This practice exam is a small sample of the material to expose you to the structure of potential questions. Taking notes on why each answer option is wrong/right will add a higher level of learning while you use this practice exam. Getting into study groups and formulating more practice questions will also help you assess your knowledge through self-testing. If you do not know where to start, use the PowerPoints to guide you through the textbook, and know all the clinical points. OPAL recordings, my questions of the day, and YouTube videos are some great resources as well. Make sure to sleep (even a nap is better than nothing) before the exam, so you can retain the information. I wish you all the best of luck!

1. Which of the following is NOT transected by the transpyloric plane?
   a. Fundus of the stomach
   b. Duodenojejunal flexure
   c. Origin of the superior mesenteric artery
   d. Fundus of the gallbladder
*See page 224

2. At which level would you find Camper’s fascia?
   a. T7
   b. T8
   c. T9
   d. T11
*See page 224

3. Caput madusae is a clinical presentation seen with portal hypertension. Which veins form this portocaval anastomosis?
   a. Paraumbilical veins (portal); superficial and inferior epigastric veins (caval)
   b. Paraumbilical veins (caval); superficial and inferior epigastric veins (portal)
   c. Umbilical veins (portal); superior and inferior epigastric veins (caval)
   d. Umbilical veins (portal); superior and inferior epigastric veins (caval)
*See page 232

4. The deep inguinal ring is an opening in which of the following?
   a. Transversalis fascia
   b. Aponeurosis of the external abdominal oblique
5. Which of the following results from excess fluid in the tunica vaginalis?
   a. Hydrocele of the cord
   b. Hydrocele of the testis
   c. Cryptorchidism
   d. Indirect inguinal hernia

*See page 228

6. What is the efferent limb of the cremasteric reflex?
   a. Cremasteric branch of pudendal nerve
   b. Ilioinguinal nerve
   c. Femoral branch of genitofemoral nerve
   d. Genital branch of genitofemoral nerve

*See page 229

7. Which of the following is NOT a content of the rectus sheath?
   a. Pyramidalis muscle
   b. T8 intercostal nerve
   c. Superior epigastric vessels
   d. Iliohypogastric nerve

*See page 230

8. Which of the following is the fetal remnant of the urachal cord?
   a. Median umbilical fold
   b. Medial umbilical fold
   c. Round ligament of the liver
   d. Ligamentum vinosum

*See page 230

9. Which of the following is NOT true of inguinal hernias?
   a. Direct are medial to the inferior epigastric vessels
   b. Direct occur in Hesselbach’s Triangle
   c. Indirect are more common in middle aged men
   d. Indirect are more common
10. What of the following is considered retroperitoneal?
   a. Kidneys
   b. Urinary bladder
   c. Stomach
   d. Spleen
*See page 237

11. Which of the following is NOT a part of the portal triad?
   a. Portal vein
   b. Cystic duct
   c. Hepatic artery
   d. Common bile duct
*See page 239

12. What gives parasympathetic innervation to the hindgut structures?
   a. Lesser Splanchnic nerve (T10-T11)
   b. Lesser Splanchnic nerve (T12)
   c. Pelvic Splanchnic nerves (S2-S4)
   d. Pelvic Splanchnic nerves (S1-S3)
*See page 243

13. Which of the following is NOT a direct branch of the abdominal aorta?
   a. Common iliac artery
   b. Middle suprarenal artery
   c. Celiac trunk
   d. Splenic artery
*See page 244

14. A patient presents with dysphagia and retrosternal pain. A barium swallow reveals a bird beak sign is observed on the scan. What is the most likely diagnosis?
   a. Achalasia
b. Barrett’s esophagus
c. Crohn’s disease
d. Zenker’s diverticulum

*See page 250

15. Which of the following is NOT true of the esophagus?
   a. Upper part is supplied by the inferior thyroid artery
   b. Runs with Vagus nerves
   c. Lined with non-keratinizing stratified squamous epithelium
   d. Portocaval anastomosis between upper and middle parts

*See page 252

16. Where are the permanent rugae located in the stomach?
   a. Cardia
   b. Pylorus
   c. Lesser curvature
   d. Greater curvature

*See page 255

17. A patient presents with pernicious anemia due to low levels of Vitamin B12. Which cells are possibly malfunctioning?
   a. Goblet cells
   b. Chief cells
   c. D cells
   d. Parietal cells

*See page 257

18. What artery supplies the left lesser curvature of the stomach?
   a. L gastric artery
   b. R gastric artery
   c. L gastro-omental artery
   d. R gastroepiploic artery

*See page 259
19. Where are Brunner’s glands found?
   a. Duodenum
   b. Jejunum
   c. Ileum
   d. All of the above

*See page 266

20. Which of the following is NOT true of the Kerckring folds?
   a. Found in the small intestine
   b. Formed by the folding of the mucosa and submucosa
   c. Increase surface area by about 1/3
   d. Contain Paneth cells

*See page 266

21. Where does the major duodenal papilla open into?
   a. Pyloric region of the stomach
   b. First part of the duodenum
   c. Second part of the duodenum
   d. Fundus of the gallbladder

*See page 269

22. Which structure joins the Common Bile Duct to form the Ampulla of Vater?
   a. Hepaticopancreatic duct
   b. Common Hepatic duct
   c. Main pancreatic duct
   d. Accessory pancreatic duct

*See page 269

23. Which of the following is NOT true of the small intestine?
   a. The ileum is 3/5 of the length
   b. The ileum has more arcades
   c. The jejunum has shorter vasa recta
   d. The jejunum has fewer Peyer’s patches

*See page 272
24. A two-year old presents with severe abdominal pain and an outpouching 2 feet from the ileocecal valve. What is the diagnosis?
   a. Meckel's diverticulum
   b. Zenker’s diverticulum
   c. Crohn’s Disease
   d. Hypertrophic pyloric stenosis

*See page 273

25. Appendicitis is accompanied by severe pain in the right lower quadrant (RLQ) of the abdomen. Where else can this pain radiate?
   a. Right upper quadrant
   b. Epigastric region
   c. Periumbilical region
   d. Lumbar region

*See page 276

26. Which of the following best describes the location of McBurney’s Point?
   a. Junction of lateral 1/3 and middle 1/3 between umbilicus and R ant. superior iliac spine
   b. Junction of lateral 1/3 and middle 1/3 between umbilicus and L ant. superior iliac spine
   c. Junction of lateral 1/3 and middle 1/3 between umbilicus and R post. superior iliac spine
   d. Junction of lateral 1/3 and middle 1/3 between umbilicus and L post. superior iliac spine

*See page 276

27. The Marginal artery of Drummond connects the _____ to the _____.
   a. Middle colic artery, superior mesenteric artery
   b. Right colic artery, superior mesenteric artery
   c. Middle colic artery, inferior mesenteric artery
   d. Right colic artery, inferior mesenteric artery

*See page 276
28. Which of the following is NOT true of the rectum?
   a. Puborectalis muscle aids in fecal continence
   b. Houston’s valves are formed by the mucosa and submucosa
   c. Haustra are present here
   d. Teniae are absent here

*See page 278

29. Anorectal varices are a clinical presentation seen with portal hypertension. Which veins form this portocaval anastomosis?
   a. Superior rectal vein (portal); middle and inferior rectal veins (caval)
   b. Superior rectal vein (caval); middle and inferior rectal veins (portal)
   c. Superior rectal vein (portal); middle rectal vein (caval)
   d. Middle rectal vein (portal); inferior rectal veins (caval)

*See page 279

30. Which of the following is NOT true of external hemorrhoids?
   a. Painful due to innervation by the inferior rectal branch of the pectinate nerve
   b. Found below the pectinate line
   c. Cause rectal bleeding
   d. Blood clots in the external rectal venous plexus

*See page 280

31. Which of the following is NOT associated with Hirschprung’s Disease?
   a. Abdominal distention
   b. Deficiency of ganglion cells in the Plexus of Auerbach
   c. Deficiency of ganglion cells in Meissner’s Plexus
   d. Congenital mega-esophagus

*See page 284

32. Cholecystokinin (CCK) is a hormone that stimulates the gallbladder to contract and the pancreas to secrete digestive enzymes. Where are the cells that produce CCK found?
   a. Gallbladder
   b. Pancreas
   c. Duodenum
d. Liver

*See page 286

33. Which of the following is NOT true of the endocrine secretions of the pancreas?
   a. Alpha cells produce glucagon
   b. Beta cells produce insulin
   c. Delta cells produce secretin
   d. All of the above are true

*See page 287

34. Which of the following supplies blood to the head and neck of the pancreas?
   a. Superior pancreaticoduodenal artery
   b. Gastroduodenal artery
   c. Caudal pancreatic artery
   d. Splenic artery

*See page 289

35. Which of the following is NOT true of the fine structure of the liver?
   a. Sinusoids drain into the central veins
   b. Ito cells are found in the Space of Disse
   c. Glisson’s triads are contained in the lobules
   d. Smooth ER are abundant in hepatocytes

*See page 293

36. Where is the immune response in the spleen initiated?
   a. White pulp
   b. Red pulp
   c. Marginal zones
   d. Reticular tissue

*See page 298

37. Which of the following is NOT a part of the juxtaglomerular complex (JGC) in nephrons?
   a. Macula densa cells
b. Juxtaglomerular cells
c. Extraglomerular mesangium
d. Glomerulus

*See page 306

38. Which of the following does NOT drain directly into the inferior vena cava?
   a. Right renal vein
   b. Left renal vein
   c. Right gonadal vein
   d. Left gonadal vein

*See page 308

39. What is the origin of the superior suprarenal artery?
   a. Inferior phrenic artery
   b. Internal thoracic artery
   c. Abdominal aorta
   d. Superior mesenteric artery

*See page 310

40. Which part of the adrenal glands is responsible for cortisol production?
   a. Zona glomerulosa
   b. Zona fasciculata
   c. Zona reticularis
   d. None of the above

*See page 311

41. Which of the following is NOT a content of Alcock’s canal?
   a. Pudendal nerve
   b. Internal pudendal artery
   c. Internal pudendal vein
   d. Lymphatics

*See page
42. The urgency for micturition typically occurs at approximately _____ mL of urine.
   a. 100
   b. 200
   c. 300
   d. 400
*See page

43. Which of the following muscles does NOT help form the pelvic diaphragm?
   a. Levator ani
   b. Puborectalis
   c. Iliopsoas
   d. Coccygeus
*See page

44. Which of the following is the fetal remnant of the Mullerian/paramesonephric duct?
   a. Prostatic utricle
   b. Seminal colliculus
   c. Gartner’s duct
   d. Wolffian duct
*See page

45. Which part of the male urethra is the most prone to injury?
   a. Pre-prostatic
   b. Prostatic
   c. Membranous
   d. Spongy
*See page

46. What epithelium is found in seminal vesicles?
   a. Stratified columnar
   b. Pseudostratified columnar
   c. Simple cuboidal
   d. Pseudostratified squamous
47. What is the epithelium found in the fallopian tubes?
   a. Simple ciliated columnar
   b. Non-keratinizing simple cuboidal
   c. Pseudostratified columnar
   d. Non-keratinizing stratified squamous

48. Where do the majority of prostate cancers occur?
   a. Transition zone
   b. Central zone
   c. Peripheral zone
   d. Median zone

49. Which of the following is homologous to the Bartholin’s gland?
   a. Cowper’s gland
   b. Prostate gland
   c. Greater vestibule
   d. Bulbourethral gland

50. Which of the following is homologous to the prostate gland?
   a. Cowper’s gland
   b. Paraurethral gland of Skene
   c. Greater vestibule
   d. Bulbourethral gland

51. Which of the following is the most common cause of ovarian enlargement in pregnant women?
   a. Leiomyomas
b. Luteal cyst

c. Non-neoplastic ovarian cyst

d. Follicular cyst

*See page

52. Which of the following is NOT true of the proliferation phase of the menstrual cycle?
   a. Ovulation occurs
   b. Days 5-15
   c. Controlled mainly by progesterone
   d. Accompanied by an increase in body temperature

*See page

53. Which layer of the endometrium does NOT shed during menstruation?
   a. Stratum basale
   b. Stratum compactum
   c. Stratum spongiosum
   d. Stratum functionale

*See page

54. Which of the following directly drains the left ovarian vein?
   a. Left renal vein
   b. Gonadal vein
   c. Portal vein
   d. Internal pudendal vein

*See page

55. Which of the following is a part of the broad ligament?
   a. Mesovarium
   b. Mesometrium
   c. Mesosalpinx
   d. All of the above

*See page
56. Which of the following is NOT a content of the broad ligament?
   a. Ovarian artery
   b. Urethra
   c. Cervix
   d. Gartner’s duct

*See page

57. Which of the following is the deepest layer found in the scrotum?
   a. Dartos fascia
   b. Cremaster muscle
   c. Tunica vaginalis
   d. Internal spermatic fascia

*See page

58. Which of the following gives rise to the internal spermatic fascia?
   a. Dartos fascia
   b. Cremaster muscle
   c. Transversalis fascia
   d. Internal abdominal oblique

*See page

59. Which of the following directly drains the right testicular vein?
   a. Right renal vein
   b. Splenic vein
   c. Internal pudendal vein
   d. Inferior vena cava

*See page

60. Which of the following innervation controls the process of emission in males?
   a. Somatic
   b. Sympathetic
   c. Parasympathetic
   d. Both B and C
61. Which of the following forms the male reproductive system?
   a. Wolffian duct
   b. Gartner’s duct
   c. Testicular duct
   d. Mullerian duct

62. Approximately how many eggs are released during a female’s entire life?
   a. 350
   b. 450
   c. 750
   d. 950

63. When is the Shirodka/McDonald surgery performed?
   a. When women have ongoing polycystic ovarian syndrome
   b. When women have severe endometriosis
   c. When women have an incompetent internal os and habitual abortions
   d. When women have multiple leiomyomas

64. Which of the following BEST describes the location of the openings to the ejaculatory ducts?
   a. Seminal colliculus
   b. Prostatic urethra
   c. Trigone
   d. Prostatic sinus

65. Which of the following gives the motor innervation to the palatopharyngeus muscle?
   a. CN V
b. CN VII
c. CN IX
d. CN X

*See page

66. Which of the following gives the sensory innervation to the oral and laryngeal regions?
   a. CN V
   b. CN VII
   c. CN IX
   d. CN X

*See page

67. Which of the following gives the motor innervation to the tensor tympani muscle?
   a. CN V
   b. CN VII
   c. CN IX
   d. CN X

*See page

68. Which of the following is NOT true of cleft palate?
   a. Caused by failure of the palatine processes to fuse
   b. Steroid use during fetal development is a risk factor
   c. More commonly seen with anterior palate than posterior
   d. It is a form of congenital malformation

*See page

69. Which of the following innervates the parotid gland?
   a. CN V
   b. CN VII
   c. CN IX
   d. CN X

*See page
70. Where in the mouth does Stensen’s duct open?
   a. Upper 2\textsuperscript{nd} molar
   b. Upper 2\textsuperscript{nd} incisor
   c. Lower 2\textsuperscript{nd} molar
   d. Lower 2\textsuperscript{nd} incisor

*See page

71. Which of the following is NOT true of the submandibular gland?
   a. Receives fibers from the superior salivatory nucleus
   b. Controlled by the facial nerve
   c. Releases secretions from Bartholin’s duct into the vestibule of the mouth
   d. It is smaller than the Parotid gland

*See page

72. Which of the following may be caused by a malformation of the foramen cecum?
   a. Lingual thymus
   b. Lingual thyroid
   c. Lingual pituitary
   d. Lingual prostate

*See page

73. Which taste buds are the largest?
   a. Fungiform papillae
   b. Foliate papillae
   c. Filiform papillae
   d. Vallate papillae

*See page

74. Which nerve receives general sense from the anterior 2/3 of the tongue?
   a. CN V
   b. CN VII
   c. CN IX
   d. CN X

*See page
75. Which nerve receives taste information from the very back of the tongue?
   a. CN V
   b. CN VII
   c. CN IX
   d. CN X

*See page

76. Which of the following is least likely to cause macroglossia?
   a. Hypothyroidism
   b. Hyperthyroidism
   c. Amyloidosis
   d. Cretinism

*See page

77. Which nerve would a dentist anesthetize if removing the upper 2nd molar?
   a. Inferior alveolar nerve
   b. Superior alveolar nerve
   c. Lingual nerve
   d. Mandibular nerve

*See page

78. What are Koplik’s spots indicative of?
   a. Measles
   b. Herpes simplex 1
   c. Herpes simplex 2
   d. Aphthous ulcers

*See page

79. What drains the nasolacrimal duct?
   a. Superior nasal meatus
   b. Inferior nasal meatus
   c. Paranasal sinuses
   d. Nasopharynx

*See page
80. What drain the ethmoidal air cells?
   a. Superior nasal meatus
   b. Middle nasal meatus
   c. Inferior nasal meatus
   d. Maxillary sinus

*See page

81. What nerve innervates the tip of the nose?
   a. Ophthalmic nerve
   b. Maxillary nerve
   c. Mandibular nerve
   d. Olfactory nerve

*See page

82. What nerve innervates the levator palpebrae superioris muscle?
   a. CN III
   b. CN V
   c. CN VII
   d. CN IX

*See page

83. Damage to which of the following nerves would most result in a person becoming cross-eyed (medial deviation of the eye)?
   a. CN III
   b. CN IV
   c. CN VI
   d. CN VII

*See page

84. Which of the following is NOT a content of the cavernous sinus?
   a. CN III
   b. CN IV
   c. CN VI
85. Which of the following detects angular acceleration?
   a. Utricle
   b. Vestibular nerve
   c. Macula saccule
   d. Cristae ampullaris

86. Which of the following detects linear acceleration?
   a. Utricle
   b. Vestibular nerve
   c. Macula saccule
   d. Cristae ampullaris

87. Which glial cells myelinate the neurons of the peripheral nervous system?
   a. Astrocytes
   b. Satellite cells
   c. Oligodendrocytes
   d. Schwann cells

88. What connective tissue surrounds axons?
   a. Epineurium
   b. Perineurium
   c. Endoneurium
   d. Fascicle

89. Which type of mechanoreceptor detects vibrations?
   a. Meissner’s corpuscle
   b. Merkel’s disk
c. Pacinian corpuscle
d. Ruffini endings

*See page

90. Which of the following nerves emerges from branchial arch 4?

a. CN V
b. CN VII
c. CN IX
d. CN X

*See page

Draw the Portocaval Anastamosis here:

Draw the branches of the Abdominal Aorta here: