

Buy Course:- [Comprehensive Radiographic Pathology, 7th Ed \(Chapters 1 to 10 only\)](#)

Test Questions

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

Chapter 1: Introduction to Pathology

1. Which of the following is not one of the protective personnel equipment (PPE)?
 - A. Sharps container
 - B. Gloves
 - C. Mask
 - D. Gown
2. 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
3. _____ is a first response of body tissues to the local injury.
 - A. Infection
 - B. Ischemia
 - C. Inflammation
 - D. Edema

Chapter 2: Specialized Imaging Techniques

4. Which of the following modality do not use ionizing radiation?
 - A. Ultrasound
 - B. Computed Tomography
 - C. Mammography
 - D. Radiography
5. The role of the radiographer as a team member is to produce the best quality images for diagnosis.
 - A. True
 - B. False
6. Which of the following is the most[b/] important factor for effective communication?
 - A. health insurance policy
 - B. patient's medical history
 - C. patient's economic status
 - D. none of the above
7. Which of the following are imaging features?
 - A. location, size and density
 - B. structure, shape and demarcation
 - C. perfusion and integration
 - D. all of the above
8. Space-occupying effect is called _____.
 - A. location
 - B. demarcation
 - C. integration
 - D. density
9. The most common imaging technique for diagnosing breast cancer uses _____.
 - A. ultrasound
 - B. computed tomography
 - C. full-field digital mammography (FFDM)
 - D. nuclear medicine
10. Which of the following is a common projection done for screening mammography?
 - A. craniocaudal
 - B. mediolateral oblique
 - C. cephalic
 - D. both A and B

11. For a woman with a palpable nodule, the first choice may be a diagnostic mammogram, which includes an additional _____ degree mediolateral projection.
- A. 20
 - B. 35
 - C. 55
 - D. 90
12. Ultrasound uses high-frequency _____ produced by electrical stimulation of a specialized crystal.
- A. magnetic waves
 - B. sound waves
 - C. radionuclides
 - D. ionizing radiation
13. _____ tissue or structures transmit sound waves easily and appear as a dark region on an ultrasound image.
- A. Anechoic
 - B. Hyperechoic
 - C. Hypoechoic
 - D. Isoechoic
14. Ultrasound is the modality of choice for examinations of children and pregnant women.
- A. True
 - B. False
15. Which of the following studies assess the patency of major blood vessels, demonstrating obstructions, blood clots, plaques, and emboli in ultrasound?
- A. Gadolinium contrast
 - B. Barium sulfate
 - C. Vascular or color flow Doppler
 - D. Radionuclide
16. Which of the following complications make it difficult to perform ultrasound procedures?
- A. overlying dressings
 - B. retention sutures and drains
 - C. open wounds
 - D. all of the above
17. Which of the following modality produces cross-sectional tomographic images by first scanning a slice of a tissue?
- A. Ultrasound
 - B. Computed Tomography
 - C. Mammography
 - D. Radiography
18. The _____ reflects the attenuation of a specific tissue relative to that of water in CT images.
- A. Tesla unit
 - B. 3D software
 - C. Hounsfield number
 - D. H & D curve
19. The _____ determines the number of densities that can be visualized on the image display monitor.
- A. window width
 - B. histogram
 - C. blurring
 - D. binning
20. In _____, continuous CT scanning is performed as a patient moves through the gantry.
- A. conventional scanning
 - B. helical scanning
 - C. 1st generation scanner
 - D. 2nd generation scanner
21. Which of the following made cardiac scanning possible?
- A. faster scanning times
 - B. thinner slices
 - C. multiple magnetic coils

- D. both A and B
22. Which of the following radiation protection practice protocols are recorded in new CT scanners?
A. patient conversations
B. health insurance benefits
C. ALARA
D. shielding choices
23. _____ demonstrates internal structures for virtual bronchoscopy or colonoscopy.
A. Virtual reality (VR)
B. 3D reconstruction
C. Windowing
D. Subtraction imaging
24. Which of the following is the modality of choice for imaging the central nervous system and spine?
A. Digital mammography
B. Magnetic resonance imaging (MRI)
C. Nuclear medicine
D. Computed radiography
25. Which of the following absorb the energy when human body is placed under magnetic field?
A. electrons
B. bones
C. hydrogen atoms
D. nucleolus
26. _____ detects time for T1 and T2 relaxation types of hydrogen atoms.
A. Transformer
B. Ionizing chamber
C. Imaging plate
D. Receiver coil
27. _____ has a low signal intensity and appears dark on T1 weighted MR images.
A. Water
B. Bones
C. Muscle
D. Calcium
28. Which of the following is a disadvantage of MRI?
A. ionizing radiation
B. longer scanning times
C. not suitable for children
D. produces tissue damage
29. Which of the following IV contrast is used in MRI?
A. Gadolinium
B. Barium sulfate
C. Iodine
D. Radionuclide
30. Which of the following analyzes the chemical composition of tissues in vivo?
A. Ultrasound
B. MR spectroscopy (MRS)
C. Fluoroscopic procedures
D. Computed radiography
31. Which of the following modality uses radionuclides?
A. Ultrasound
B. Nuclear medicine
C. Bone densitometry
D. Radiography

32. _____ detects the ionizing radiation emitted from the patient in nuclear medicine procedures.
- A. Intensifier tube
 - B. TFT
 - C. Gamma camera
 - D. Radiographic film
33. In _____, the patients are source of radiation emitting the signals while the detector rotates around them capturing images.
- A. MR spectroscopy (MRS)
 - B. Digital subtraction angiography
 - C. Single-photon emission computed tomography (SPECT)
 - D. Doppler ultrasound
34. _____ is the most common radionuclide used in Positron Emission Tomography (PET).
- A. Molybdenum
 - B. Iodine
 - C. Titanium
 - D. Fluorine
35. Positron Emission Tomography (PET) is very useful in which of the following medical specialty?
- A. Oncology
 - B. Cardiology
 - C. Neurology
 - D. all of the above
36. Integrated imaging is accomplished with the use of special software designed to fuse multidimensional computed data from MRI, CT, nuclear medicine, SPECT, or PET into a single set of images.
- A. True
 - B. False

Chapter 3: Respiratory System

37. A 72-inch SID should be used for chest x-ray when possible to minimize magnification of the _____.
- A. liver
 - B. pancreas
 - C. kidneys
 - D. heart
38. The major role of the respiratory system is the oxygenation of blood and the removal of the body's waste products in the form of carbon dioxide.
- A. True
 - B. False
39. The lower respiratory system consists of which of the following?
- A. trachea
 - B. bronchi
 - C. bronchioles
 - D. all of the above
40. Respiration is controlled by a center in the _____ at the base of the brain.
- A. frontal lobe
 - B. medulla
 - C. pituitary gland
 - D. hypothalamus
41. The inner layer of the lung is called _____.
- A. visceral pleura
 - B. parietal pleura
 - C. myocardium
 - D. cilia
42. A chest x ray is obtained after endotracheal tube insertion to _____.
- A. check for puncture of the trachea
 - B. insure proper placement or position

- C. check for pneumonia
- D. check for asthma

43. Which of the following is known as "Dirty Chest"?

- A. Chronic bronchitis
- B. Asthma
- C. Emphysema
- D. SARS

44. _____ 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

45. Which of the following modality is the best to demonstrate pulmonary emboli?

- A. High-resolution CT(HRCT)
- B. Nuclear medicine lung scan
- C. Doppler ultrasound
- D. PET lung scan

46. ARDS is also known as _____.

- A. Wet lungs
- B. Dirty lungs
- C. Airless lungs
- D. Shock lungs

47. Pleural effusion is defined as the collection of _____ in the pleural space.

- A. Air
- B. Dust
- C. Foreign materials
- D. Fluid

Chapter 4: Skeletal System

48. Which of the following factors are critical in radiography of the skeletal system?

- A. proper patient positioning
- B. correct alignment of x-ray tube, body part and IR
- C. choice of exposure factors
- D. all of the above

49. Bone radiographs require a short scale of contrast to provide maximal visibility of detail.

- A. True
- B. False

50. Which of the following is the modality of choice for the evaluation of bones and spinal injuries?

- A. Computed tomography
- B. Ultrasound
- C. Nuclear medicine
- D. Mammography

51. _____ covers outer surfaces of the bone.

- A. pericardium
- B. periosteum
- C. endosteum
- D. trabeculae

52. The _____ persists until the bone's growth is complete.

- A. osteoblasts
- B. osteoclasts
- C. diaphysis
- D. epiphyseal cartilage

53. _____ is a rare hereditary bone dysplasia (marble bones) involving the bone resorption mechanism of calcified cartilage.
- A. Osteoporosis
 - B. Osteogenesis imperfecta
 - C. Osteopetrosis
 - D. Osteomalacia
54. Which of the following the Radiologic Technologist should do for brittle bone disease?
- A. Increase the exposure factors
 - B. Decrease the exposure factors
 - C. Use compression device
 - D. Make no change in factors
55. _____ imaging modality is used to demonstrate tears in the menisci of the knees.
- A. Ultrasound
 - B. X-ray
 - C. Nuclear medicine
 - D. MRI
56. Blood levels with an increased uric acid leading to deposits of crystals in the joints and cartilage is called _____.
- A. Osteomalacia
 - B. Gout
 - C. Paget's disease
 - D. Rheumatoid arthritis (RA)
57. Which of the following is the most common initial site of Paget's disease?
- A. Pelvis
 - B. Skull
 - C. Upper extremities
 - D. Spine
58. A fracture that results from a weakness in the bone caused by a tumor or infection is known as _____ type of fracture.
- A. Pathologic
 - B. Stress
 - C. Boxer's
 - D. Greenstick
59. Which of the following describes a forward displacement of one vertebra on the other that results in back pain caused by cleft in the pars interarticularis?
- A. Spondylolisthesis
 - B. Intervertebral herniation
 - C. Spondylolysis
 - D. Vertebral crack

Chapter 5: Gastrointestinal System

60. Which of the following GI condition requires an increase in kVp during x-ray imaging?
- A. ascites
 - B. vertebral crack
 - C. diabetes
 - D. ulcer
61. Which of the following is the most common imaging examination of the GI system?
- A. plain abdominal radiographs
 - B. contrast studies of the digestive tract
 - C. lithotripsy
 - D. both A and B
62. _____ moistens the food in preparation for swallowing.
- A. Saliva
 - B. Insulin
 - C. Cholesterol
 - D. Calcium

63. _____ stores bile and located undersurface of the liver.
A. Kidney
B. Gallbladder
C. Pancreas
D. Spleen
64. The ____ controls the level of circulating blood glucose.
A. Kidney
B. Gallbladder
C. Pancreas
D. Spleen
65. _____ is the most common cause of acute esophagitis.
A. Tumor
B. Infection
C. Gastroesophageal reflux
D. Malignancy
66. Reflux of the stomach contents into the esophagus is a common complication of hiatal hernia.
A. True
B. False
67. Crohn's disease most commonly occurs in geriatric patients.
A. True
B. False
68. ____ is/are varicose veins of the lower end of the rectum with symptoms of pain, itching, and bleeding.
A. Hemorrhoids
B. Intussusception
C. Volvulus
D. Crohn's disease
69. Ascites or accumulation of fluid in the peritoneal cavity, is a common complication of cirrhosis.
A. True
B. False
70. ____ is the best imaging procedure for screening patients with blunt abdominal trauma for the presence of splenic injury.
A. MRI
B. Computed Tomography
C. Radiography
D. Nuclear Medicine
- Chapter 6: Urinary System**
71. The urinary system consists of which of the following?
A. kidneys
B. ureters
C. bladder
D. all of the above
72. 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.
A. 190 and 99
B. 15 and 85
C. 81 and 70
D. 4 and 50
73. All x-rays of the urinary system must be taken with full exhalation by patient so that the _____ goes upward and does not compress the abdominal contents.
A. lungs
B. heart
C. ribs
D. diaphragm

74. The _____ acts as a reservoir for the urine before it leaves the body.
- A. kidneys
 - B. ureters
 - C. bladder
 - D. liver
75. _____, a substance produced by the kidneys, stimulates the rate of production of red blood cells.
- A. Erythropoietin
 - B. Insulin
 - C. Glucagon
 - D. Bile
76. _____ is a rare anomaly in which one kidney fails to develop and is associated with various other developmental anomalies.
- A. Unilateral renal agenesis
 - B. Hypoplastic kidney
 - C. Compensatory kidney
 - D. All of the above
77. When the kidneys are fused at their lower poles, they are called by which of the following name?
- A. Doughnut shaped kidney
 - B. Horseshoe kidney
 - C. Fusion kidney
 - D. Ectopic kidney
78. _____ is the condition of calcium deposits within the renal parenchyma.
- A. Nephrocalcinosis
 - B. Nephrolithiasis
 - C. Pyelonephritis
 - D. Glomerulonephritis
79. Which of the following is the imaging modality of choice to diagnose renal vein thrombosis?
- A. CT
 - B. MRI
 - C. Intravenous pyelogram
 - D. US
80. An accumulation of excessive blood levels of urea and creatinine causes _____.
- A. Oliguria
 - B. Dysuria
 - C. Uremia
 - D. Polyuria

Chapter 7: Cardiovascular System

81. Which of the following controls the heart rate?
- A. AV node
 - B. Sympathetic nervous system
 - C. Autonomic nervous system
 - D. Purkinje fibers
82. _____ separates the aorta from the left ventricle.
- A. Myocardium
 - B. Aortic valve
 - C. Bundle of HIS
 - D. Inferior vena cava
83. An abnormality found on a _____ may be the first evidence of cardiovascular disease in an asymptomatic patient.
- A. angiography
 - B. cardiac bypass
 - C. chest radiograph
 - D. none of the above
84. The pulmonary veins carry oxygenated blood from the lungs to the _____.
- A. Right atrium

- B. Right ventricle
- C. Left ventricle
- D. Left atrium

85. The contraction phase of heart is known as _____.

- A. systole
- B. diastole
- C. intrinsic rhythm
- D. tachycardia

86. Which of the following protects against friction and permits the heart to move easily during contraction?

- A. Myocardium
- B. Pericardium
- C. Endocardium
- D. Septum

87. 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?

- A. Tetralogy of Fallot
- B. Ventricular septal defect
- C. Atrial septal defect
- D. All of the above

88. _____ 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

89. _____ refers to an abnormal accumulation of fluid in the extravascular pulmonary tissues.

- A. Hemothorax
- B. Aneurysm
- C. Pulmonary edema
- D. Atherosclerosis

90. 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

Chapter 8: Nervous System

91. 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

92. _____ is the largest part of the brain.

- A. Synapse
- B. Hypothalamus
- C. Cerebrum
- D. Pituitary gland

93. The ____ receives sensory information from all parts of the body and triggers impulses that govern all motor activity.

- A. fissures
- B. cerebral cortex
- C. sulci
- D. myelin sheath

94. The brainstem is composed of which of the following?

- A. midbrain
- B. pons

- C. medulla
- D. all of the above

95. The cerebellum is the largest portion of the brain.
A. True
B. False

96. _____ functions as a link between the mind and body.
A. Pituitary gland
B. Hypothalamus
C. Spinal cord
D. Heart

97. _____ is the innermost layer that attaches to the outer surface of the brain and spinal cord.
A. Dura mater
B. Pia mater
C. Arachnoid membrane
D. Myelin sheath

98. _____ is the most common primary malignant brain tumor?
A. Glioma
B. Subdural hematoma
C. Acoustic neuroma
D. Meningioma

99. A _____ fracture is caused by a direct blow to the orbit.
A. Depressed fracture
B. Blow-out fracture
C. Punching fracture
D. Tripod fracture

100. Which of the following is a definition of paralysis on one side of the body?
A. Paraplegia
B. Quadriplegia
C. Dysplegia
D. Hemiplegia

101. Alzheimer disease (presenile dementia) is a diffuse form of progressive cerebral atrophy that develops at an earlier age than the senile period.
A. True
B. False

Chapter 9: Hematopoietic System

102. Red blood cells are produced in the _____.
A. Red bone marrow
B. Yellow bone marrow
C. Spleen
D. Lymph nodes

103. _____ is an iron-based protein that carries oxygen from the respiratory tract to the body's tissues.
A. Cholesterol
B. Hemoglobin
C. Bile
D. Insulin

104. In a normal person, the white blood cell count is _____.
A. 13 to 17 grams/mm³
B. 5000 to 10,000/mm³
C. 155,000 to 500,000/mm³
D. 4.8 million to 7 million/mm³

105. Which of the following is a major hereditary hemolytic anemia?
A. Spherocytosis

- B. Sickle cell anemia
- C. Thalassemia
- D. all of the above

106. No cure currently exists for sickle cell anemia.
A. True
B. False

107. Which of the following is a cause of Aplastic anemia?
A. Iron deficiency
B. Inadequate oxygen supply
C. Defective hemoglobin
D. Failure of bone marrow to function

108. Leukemia is a neoplastic proliferation of _____.
A. red blood cells
B. platelets
C. white blood cells
D. insulin

109. Which of the following characteristics represents radiographic evidence of lymphoma on a chest x-ray?
A. Bone erosion in the thoracic spine
B. Asymmetric, bilaterally enlarged mediastinal lymph nodes
C. Hepatomegaly
D. All of the above

110. Which of the following is called "kissing disease?"
A. Thrombocytopenia
B. Mouth sores
C. Mononucleosis
D. Gingivitis

111. Which of the following is a deficiency in the number of platelets?
A. Anemia
B. Hemophilia
C. Leukemia
D. Purpura

Chapter 10:Endocrine System

112. Which of the following are major glands of the endocrine system?
A. Thyroid
B. Liver
C. Adrenal
D. A and C only

113. _____ is secreted by the pancreas when the blood glucose level rises.
A. Glucagon
B. Iron
C. Insulin
D. Cortisone

114. Which of the following are sex hormones?
A. Glucagons
B. Mineralocorticoids
C. Androgens
D. Glucocorticoids

115. _____ is another name for epinephrine.
A. Insulin
B. Adrenaline
C. Cortisone
D. Glucagon

116. _____ is the second most common malignancy in children.
- A. Melanoma
 - B. Neuroblastoma
 - C. Wilms' tumor
 - D. Pituitary adenoma
117. Which of the following is often called the master gland?
- A. Hypothalamus
 - B. Adrenal gland
 - C. Pituitary gland
 - D. Thyroid gland
118. _____ stimulates the production of milk during pregnancy and after delivery.
- A. Cortisone
 - B. Androgens
 - C. Prolactin
 - D. Thyroxine
119. 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
120. _____ is a major complication of diabetes mellitus.
- A. Atherosclerosis
 - B. Hypertension
 - C. Obesity
 - D. Anemia