sacral
- c) External iliac only
- d) External and internal iliac**
- e) Superficial inguinal

29. In males, traumatic injury to the perineum may rupture the bulb of the penis or penile urethra. The resulting leakage of blood or urine may be found in all of the following areas *except*:

- a) The anterior abdominal wall
- b) The ischiorectal fossa**
- c) The scrotum
- d) The penis
- e) The superficial perineal pouch

30. The deep perineal space (pouch) contains the:

- a) Internal pudendal artery
- b) Pudendal artery
- c) Sphincter urethrae
- d) Both A and B
- e) Both A and C

31. The following is true about the pudendal canal *except*:

- a) Can be palpated throughout its entire length during rectal examination**
- b) Is a fascial tunnel
- c) Contains the terminal branches of the pudendal nerve
- d) Lies in the lateral wall of the ischiorectal fossa

32. All of the following statements about the ductus deferens are true *except*:

- a) It opens via the ejaculatory duct into the prostatic urethra
- b) It begins at the head of the epididymis**
- c) It is one of the contents of the spermatic cord
- d) It enters the abdominal cavity at the deep inguinal ring
- e) It is retroperitoneal

33. Which one of the following is true regarding the muscles of the pelvis:

- a) The obturator internus muscle leaves the pelvis through the greater sciatic foramen
- b) The levator ani muscle is composed of the pubococcygeus, puborectalis and iliococcygeus**
- c) The pelvic diaphragm is a sling of muscle that separates the true pelvis from the false pelvis
- d) The piriformis is one of the components forming the lateral pelvic walls

34. Which one of the following is true:

- a) The urinary bladder in the male sits at a lower level than that of the female because of the presence of the prostate
- b) The scrotum is actually an external genital organ, but is in direct continuity with male pelvic organs via the vas deferens**
- c) The efferent ductules unite at the superior aspect of the testis to form the ductus deferens
- d) The gonadal artery in the male and female is a branch from the anterior division of the internal iliac artery

35. The urethra is located in the:

- a) Ischiorectal fossa
- b) Deep perineal pouch
- c) Superficial perineal pouch
- d) Both B and C**
- e) All of the above

36. The bulb of the penis is located in the:

- a) Deep perineal pouch
- b) Superficial perineal pouch**
- c) Ischiorectal fossa
- d) None of the above

37. Primary support for the uterus is derived from the:

- a) Lateral (transverse) cervical ligaments**
- b) Pubocervical ligaments
- c) Sacrocervical ligaments
- d) Round ligament of the uterus
- e) Broad ligament

38. Which is not considered a usual branch of the anterior division of the internal iliac artery:

- a) Internal pudendal artery
- b) Iliolumbar artery**
- c) Obturator artery
- d) Umbilical artery
- e) Middle rectal artery

39. Which of the following statements about the rectum is false?

- a) The sciatic nerve is derived from the segments L4 and 5; S1, 2 and 3
- b) In the pudendal nerve is derived from the segments L3, 4 and 5
- c) The pelvic splanchnic nerve is derived from the segments S2, 3 and 4
- d) The obturator nerve is derived from the segments L2, 3 and 4
- e) The lumbosacral trunk is derived from the segments L4 and 5

40. Which of the following ligaments is attached to the uterus and composed of peritoneum:

- a) Transverse cervical (cardinal) ligaments
- b) Broad ligament
- c) Round ligament
- d) Suspensory ligament of ovary
- e) Medial umbilical fold

41. Which statement is false about the pudendal nerve?

- a) It carries fibers from the spinal cord segments S2-S4
- b) It innervates the levator ani muscle
- c) It innervates the internal sphincters of bladder and rectum
- d) It runs in the ischiorectal fossa
- e) It exits the pelvis through the greater sciatic foramen

42. The male urethra:

- a) In rupture urethra urine may be found in the scrotum
- b) Its entire epithelial lining is stratified squamous type
- c) Is 5 inches long
- d) The membranous part receives the ejaculatory ducts
- e) Has 3 constrictions

43. The transverse (lateral) cervical ligament is pierced by the:

- a) Superior hypogastric plexus
- b) Uterine artery
- c) Ureter
- d) Both B and C
- e) All of the above

44. The deep perineal space is deep to the perineal membrane. It contains:

- a) Membranous urethra
- b) Vagina
- c) Deep transverse perineal muscles
- d) All of the above
- e) Both A and C

45. Regarding the spermatic cord, select the false statement:

- a) The vas deferens starts in the tail of epididymis
- b) The internal spermatic fascia arises from the internal oblique muscle
- c) The testicular artery arises from the aorta
- d) The cremasteric artery arises from the inferior epigastric artery
- e) Lymphatics from the ductus deferens drain to internal iliac nodes

46. Which of the following is not a branch of the internal iliac artery?

- a) Inferior vesical
- b) Umbilical
- c) Superior gluteal
- d) Iliolumbar
- e) Inferior epigastric

47. Which of the following is true?

- a) The urinary bladder in male sits at a lower level than that of the female because of the presence of the prostate
- b) The scrotum is actually an external genital organ, but is in direct continuity with male pelvic organs via the ductus deferens
- c) The efferent ductules unite at the superior aspect of the testis to form the ductus deferens
- d) The gonadal artery in the male and female is a branch from the anterior division of the internal iliac artery
- e) The lymphatics of the ovary drain to the internal iliac nodes

48. The following statements concerning the ischio-anal fossa are true except:

- a) The pudendal nerve lies in its lateral wall
- b) The floor is formed by the superficial fascia and skin
- c) The lateral wall is formed by the obturator internus muscle and its fascia
- d) The medial wall in part is formed by the levator ani muscle
- e) The roof is formed by the urogenital diaphragm

49. Which is statement is not true concerning the anal canal?

- a) It is about 1.5 inches (3.75cm) long
- b) It is lined by ciliated columnar epithelium
- c) It is related laterally to the external anal sphincter
- d) It is the site of an important portal-systemic anastomosis
- e) The mucous membrane of the lower half receives its arterial supply from the inferior rectal artery

50. All of the following structures exit the pelvis via the greater sciatic foramen except:

- a) Piriformis muscle
- b) Superior gluteal vessels
- c) Internal pudendal vessels
- d) Obturator internus muscle
- e) Inferior gluteal vessels

51. The pelvic diaphragm:

- a) Forms the inferior boundary of the pelvic cavity
- b) Can be divided into levator ani and coccygeus muscles
- c) Exhibits midline openings for the rectum and urethra in the male
- d) Is attached to the pubis, lateral pelvic wall (arcus tendineus) and ischial spine
- e) All of the above

52. The ovaries are anchored to the lateral pelvic wall by the:

- a) Ovarian ligament
- b) Broad ligament
- c) Suspensory ligament
- d) Mesovarium
- e) Round ligament

53. Which of the following statements is true?

- a) The internal pudendal artery is embedded in a fascial canal within the urogenital triangle
- b) The pudendal nerve is a branch of the lumbar plexus
- c) The posterior scrotal (labial) nerves are not branches of the inferior rectal nerve
- d) The pudendal nerve enters the perineum (from the gluteal region) by passing through the greater sciatic foramen
- e) The pudendal nerve supplies the external anal sphincter

54. Which of the following has an intra- and extrapelvic component:

- a) Broad ligament
- b) Ovarian ligament
- c) Round ligament of the uterus
- d) Transverse cervical (cardinal) ligament
- e) More than one of the above

55. Which structures do not pass through the deep perineal pouch of the urogenital triangle:

- a) Urethra
- b) Root of the clitoris
- c) Deep transverse perineal muscle
- d) Internal pudendal artery
- e) Vagina

56. The urinary bladder:

- a) Is lined by stratified squamous epithelium
- b) Has lymphatics which drain to nodes alongside the internal iliac artery
- c) Has a trigone whose endothelium is endoderm-derived
- d) Has a medial umbilical ligament arising from its apex
- e) Lies anterior to the anal canal in the male

57. Concerning the pudendal nerve, select the incorrect statement:

- a) Is the main motor and sensory supply of the pelvic floor and perineum
- b) Has a root value of S1-3
- c) Passes between piriformis and coccygeus to reach the ischioanal fossa
- d) Has the inferior rectal nerve as one of its branches which supplies the levator ani
- e) Has the perineal nerve as one of its terminal branches

58. Which is not true about the rectum?

- a) Receives its blood supply from the superior, middle and inferior rectal arteries, the superior being the main artery supplying the mucous membrane
- b) Receives some of its blood supply from the middle rectal artery- a branch of the internal iliac artery which may sometimes be absent
- c) Receives some of its blood supply from the internal pudendal artery via the inferior rectal artery
- d) Has a venous drainage which includes the middle rectal vein, which drains to the portal circulation
- e) Has a lymph drainage which reaches both the inferior mesenteric and internal iliac lymph nodes

59. The Prostate Gland:

- a) Has peritoneum on its posterior surface
- b) Releases its secretions into the ejaculatory duct
- c) Is supported by both the urogenital and pelvic diaphragms
- d) If healthy, cannot be palpated by rectal digital examination
- e) All of the above

