

GROSS ANATOMY EXAMINATION II

September 29, 1989

PART I: Answer in the space provided. (35 points)A. Answer in appropriate space(s). (10 points)

1. The sensory innervation to the diaphragm is derived from the _____ and _____ nerves.
2. The esophageal hiatus lies at approximately which vertebral level: _____.
3. The superior mesenteric artery arises from the aorta at approximately which vertebral level: _____.
4. An anomaly of the small intestine related to persistence of the vitelline duct in the adult is termed _____.
5. Within the hepatoduodenal ligament, the portal vein lies _____ to the proper hepatic artery.
6. The sacral portions of the sympathetic trunks fuse at the tip of the coccyx to form the _____.
7. Two structures derived from the ventral mesentery are the _____ and _____.
8. The labia minora are united posteriorly by the _____.

B. Indicate your understanding of the following: (25 points)

1. Arcus tendineus. (2 points)

2. Anterior scrotal/labial nerve. (1 point)

6. Discuss the boundaries and significance of the Epiploic Foramen of Winslow. (5 points)

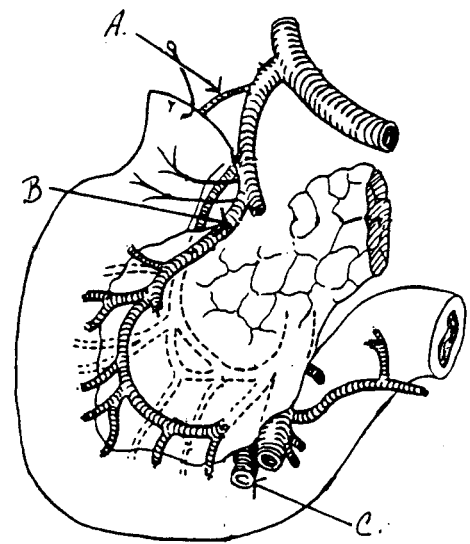
7. Median umbilical ligament. (3 points)

8. Identify the structures. (3 points)

a. _____

b. _____

c. _____



PART II. Answer in the space provided. (35 points)

1. Discuss the course and distribution of the internal pudendal artery in the male. (10 points)

2. Indicate your understanding of an atonic bladder. (3 points)

3. Indicate your understanding of the right lateral (paracolic) gutter and provide its clinical significance. (3 points)

4. Discuss the anatomy of the posterior portion (or margin) of the U.G. (urogenital) diaphragm. (5 points)

5. Name the lymph node(s) immediately associated and receiving drainage from the following structures: (6 points)
- a. Scrotum -
 - b. Ovary -
 - c. Ascending colon -
 - d. Fundus of the uterus -
 - e. 1st part of the duodenum -
 - f. Area below the pectinate line -
6. Discuss the anatomy of the transverse colon (e.g., vasculature, innervation, structure, relationships). (8 points)

PART III. Circle the correct answer(s). (30 points)

1. In regard to the pelvic fascia:
 - a. transversalis fascia is referred to as visceral pelvic fascia in the pelvis
 - b. the parietal pelvic fascia is continuous with the superficial perineal fascia
 - c. the perivisceral fascia is continuous with Scarpa's fascia
 - d. extraperitoneal connective tissue is found in the true pelvis
 - e. the pubosacral ligamentous complex is formed by a condensation of the extraperitoneal connective tissue

2. The right ovary:
 - a. has an epithelial surface that merges with the mesovarium
 - b. receives ovarian vessels through the suspensory ligament of the ovary
 - c. has venous drainage that usually terminates in the right renal vein
 - d. is supplied by the ovarian artery, which arises from the aorta just below the origin of the renal arteries
 - e. is connected to the uterus by the mesosalpinx

3. In regard to the pelvic nerves:
 - a. the detrusor muscle is innervated by the pudendal nerve
 - b. engorgement of the corpora cavernosa is a function of the parasympathetics
 - c. stretch receptors in the bladder normally send impulses to lumbar levels 2-4
 - d. defecation includes reflex arcs involving the sacral parasympathetics and the pudendal nerves
 - e. the helicine arteries play a role in erection of the penis

4. The membranous urethra:
 - a. is the narrowest and least dilatable part of the urethra
 - b. is the shortest segment of the urethra
 - c. is located in the deep space/pouch
 - d. receives drainage from the greater vestibular glands
 - e. contains the fossa navicularis

5. In regard to the pectinate line:
 - a. carcinoma above this line would involve columnar or cuboidal epithelia
 - b. is a region that may be involved in portal hypertension
 - c. dilated and redundant veins below this line are referred to as external hemorrhoids
 - d. the region above this line is supplied with afferent innervation by somatic nerve fibers of the pudendal nerve
 - e. is located just above the anal columns

6. Structures located in the superficial perineal space/pouch include:
- bulbourethral glands
 - prostatic urethra
 - posterior scrotal nerves
 - superficial transverse perineal muscle
 - femoral ring
7. The duodenum:
- is the shortest, widest, and most fixed part of the small intestine
 - contains circular folds (plicae circulares) throughout its extent
 - contains the largest and most numerous aggregations of lymph nodules referred to as Peyer's patches
 - has appendices epiploicae
 - is in contact with the medial border of the left kidney
8. The kidney:
- has pararenal fat located between the renal fascia and the body wall
 - is surrounded by renal fascia derived from a condensation of the transversalis fascia
 - has glomeruli in its cortex
 - has a renal sinus contained in the renal pelvis
 - has the ureters lying posterior to the renal arteries and veins
9. The superior mesenteric artery:
- has the superior mesenteric vein to its right
 - supplies all of the small intestine except the first (superior) part of the duodenum
 - arises 1 cm above the aortic bifurcation
 - has a perivascular nerve plexus with parasympathetics derived from S2,3,4
 - supplies blood to the right colic flexure
10. In regard to the vasculature of the abdomen and pelvis:
- the inferior phrenic arteries normally arise the aorta inferior to the origin of the celiac trunk
 - the renal arteries arise from the aorta at the same level as the superior mesenteric artery ^{OR A1170000}
 - the right testicular vein drains directly into the inferior vena cava
 - the hepatic veins drain blood into the portal vein
 - the middle suprarenal artery normally arises from the renal artery

11. In regard to the nervous system:
- a. the phrenic nerve is an example of a somatic nerve that can give rise to referred pain
 - b. visceral pain involves the modalities of temperature and touch
 - c. pain over the right iliac fossa related to appendicitis is an example of referred pain
 - d. pain from the gall bladder may be referred to the infrascapular region
 - e. the pelvic splanchnics usually synapse with post-ganglionic fibers in the inferior hypogastric plexus
12. Indirect inguinal hernias:
- a. occur lateral to the inferior epigastric artery
 - b. are associated with the process vaginalis
 - c. are found below and lateral to the pubic tubercle
 - d. usually have abdominal contents that lie within the spermatic cord
 - e. occur in the medial inguinal fossa