

### **Test Questions**

(hint: print questions & circle answers before starting online test)

#### **Chapter 1**

1. Which of the following is not one of the protective personnel equipment (**PPE**)?
  - a. Sharps container
  - b. Gloves
  - c. Mask
  - d. Gown
  
2. What is the Latin word for "new growth"?
  - a. Tumor
  - b. Neoplasia
  - c. Seeding
  - d. Growing
  
3. \_\_\_\_\_ is the study of neoplasms or tumors.
  - a. Pathology
  - b. Radiology
  - c. Cardiology
  - d. Oncology
  
4. When increased function of an organ is required, which of the following term is used?
  - a. Hypertrophy
  - b. Hypotrophy
  - c. Hyperplasia
  - d. Neoplastic
  
5. Which of the following is a result of depriving tissues of oxygen and nutrients caused by an arterial vessel narrowing?
  - a. Gangrene
  - b. Polyps
  - c. Scars
  - d. Ischemia
  
6. Which of the following term is used when the progression of a loss of oxygen and nutrients resulting in tissue necrosis especially in the diabetic's foot?
  - a. Hemorrhage
  - b. Gangrene
  - c. Ischemia
  - d. Infarction
  
7. \_\_\_\_\_ term is used to indicate a disease in which the underlying cause is unknown.
  - a. Nosocomial
  - b. Epidemic
  - c. Iatrogenic
  - d. Idiopathic
  
8. Which of the following is an alteration of the cell growth, specifically an abnormal proliferation of cells?
  - a. Epilation
  - b. Dysplasia
  - c. Neoplasia
  - d. Hyperplasia
  
9. \_\_\_\_\_ is a first response of body tissues to the local injury.
  - a. Infection
  - b. Ischemia
  - c. Inflammation
  - d. Edema

### Chapter3

10. External respiration happens within the:
  - a. Trachea
  - b. Bronchioles
  - c. Alveoli
  - d. Pulmonary artery
  
11. A chest x ray is obtained after endotracheal tube insertion to \_\_\_\_\_.
  - a. check for puncture of the trachea
  - b. insure proper placement/position
  - c. check for pneumonia
  - d. all of the above
  
12. \_\_\_\_\_ image is taken to verify the correct placement of a central venous catheter.
  - a. Chest x-ray
  - b. Soft tissue neck
  - c. KUB
  - d. All of these
  
13. Which of the following is the hereditary disease process characterized by the excretion of viscous mucus blocking the air passages?
  - a. Pleurisy
  - b. Tuberculosis
  - c. Pneumonia
  - d. Cystic fibrosis
  
14. Which of the following is a definition of **Croup**?
  - a. Trapping of pus in the alveolar sacs
  - b. Inflammation involving the pleural lining of the lung
  - c. Muscle spasm narrowing the bronchi
  - d. Viral infection of the subglottic region of the trachea
  
15. \_\_\_\_\_ is swelling of the epiglottic tissue commonly caused by the flu.
  - a. Epiglottitis
  - b. Pleurisy
  - c. Croup
  - d. Pneumonia
  
16. \_\_\_\_\_ is a very common disease in which widespread narrowing of the airways develops because of an increased responsiveness of the tracheobronchial tree to allergens.
  - a. Asthma
  - b. Bronchitis
  - c. Pneumonia
  - d. Cough
  
17. Asbestos fibers cause major fibrosis that result in \_\_\_\_\_.
  - a. Pleural effusion
  - b. Pulmonary inflammation
  - c. Pleural plaques
  - d. Shock lung
  
18. Which of the following is the most common malignant lung neoplasm that arises from the mucosa of the bronchial tree?
  - a. Alveolar carcinoma
  - b. Squamous carcinoma
  - c. Adenocarcinoma
  - d. bronchogenic carcinoma
  
19. \_\_\_\_\_ is an inflammation caused by mycobacterium resulting in lesions that may calcify and are usually found in the apices.
  - a. Pneumonia
  - b. Adenocarcinoma
  - c. Tuberculosis
  - d. Cystic fibrosis

20. Which of the following modality is **the best** to demonstrate pulmonary emboli?
- High-resolution CT (HRCT)
  - Nuclear medicine lung scan
  - Doppler ultrasound
  - PET lung scan
21. \_\_\_\_\_ is a condition of decreased air within the lung associated with reduced lung volume.
- Atelectasis
  - COPD
  - Pleural effusion
  - Septic embolism
22. Which of the following describes an air in the cavity surrounding the lung?
- Pleural effusion
  - Atelectasis
  - Pneumothorax
  - Hemothorax
23. Pleural effusion is defined as the collection of \_\_\_\_\_ in the pleural space.
- Air
  - Dust
  - Foreign materials
  - Fluid
24. Which of the following are more prone to the aspiration of solid foreign bodies into the tracheobronchial tree?
- Adults
  - Young children
  - Teenagers
  - Elderly patients
25. ARDS is also known as \_\_\_\_\_.
- Wet lungs
  - Dirty lungs
  - Airless lungs
  - Shock lungs
26. Which of the following is known as "**Dirty Chest**"?
- Chronic bronchitis
  - Asthma
  - Emphysema
  - SARS
- Chapter 4**
27. \_\_\_\_\_ is a rare hereditary bone dysplasia (marble bones) involving the bone resorption mechanism of calcified cartilage.
- Osteoporosis
  - Osteogenesis imperfecta
  - Osteopetrosis
  - Osteomalacia
28. \_\_\_\_\_ is an inherited disorder of connective tissue (brittle bone disease) characterized by multiple fractures.
- Rickets
  - Osteogenesis imperfecta
  - Osteoporosis
  - Osteopetrosis
29. Which of the following is the most common form of dwarfism caused by decreased enchondral bone formation?
- Osteomalacia
  - Arthritis
  - Achondroplasia

- d. Osteopetrosis
30. Which of the following the Radiologic Technologist should do for brittle bone disease?
- Increase the exposure factors
  - Decrease the exposure factors
  - Use compression device
  - Make no change in factors
31. When the fluid-filled sac located near joints becomes inflamed, the results will be:
- Bursitis
  - Osteoporosis
  - Tendonitis
  - Arthritis
32. A disease process usually caused by deficiency of bone matrix is called \_\_\_\_\_.
- Osteopetrosis
  - Osteogenesis imperfecta
  - Osteoporosis
  - Osteoarthritis
33. Which of the following is an insufficient mineralization of the adult skeleton appearing as a loss of bone density?
- Osteoporosis
  - Osteomalacia
  - Rickets
  - Scurvy
34. Body weight on weight-bearing long bones may bend or bow as a result of softened bones in cases of \_\_\_\_\_.
- Osteomalacia
  - Rickets
  - Osteoporosis
  - Achondroplasia
35. Blood levels with an increased uric acid leading to deposits of crystals in the joints and cartilage is called \_\_\_\_\_.
- Osteomalacia
  - Gout
  - Paget's disease
  - Rheumatoid arthritis (RA)
36. Which of the following demonstrate degenerative knee joint narrowing most accurately?
- Oblique view
  - Sunrise view
  - Recumbent, AP, and lateral
  - Weight-bearing standing AP and lateral
37. In Paget's disease, the beginning phase involves \_\_\_\_\_ of the bone.
- Construction
  - Growth
  - Destruction
  - Renewal
38. Which of the following is the most common initial site of Paget's disease?
- Pelvis
  - Skull
  - Upper extremities
  - Spine
39. \_\_\_\_\_ is a fracture of the arch of C2 anterior to the inferior facet usually associated with anterior subluxation of C2 and C3.
- Boxer's fracture
  - Stress fracture
  - Jefferson's fracture
  - Hangman's fracture

40. Which of the following describes a forward displacement of one vertebra on the other resulting in back pain caused by cleft in the pars interarticularis?
- Spondylolisthesis
  - Intervertebral herniation
  - Spondylolysis
  - Vertebral crack
41. \_\_\_\_\_ imaging modality is used to demonstrate tears in the menisci of the knees.
- Ultrasound
  - X-ray
  - Nuclear medicine
  - MRI
42. Which of the following is called a discontinuity of two or more fragments?
- Incomplete fracture
  - Complete fracture
  - Open fracture
  - None of the above
43. A fracture that results from a weakness in the bone caused by a tumor or infection is known as \_\_\_\_\_ type of fracture.
- Pathologic
  - Stress
  - Boxer's
  - Greenstick
44. A \_\_\_\_\_ fracture usually caused by falling on an outstretched hand which results in posterior displacement of the distal fragment of the radius.
- Boxer's fracture
  - Colles' fracture
  - Greenstick fracture
  - Hangman's fracture

## Chapter 5

45. \_\_\_\_\_ is the most common cause of acute esophagitis.
- Tumor
  - Infection
  - Gastroesophageal reflux
  - Malignancy
46. Which of the following increases the likelihood of reflux esophagitis?
- Achalasia
  - Hiatal hernia
  - Malignancy
  - Diverticula
47. Difficulty swallowing is termed:
- Deglutition
  - Dysphagia
  - Aphasia
  - Mastication
48. \_\_\_\_\_ is the **most** common abnormality found on upper GI exams.
- Gastric ulcer
  - Esophageal varices
  - Esophageal reflux
  - Hiatal hernia
49. Which of the following are complications of peptic ulcer disease?
- Perforation
  - Obstruction
  - Hemorrhage
  - All of the above

50. Which of the following is the most common location of Peptic ulcers?
- Fundus
  - Body
  - Lesser curvature
  - Greater curvature
51. Appendicitis occurs in all age groups, but it is more common in \_\_\_\_\_.
- Infants and toddlers
  - Elderly adults
  - Young adults
  - Children and adolescents
52. \_\_\_\_\_ are varicose veins of the lower end of the rectum with symptoms of pain, itching, and bleeding.
- Hemorrhoids
  - Intussusception
  - Volvulus
  - Crohn's disease
53. \_\_\_\_\_ stones are the predominant type of gallstones in the United States.
- Pigment
  - Cholesterol
  - Calcium carbonate
  - All of the above
54. \_\_\_\_\_ is the **current** imaging modality of choice for the gallbladder.
- Nuclear medicine
  - CT
  - X-ray
  - Ultrasound
55. Fluid attenuates radiation, so an \_\_\_\_\_ is necessary to penetrate the accumulated fluid in ascites.
- Increase in kVp and decrease mAs by 1/2
  - Decrease in kVp
  - Increase in kVp
  - None of the above
56. Which of the following is the most common cause of acute pancreatitis?
- Blockage of pancreatic duct
  - Diabetes
  - Excessive alcohol consumption
  - Cirrhosis
57. Ascites or accumulation of fluid in the peritoneal cavity, is a common complication of cirrhosis.
- True
  - False
58. Reflux of the stomach contents into the esophagus is a common complication of hiatal hernia.
- True
  - False
59. UGI exams are the **least** common imaging procedure used to diagnose Hiatal hernia.
- True
  - False
60. Crohn's disease most commonly occurs in geriatric patients.
- True
  - False
61. There is an increased incidence of gallbladder cancer in patients with porcelain gallbladder.
- True
  - False

## Chapter 6

62. \_\_\_\_\_ is the functional unit of the kidney.
- Nephron
  - Lobule
  - Glomerulus
  - Cortex
63. The nephrons filter about \_\_\_\_\_ L of water out of the glomerular blood each day. Only about 1 to 2 L of water is excreted in urine, so about \_\_\_\_\_% of the filtered water is reabsorbed into the tubular blood.
- 190 and 99
  - 15 and 85
  - 81 and 70
  - 4 and 50
64. Where does the formation of urine start?
- Nephrons
  - Glomerulus
  - Lobule
  - Proximal convoluted tubule
65. \_\_\_\_\_ is a miniature replica of a kidney.
- Ectopic kidney
  - Superposition kidney
  - Compensatory kidney
  - Hypoplastic kidney
66. \_\_\_\_\_ is a rare anomaly in which one kidney fails to develop and is associated with various other developmental anomalies.
- Unilateral renal agenesis
  - Hypoplastic kidney
  - Compensatory kidney
  - All of the above
67. Which of the following is the most common type of fusion anomaly?
- Doughnut shaped kidney
  - Crossed kidney
  - Horseshoe Kidney
  - None of the above
68. When the kidneys are fused at their lower poles, they are called by which of the following name?
- Doughnut shaped kidney
  - Horseshoe kidney
  - Fusion kidney
  - Ectopic kidney
69. Which of the following term is used to describe smaller than normal amount of urine?
- Oliguria
  - Dysuria
  - Hematuria
  - Polyuria
70. Which of the following is a definition of oliguria?
- A smaller than normal amount of urine
  - A larger than normal amount of urine
  - The presence of pus in the urine
  - The presence of blood and sugar in the urine
71. \_\_\_\_\_ is the **most** common hospital-acquired infection.
- Tuberculosis
  - Pyelonephritis
  - Hepatitis
  - Cystitis

72. \_\_\_\_\_ is the condition of calcium deposits within the renal parenchyma.
- Nephrocalcinosis
  - Nephrolithiasis
  - Pyelonephritis
  - Glomerulonephritis
73. A \_\_\_\_\_ is the **most** common abdominal neoplasm in infants and children.
- Nephroblastoma
  - Hypernephroma
  - Pyelocarcinoma
  - Renal cell sarcoma
74. Which of the following is the imaging modality of choice to diagnose renal vein thrombosis?
- CT
  - MRI
  - Intravenous pyelogram
  - US
75. \_\_\_\_\_ describes a kidney that is abnormally placed.
- Horseshoe kidney
  - Hypertrophic kidney
  - Crossed kidney
  - Ectopic kidney

### Chapter 7

76. The innermost layer of the heart is a smooth delicate membrane called the \_\_\_\_\_.
- Myocardium
  - Pericardium
  - Epicardium
  - Endocardium
77. Which of the following controls the heart rate?
- AV node
  - Sympathetic nervous system
  - Autonomic nervous system
  - Purkinje fibers
78. The left AV valve is also known as the \_\_\_\_\_ or bicuspid valve.
- Mitral valve
  - Tricuspid valve
  - Unicuspid valve
  - None of the above
79. The \_\_\_\_\_ is the partition that separates the chambers on the right and left sides of the heart.
- Papillary muscle
  - Myocardium
  - Endocardium
  - Septum
80. The \_\_\_\_\_ and \_\_\_\_\_ carry deoxygenated blood from the body to the heart.
- Right and left coronary arteries
  - Superior and inferior vena cava
  - Right and left pulmonary veins
  - Left and right pulmonary arteries
81. The pulmonary veins carry oxygenated blood from the lungs to the \_\_\_\_\_.
- Right atrium
  - Right ventricle
  - Left ventricle
  - Left atrium
82. Which of the following allows mixing of blood from system and pulmonary circulations as a result of a lack of closure of the foramen ovale after birth?
- Tetralogy of Fallot
  - Ventricular septal defect

- c. Atrial septal defect
- d. All of the above

83. \_\_\_\_\_ is the radiographic evidence of ventricular septal defect.

- a. Enlarged right atrium and ventricle
- b. Enlarged left ventricle
- c. Enlarged pulmonary trunk
- d. Enlarged aorta

84. Which of the following imaging modality are the most definitive, yet the **most invasive**, for demonstration of the heart atria and ventricles?

- a. MRI
- b. US
- c. Angiography
- d. CT

85. \_\_\_\_\_ is the most common cause of cyanotic congenital heart disease and is a combination of four abnormalities.

- a. Tetralogy of Fallot
- b. Atrial septal defect
- c. Ventricular septal defect
- d. All of the above

86. \_\_\_\_\_ causes ischemic heart disease as a result of decreased oxygen to the myocardium.

- a. Mitral valve collapse
- b. Tetralogy of Fallot
- c. Ventricular septal defect
- d. Coronary artery disease

87. Which of the following describes atherosclerosis?

- a. Loss of arterial wall elasticity
- b. Fatty deposits on the inner lining of arteries
- c. Calcification of the aorta
- d. Acute arterial collapse

88. \_\_\_\_\_ is the leading cause of strokes and Congestive heart failure (CHF).

- a. Myocardial infarction
- b. Diabetes
- c. Pulmonary infection
- d. Hypertension

89. High blood pressure is defined as a systolic pressure above \_\_\_\_\_ mm Hg and a diastolic pressure above \_\_\_\_\_ mm Hg. As a person ages, the allowed systolic pressure is increased 10 mm Hg per decade over age 40.

- a. 140/90
- b. 90/140
- c. 100/70
- d. 70/100

### Chapter 8

90. The \_\_\_\_\_ and \_\_\_\_\_ make up the central nervous system (CNS).

- a. Spinal nerves and ganglia
- b. Brain and cranial nerves
- c. Brain and spinal cord
- d. Spinal cord and spinal nerves

91. \_\_\_\_\_ is the basic unit of the nervous system.

- a. Corpus callosum
- b. Glioma
- c. Meningi
- d. Neuron

92. Which of the following is an acute inflammation of the pia mater and arachnoid mater?

- a. Meningitis
- b. Encephalitis

- c. Carditis
- d. Hydrocephalus

93. \_\_\_\_\_ is the most common primary malignant brain tumor?

- a. Glioma
- b. Subdural hematoma
- c. Acoustic neuroma
- d. Meningioma

94. \_\_\_\_\_ is the primary imaging modality used to examine head injuries (trauma).

- a. Radiography
- b. MRI
- c. Computed Tomography
- d. Ultrasound

95. \_\_\_\_\_ is caused by arterial bleeding in the cranium.

- a. Intracranial hemorrhage
- b. Subdural hematoma
- c. Ventricular hemorrhage
- d. Epidural hematoma

96. Which of the following is the most common facial bone fracture?

- a. Maxillae
- b. Zygoma
- c. Nasal bones
- d. Mandible

97. A \_\_\_\_\_ fracture is when the zygoma is separated from the other facial bones.

- a. Tripod
- b. Blow-out
- c. Depressed
- d. Compressed

98. A \_\_\_\_\_ fracture is caused by a direct blow to the orbit.

- a. Depressed fracture
- b. Blow-out fracture
- c. Punching fracture
- d. Tripod fracture

99. Which of the following is a definition of paralysis on one side of the body?

- a. Paraplegia
- b. Quadriplegia
- c. Dysplegia
- d. Hemiplegia

100. A major cause of \_\_\_\_\_ is the rupture of a berry aneurysm.

- a. Huntington's disease
- b. Alzheimer's
- c. Myocardial infarction
- d. Subarachnoid hemorrhage

101. The cerebellum is the largest portion of the brain.

- a. True
- b. False

102. The nasal bones are the most commonly fractured facial bone.

- a. True
- b. False

## Chapter 9

103. In a normal person, the red blood cell count is:

- a. 4.5 million to 6 million/mm<sup>3</sup>
- b. 14 to 19 grams/mm<sup>3</sup>
- c. 3000 to 11,000/mm<sup>3</sup>
- d. 102,000 to 500,000/mm<sup>3</sup>

104. In a normal person, the white blood cell count is:
- 13 to 17 grams/mm<sup>3</sup>
  - 5000 to 10,000/mm<sup>3</sup>
  - 155,000 to 500,000/mm<sup>3</sup>
  - 4.8 million to 7 million/mm<sup>3</sup>
105. Blood \_\_\_\_\_ are one of the essential components of the blood-clotting process.
- Platelets
  - Leukocytes
  - Plasma
  - Erythrocytes
106. \_\_\_\_\_ is the **most common** cause of anemia.
- Genetic disorder of red blood cells
  - Iron deficiency
  - Viral disease
  - All of the above
107. Which of the following is a cause of Aplastic anemia?
- Iron deficiency
  - Inadequate oxygen supply
  - Defective hemoglobin
  - Failure of bone marrow to function
108. Which of the following characteristics represents radiographic evidence of lymphoma on a chest x-ray?
- Bone erosion in the thoracic spine
  - Asymmetric, bilaterally enlarged mediastinal lymph nodes
  - Hepatomegaly
  - All of the above
109. \_\_\_\_\_ is an inherited anomaly in blood coagulation that appears clinically only in males.
- Hemophilia
  - Leukemia
  - Anemia
  - Thalassemia
110. Red blood cells are produced in the \_\_\_\_\_.
- Red bone marrow
  - Yellow bone marrow
  - Spleen
  - Lymph nodes
111. Which of the following is a deficiency in the number of platelets?
- Anemia
  - Hemophilia
  - Leukemia
  - Purpura

### Chapter 10

112. Which of the following are major glands of the endocrine system?
- Thyroid
  - Liver
  - Adrenal
  - A and C only
113. \_\_\_\_\_ and \_\_\_\_\_ are called the fight or flight hormones.
- Renin and norepinephrine
  - Aldosterone and cortisone
  - Cortisone and epinephrine
  - Epinephrine and norepinephrine
114. \_\_\_\_\_ is another name for epinephrine.
- Insulin
  - Adrenaline

- c. Cortisone
- d. Glucagon

115. What causes Cushing's syndrome?

- a. An excess of glucocorticoid hormones
- b. An insufficiency of glucocorticoid hormones
- c. An excess of androgen hormone
- d. An insufficiency of insulin hormones

116. \_\_\_\_\_ is the **second most** common malignancy in children.

- a. Melanoma
- b. Neuroblastoma
- c. Wilms' tumor
- d. Pituitary adenoma

117. \_\_\_\_\_ results from excessive growth hormone.

- a. Diabetes type 1
- b. Diabetes type 2
- c. Hypothyroidism
- d. Hyperpituitarism

118. Which of the following radiographic characteristics highly suggest Acromegaly?

- a. Thickening of the heel pad to greater than 23 mm
- b. Calcification
- c. Osteoporosis
- d. Shortened long bones

119. Which of the following disease results from an excess thyroid hormone production from the entire gland?

- a. Diabetes
- b. Goiter
- c. Cretinism
- d. Graves' disease

120. \_\_\_\_\_ is a **major** complication of diabetes mellitus.

- a. Atherosclerosis
- b. Hypertension
- c. Obesity
- d. Anemia

### Chapter 11

121. Which of the following are radiographic imaging procedures of the female reproductive system that are commonly used today?

- a. Hysterosalpingography
- b. Pelvimetry
- c. Mammography
- d. A and C only

122. \_\_\_\_\_ or \_\_\_\_\_ can demonstrate Pelvic inflammatory disease (PID), which becomes evident with thickened and dilated fallopian tubes or abscess formation.

- a. Ultrasound (US) or CT
- b. Radiography or MRI
- c. NM or Fluoroscopy
- d. None of the above

123. Which of the following provides radiographic evidence of gonorrhea?

- a. Septic arthritis with articular erosion and joint space narrowing
- b. Calcification of Aorta
- c. Sclerosis
- d. All of the above

124. \_\_\_\_\_ is the twisting of the gonad on its pedicle.

- a. Gonadal distension
- b. Testicular torsion
- c. Vesiculation

d. Cryptorchidism

125. \_\_\_\_\_ is a painful condition in which endometrial tissue grows outside of the uterus.

- a. Endometriosis
- b. Endometrial carcinoma
- c. Leiomyoma
- d. Uterine fibroid

126. Which of the following is used to diagnose cervical cancer?

- a. Ultrasound
- b. PAP smear
- c. NM
- d. MRI

127. If a patient is suspected to suffer from beriberi, which of the following x ray procedure would demonstrate signs of this disease?

- a. A chest x-ray
- b. Upper extremities x-ray
- c. Esophogram
- d. Wight bearing knees

## Chapter 12

### MATCHING

128. Match following disease to its cause.

- a. Vitamin C deficiency
- b. Vitamin B<sub>3</sub> deficiency
- c. Vitamin D deficiency
- d. Vitamin B<sub>1</sub> deficiency

\_\_\_\_\_ Beriberi

\_\_\_\_\_ Pellagra

\_\_\_\_\_ Scurvy

\_\_\_\_\_ Rickets

129. \_\_\_\_\_ is an inherited generalized disorder of connective tissue with ocular, skeletal, and cardiovascular manifestations.

- a. Marfan syndrome
- b. Dwarfism
- c. Down syndrome
- d. Turner's syndrome

130. \_\_\_\_\_ is essential to the formation of prothrombin, which functions in the blood-clotting process.

- a. Vitamin K
- b. Calcium
- c. Vitamin A
- d. Folic acid

131. \_\_\_\_\_ of the following is an extremely malignant skin cancer.

- a. Erythema
- b. Lupus
- c. Multiple myeloma
- d. Melanoma