

GROSS ANATOMY EXAMINATION II
September 27, 1991

Part I. Answer in the space provided. (31 pts)

1. Discuss the anatomy of the diaphragm (structure, blood supply, relationships, innervation, action, and lymphatic drainage). (10 pts)

2. Indicate your understanding of the following: (14 pts)

a. Subphrenic recesses

b. Autonomous bladder

c. Cremasteric reflex

d. The relationship of the peritoneum to gall bladder.

e. Caput Medusae

f. Pelvic splanchnic nerves

g. Ligamentum venosum

3. Discuss the anatomy of the ischiorectal (anal) fossa (boundaries, contents) and indicate why an infection in the posterior recess can easily spread to the anterior recess. (7 pts)

Part II. Answer in the space provided. (34 pts)

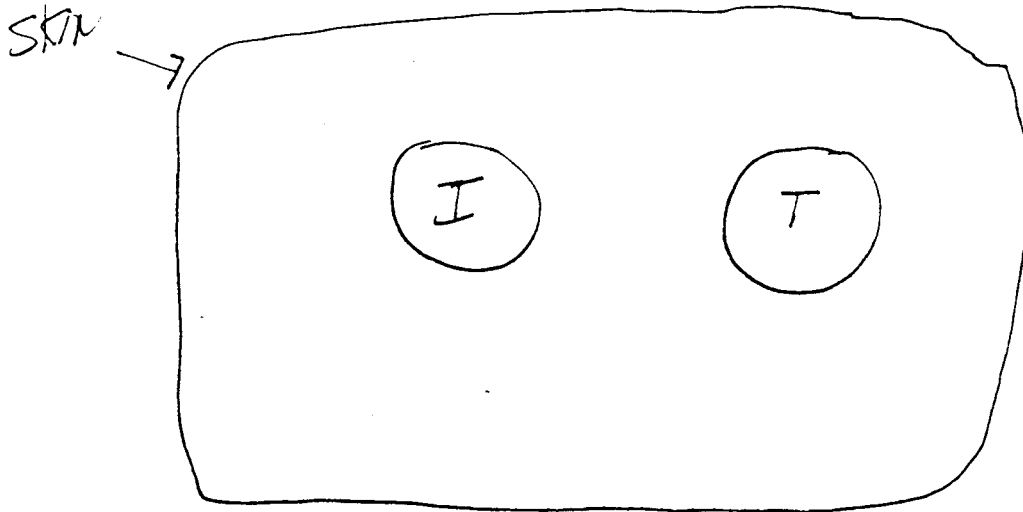
1. Discuss the lymphatic drainage of the uterus and vagina. (5 pts)

2. Discuss the lumbar sympathetic trunk. (5 pts)

5. In some cases of inguinal hernia the entire length of the processus vaginalis persists and a loop of intestine may descend into the scrotum. (6 pts)

a. State the type of hernia involved and briefly describe the location (e.g., anatomical landmarks) in the abdominal cavity where this type of hernia takes place.

b. In the cross-section of the testis (T) and intestinal loop (I) provided, draw and label the coverings of fascia, membranes, and/or muscles that you would expect to encounter.

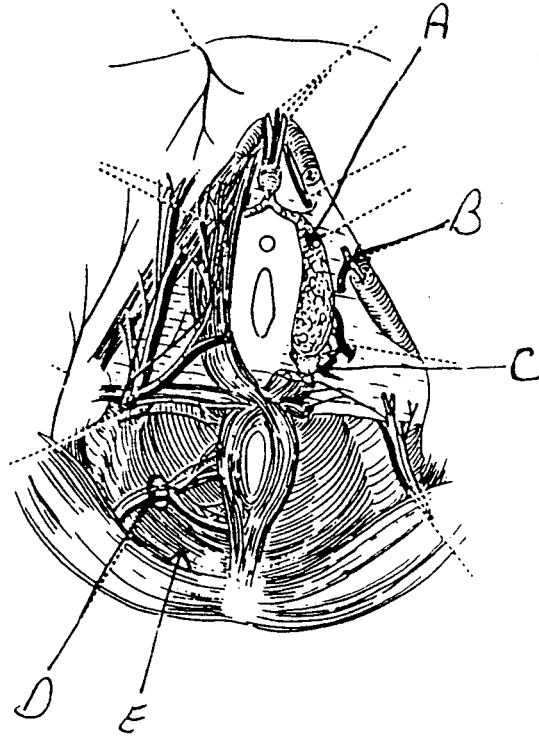


6. Discuss the innervation of the transverse colon. (4 pts)

Part III. Answer in the space provided. (35 pts)

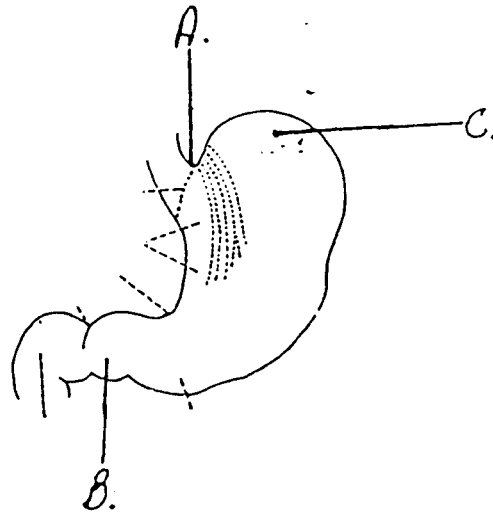
Name the structures indicated.

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____



Identify the parts of the stomach:

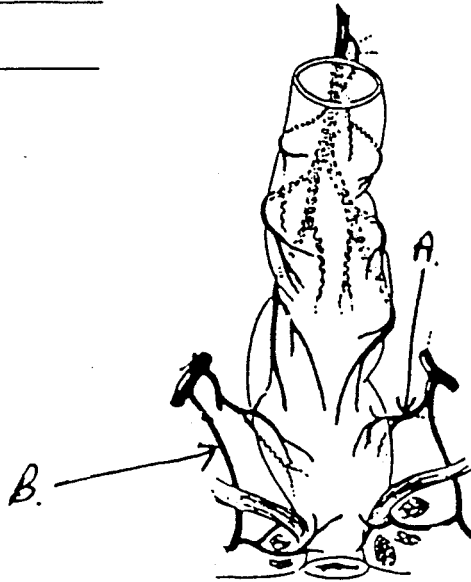
- A. _____
- B. _____
- C. _____



Identify these arteries:

A. _____

B. _____



Circle the correct answer(s). All, none, or some may apply.

1. With respect to fascia in the pelvis and perineum:
 - a. The Cardinal ligament is formed by a condensation of the parietal pelvic fascia.
 - b. The superior fascia of the urogenital diaphragm is associated with the superficial pouch.
 - c. The fascia of Denonvillier`s is transversalis fascia.
 - d. The arcus tendineus is a thickening of Scarpa's fascia.
 - e. The periuterine fascia is a condensation of the extraperitoneal connective tissue.

2. The lienorenal ligament contains the following structures:
 - a. Left renal vein
 - b. Left suprarenal gland
 - c. Head of pancreas
 - d. Splenic artery and vein
 - e. Short gastric arteries

3. Which of the following statement(s) is(are) correct regarding the peritoneum?
- The parietal peritoneum is sensitive to pain, temperature, and touch.
 - The parietal peritoneum lining the anterior abdominal wall is innervated by the lower six thoracic and first lumbar spinal nerves
 - The visceral peritoneum is sensitive to stretch
 - The visceral peritoneum is innervated by general somatic afferents
 - The sigmoid colon is considered to be an intraperitoneal structure.
4. With respect to the vasculature in the abdomen and pelvis:
- The right pampiniform plexus of veins drains into the right testicular vein.
 - The superior mesenteric vein is located to the right of the superior mesenteric artery.
 - The celiac artery lies at vertebral level T10.
 - The inferior mesenteric artery lies at vertebral level L5.
 - The aorta bifurcates at vertebral level L3.
5. In regard to the embryology of the gastrointestinal tract:
- The falciform ligament is a derivative of the ventral mesentery.
 - The gastrointestinal tract herniates into the umbilicus beginning the 10th week of fetal life.
 - The stomach undergoes a 90° counterclockwise rotation during embryological development.
 - The gastrosplenic ligament is a derivative of the dorsal mesentery.
 - The hepatoduodenal ligament omentum is a derivative of the ventral mesentery.
6. With respect to the anal canal:
- Carcinoma above the pectinate line involves columnar or cuboidal epithelia.
 - Anal columns are horizontal ridges that form the pecten line.
 - The region above the pectinate line is supplied with efferent innervation by somatic nerve fibers of the pudendal nerve.
 - The external anal sphincter muscle is composed of smooth muscle.
 - The external anal sphincter is innervated by branches of the pudendal nerve.
7. With regard to the urethra:
- The membranous urethra is the shortest segment of the urethra.
 - The spongy urethra is located in the deep perineal pouch/space.
 - The membranous urethra is the narrowest and least dilatable part of the urethra.
 - The spongy urethra contains the fossa navicularis.
 - The bulbourethral glands drain into the prostatic urethra.

8. Which of the following structures traverses the inguinal canal?
- a. posterior scrotal nerves
 - b. ductus deferens
 - c. iliohypogastric nerve
 - d. ilioinguinal nerve
 - e. round ligament
9. Which of the following statements about the male pelvis is correct?
- a. the false pelvis is deeper than in the female
 - b. the pelvic inlet is transversely oval in shape
 - c. the iliac fossa is deeper than in the female
 - d. the pelvic outlet is more oval than in the female
 - e. the subpubic arch is more rounded than in the female
10. The left ovary:
- a. is connected to the uterus by the mesometrium
 - b. is vascularized by the ovarian artery, a branch of the internal iliac artery
 - c. has an epithelial surface that is covered by transversalis fascia
 - d. has venous drainage usually terminating in the left renal vein
 - e. receives ovarian vessels through the suspensory ligament of the ovary