

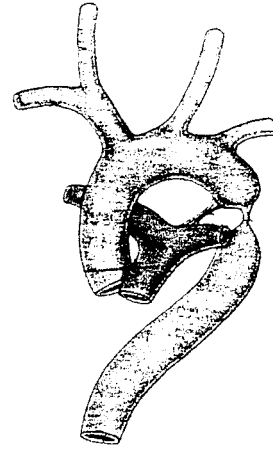
STRUCTURAL BASIS OF MEDICAL PRACTICEEXAMINATION 9B

September 21, 2006

Circle the correct answer. (22 points)

1. The picture at the right is an image of:

- a) Defective right subclavian artery
- b) Preductal coarctation of the aorta
- c) Postductal coarctation of the aorta
- d) Persistent ductus arteriosus
- e) Double aortic arch



2. The embryonic origin of the ligamentum arteriosum is:

- a) Second aortic arch
- b) Third aortic arch
- c) Fourth aortic arch
- d) Fifth aortic arch
- e) Sixth aortic arch

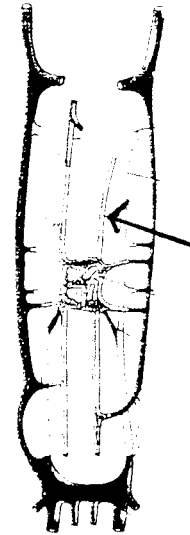
3. Regarding the circulatory system, which of these events does not occur at birth or shortly thereafter?

- a) Foramen ovale closes
- b) Pressure in right atrium decreases
- c) Umbilical arteries dilate
- d) Pressure increases in left atrium
- e) Interarterial septum seals

4. Embryonic arch arteries give origin to all but:

- a) Arch of the aorta
- b) Common carotids
- c) Descending aorta
- d) Maxillary arteries
- e) Pulmonary arteries

5. Which pair of embryonic and adult structures is **incorrect**?
- Umbilical vein – ligamentum teres hepatis
 - Umbilical artery – medial umbilical ligament
 - Ductus venosus – ligamentum venosum
 - Ductus arteriosus – ligamentum arteriosum
 - Brachiocephalic vein – aortic sac
6. Which pair of embryonic and adult structures is **incorrect**?
- Right vitelline vein – inferior vena cava
 - Right posterior cardinal vein – common iliac vein
 - Left vitelline vein – liver sinusoids
 - Left posterior cardinal vein – superior vena cava
 - Left sinus horn – coronary sinus
7. Identify the structure indicated by the arrow in the picture:
- Left posterior cardinal vein
 - Left common cardinal vein
 - Left supracardinal vein
 - Left subcardinal vein
 - Left subsupracardinal anastomosis
8. Mesonephric ducts in the male give rise to all but:
- Epididymis
 - Ductus deferens
 - Rete testis
 - Ejaculatory duct
 - Seminal glands
9. Ureteric bud tissue in the male gives rise to the:
- Renal pelvis
 - Ductus deferens
 - Seminal vesicles
 - Seminiferous tubules
 - Ductus epididymis



10. Which structure does not arise from the urogenital sinus?
- a) Penile urethra
 - b) Urinary bladder
 - c) Prostate urethra
 - d) Uterus
 - e) Bulbourethral glands
11. Metanephric diverticulum gives rise to all but the:
- a) Renal pelvis
 - b) Ureter
 - c) Calyces
 - d) Collecting tubules
 - e) Bladder
12. Paramesonephric ducts are not associated with the:
- a) Oviducts
 - b) Vagina (upper portion)
 - c) Prostatic utricle
 - d) Testis (appendix portion)
13. The definitive kidney is derived from the:
- a) Pronephros
 - b) Mesonephros
 - c) Metanephros
 - d) Supranephros
 - e) Urogenital ridge
14. Exstrophy of the bladder is often associated with:
- a) Adrenal hyperplasia
 - b) Urachal fistula
 - c) Hypospadias
 - d) Epispadias
 - e) Oligohydramnios

15. Meckel's diverticulum is associated with the:
- a) Urachus
 - b) Ligament of Treitz
 - c) Vitelline duct
 - d) Hepatic duct
 - e) Gastric luminal epithelium
16. Regarding development of the GI system, which statement is **incorrect**?
- a) Midgut exhibits a 270° rotation counterclockwise
 - b) Stomach rotates 90° clockwise
 - c) Rotation of stomach allows for the greater curvature to face right and superior
 - d) Following rotation, the descending colon is retroperitoneal
 - e) The appendix lies in a retrocecal position
17. Embryonic foregut differentiates into all but the:
- a) Liver
 - b) Esophagus
 - c) Spleen
 - d) Stomach
 - e) Pancreas
18. Hirschsprung's Disease is a disorder related to:
- a) Parasympathetic ganglia
 - b) Sympathetic ganglia
 - c) Incomplete intestinal looping
 - d) Perforation of the abdominal cavity wall
 - e) Superior mesenteric artery
19. Which statement is **incorrect** regarding development of the gut?
- a) The urorectal fold divides the cloaca
 - b) The pancreas receives blood from the celiac trunk
 - c) Rotation of the stomach results in the left vagal trunk innervating the anterior wall
 - d) The transverse colon is retroperitoneal
 - e) The spleen is intraperitoneal

20. Regarding development of the gut, which statement is **correct**?
- a) Stenosis of the gut frequently occurs in the large intestine
 - b) An omphalocele most likely occurs in the 8-9th month
 - c) An annular pancreas results from hyperproliferation of the head of the pancreas
 - d) The gall bladder is derived from the hindgut
 - e) Twisting and knotting of the intestinal loop is termed volvulus
21. Which developmental structure-vasculature pair is **incorrect**?
- a) Gall bladder – Celiac artery
 - b) Jejunum – Superior mesenteric artery
 - c) Ascending colon - Superior mesenteric artery
 - d) Rectum – Inferior mesenteric artery
 - e) Descending colon – Superior mesenteric artery
22. Failure of the interstinal loops to return to the abdominal cavity results in:
- a) Pyloric stenosis
 - b) Duodenal atresia
 - c) Stenosis of the large bowel
 - d) Omphalocele
 - e) Polydramnios