Chapter 1

1. Exogenous metabolic pathway is the transportation of dietary lipids to the peripheral tissues and the _______.
   a. Brain
   b. Heart
   c. Liver
   d. Kidneys

2. HDL is synthesized mostly in the liver, but also in the _________.
   a. Kidney
   b. Pancreas
   c. Intestines
   d. Adrenal

3. What commonly results in dyslipidemia due to a decrease in hepatic LDL receptor activity and delayed clearance of LDL?
   a. Hypothyroidism
   b. Hyperthyroidism
   c. Type 2 diabetes
   d. Hypertriglyceridemia

4. Low ______ is an independent risk factor for increased cardiovascular disease and mortality.
   a. HDL
   b. LDL
   c. Triglycerides
   d. Lipid metabolism

Chapter 2

5. In recent years resistant hypertension has doubled to what percent?
   a. 15%
   b. 24%
   c. 28%
   d. 32%

6. Obstructive sleep apnea affects what percent of the U.S. population?
   a. 10 – 20%
   b. 21 – 28%
   c. 29 – 36%
   d. 37 – 45%

7. Treatment for hypertension includes sodium restriction less than _______g/day.
   a. 0.5 – 1.0
   b. 1.5 – 2.0
   c. 2.5 – 3.0
   d. 3.5 – 4.0
8. Which of the below are contraindications and side effects for nitroprusside?
   a. Renal failure
   b. Headache
   c. Cyanide toxicity
   d. A & C

Chapter 3

9. What is the standard aspirin dosage recommendation for routine management of patients with stable angina?
   a. 75 mg
   b. 81 mg
   c. 75 – 162 mg
   d. 325 mg

10. Which of the following are contraindications to P2Y12 receptor blockers?
    a. Active bleeding
    b. Previous anaphylactic reaction
    c. PVD
    d. A & B

11. Dipyridamole in combination with aspirin is superior to aspirin alone in secondary prevention of stroke.
    a. True, page 79
    b. False

12. What is the daily oral dosage for vorapaxar?
    a. 1.2 mg
    b. 1.6 mg
    c. 2.08 mg
    d. 2.11 mg

Chapter 4

13. The ACT for unfractionated heparin (UFH) should be kept within what range?
    a. 50 – 100 seconds
    b. 125 – 175 seconds
    c. 200 – 225 seconds
    d. 250 – 300 seconds or greater

14. Low-molecular- weight heparins are not a breakdown product of UFH.
    a. True
    b. False

15. Vitamin K antagonists have been the mainstay for long-term oral anticoagulation for more than _____ years.
    a. 50
    b. 55
    c. 60
    d. 65
16. What is the most feared complication of anticoagulant therapy?
   a. Intracranial hemorrhage
   b. GI bleed
   c. Heparin-induced thrombocytopenia
   d. Hyperkalemia

17. What is the warfarin INR goal for bioprosthetic valves for the first 3 months after surgery?
   a. 1.0 – 1.5
   b. 1.6 – 2.0
   c. 2.0 – 3.0
   d. > 3.0

Chapter 5

18. What is the most common type of dyspnea?
   a. Exertional dyspnea
   b. Paroxysmal dyspnea
   c. Orthopnea dyspnea
   d. resting dyspnea

19. Atherosclerotic cardiovascular disease is the most common form of heart disease in industrialized nations.
   a. True
   b. False

20. The first heart sound has two components in up to ______ of normal individuals.
   a. 30%
   b. 40%
   c. 50%
   d. 60%

21. What are the most common tracers used in myocardial perfusion imaging?
   a. Thallium-201
   b. Technetium-99m
   c. Caesium-137
   d. A&B

Chapter 6

22. Which of the following is not a predisposed risk factor for coronary heart disease?
   a. Abdominal obesity
   b. Ethnic characteristics
   c. Diabetes
   d. Metabolic syndrome

23. C-reactive protein (CRP) values greater than ______ predict coronary events.
   a. 1mg/L
   b. 2mg/L
   c. 3mg/L
   d. 4mg/L
24. What is the most frequently used diagnostic method for detecting myocardial ischemia?
   a. Echocardiogram
   b. ECG
   c. Cardiac CT
   d. Stress test

25. Drug eluting stents have reduced the restenosis rate to what percentage?
   a. 3%
   b. 7%
   c. 10%
   d. 12%

Chapter 7

26. What percent of patients with USA/NSTEMI present without chest pain?
   a. 26.2%
   b. 31.3%
   c. 39.4%
   d. 43.6%

27. What percentage of patient undergoing angiography with unstable angina had left main disease?
   a. 5 – 10%
   b. 10 – 15%
   c. 15 – 20%
   d. 20 – 25%

28. Patients with negative biomarkers within 6 hours of symptom onset need to have them remeasured within __________ hours?
   a. 2 – 4
   b. 6 – 8
   c. 8 – 10
   d. 8 – 12

Chapter 8

29. How many people experience an MI in the United States each year?
   a. 1.0 million
   b. 1.2 million
   c. 1.4 million
   d. 1.6 million

30. Total thrombotic occlusion occurs most commonly in distal coronary arteries.
   a. True
   b. False

31. What are the definitive reperfusion therapies for STEMI?
   a. CABG
   b. PCI
   c. Fibrinolysis
   d. B & C
32. What is the most serious complication of treatment with thrombolytic agents?
   a. Restenosis
   b. Seizure
   c. Intracranial bleeding
   d. Infarct

Chapter 9

33. What percentage of patients with cardiogenic shock do not survive to hospital discharge?
   a. 20%
   b. 30%
   c. 40%
   d. 50%

34. Right ventricular infarctions occur in approximately what percent of patients with inferior MIs?
   a. 30%
   b. 35%
   c. 40%
   d. 45%

35. What are the indications for use of an intra-aortic balloon pump?
   a. STEMI
   b. Cardiogenic shock
   c. Acute mitral regurgitation
   d. B & C

Chapter 10

36. Cardiac deaths account for what percent of all perioperative mortality?
   a. 35%
   b. 40%
   c. 45%
   d. 50%

37. What is the major cardiac complication rate for a patient in risk class IV?
   a. 5.4%
   b. 6.1%
   c. 6.6%
   d. 11.0%

38. What medications are a first line therapy to reduce perioperative morbidity and mortality?
   a. Beta blockers
   b. Statins
   c. Aspirin
   d. Clonidine

39. Moderate aortic stenosis has been associated with an adjusted relative risk of _______ for perioperative cardiac complications.
   a. 5.2
   b. 5.7
   c. 6.2
   d. 6.7
Chapter 11

40. Sinus node reentry accounts for what percentage of SVTs?
   a. 3%
   b. 5%
   c. 7%
   d. 9%

41. Controlling the ventricular rate in atrial flutter is more difficult than in atrial fibrillation.
   a. True
   b. False

42. What is the success rate for atrial tachycardia ablations?
   a. 42 – 53%
   b. 55 – 62%
   c. 73 – 85%
   d. 77 – 100%

43. Which of the following pharmacologic therapies are effective in terminating atrioventricular nodal reentrant tachycardia (AVNRT)?
   a. Adenosine
   b. Verapamil
   c. Diltiazem
   d. All the above

Chapter 12

44. What percent of the population over the age of 60 has sustained an episode of atrial fibrillation?
   a. 4%
   b. 5%
   c. 6%
   d. 7%

45. What is the recurrence rate per year for drug therapy for the treatment of atrial fibrillation?
   a. 40%
   b. 50%
   c. 60%
   d. 70%

46. What is the risk of CVA in patients with nonrheumatic atrial fibrillation?
   a. 1 – 2%
   b. 3 – 5%
   c. 4 – 7%
   d. 8 – 10%

47. The mainstay of catheter ablation for atrial fibrillation is pulmonary vein isolation.
   a. True
   b. False
Chapter 13

48. Which of the following are clinical manifestations of ventricular tachycardia (VT)?
   a. Ventricular fibrillation
   b. Syncope
   c. Wide QRS
   d. All the above

49. What percent of VT episodes are idiopathic VT?
   a. 5 – 10%
   b. 15 – 20%
   c. 25 – 30%
   d. 35 – 40%

50. What is the most common form of monomorphic ventricular tachycardia?
   a. Associated with chronic coronary artery disease
   b. Associated with idiopathic dilated cardiomyopathy
   c. Associated with arrhythmogenic right ventricular cardiomyopathy
   d. Associated with congenital heart disease

51. Right ventricular outflow tract VT is more common in men than women.
   a. True
   b. False

52. Which of the following is the most effective therapy for preventing sudden cardiac death (SCD) in patients with VT?
   a. Surgical ablation
   b. Catheter ablation
   c. ICD
   d. Medication therapy

Chapter 14

53. Sinus bradycardia is a sinus rate of less than _____ bpm.
   a. 70
   b. 65
   c. 60
   d. 55

54. First-degree atrioventricular (AV) block is characterized by a prolonged PR interval that exceeds ______ ms.
   a. 185
   b. 190
   c. 195
   d. 200

55. What is the typical successful capture rate for temporary transmyocardial pacing?
   a. 11 – 30%
   b. 12 – 35%
   c. 21 – 40%
   d. 25 – 53%
Chapter 15

56. How many people in the United States die suddenly each year from some form of cardiovascular disease?
   a. 300,000
   b. 350,000
   c. 400,000
   d. 450,000

57. Nonischemic dilated cardiomyopathy is the primary diagnosis in what percent of patients who have been resuscitated after cardiac arrest?
   a. 5%
   b. 7%
   c. 9%
   d. 10%

58. Which of the following is the most common cause of cardiac arrest and sudden death?
   a. Supraventricular arrhythmias
   b. Ventricular tachycardia
   c. Ventricular fibrillation
   d. B & C

59. What year was the first ICD implanted for clinical use?
   a. 1980
   b. 1982
   c. 1984
   d. 1986

Chapter 16

60. What is the lifetime cumulative incidence of syncope?
   a. ≥ 30%
   b. ≥ 35%
   c. ≥ 40%
   d. ≥ 45%

61. What is the prevalence of reflex-mediated vasovagal syncope in loss of consciousness?
   a. 14%
   b. 15%
   c. 18%
   d. 20%

62. What is the main challenge in assessing syncope patients?
   a. Determining type of syncope
   b. Defining risk of recurrence
   c. Promptly identifying subjects at risk of sudden cardiac death
   d. B & C

63. The prognosis for untreated cardiac syncope mortality can be ______ at 6 months.
   a. > 7%
   b. > 8%
   c. >9%
   d. >10%
Chapter 17

64. What is the transaortic jet velocity of a patient with severe aortic stenosis?
   a. < 2.0
   b. 2.0 – 2.9
   c. 3.0 – 3.9
   d. ≥ 4.0

65. Which of the following is an indicator of low EF area-gradient mismatch?
   a. Effective orifice area < 1.0 cm²
   b. Left ventricular EF < 45%
   c. Mean gradient < 30 – 40 mm Hg
   d. All the above

66. What percentage of patients with aortic stenosis and heart failure will die within 2 years without valve replacement?
   a. 50%
   b. 55%
   c. 60%
   d. 65%

67. The multidisciplinary approach and the TAVR heart team has been one of the greatest collaborative successes in the field of cardiovascular diseases.
   a. True
   b. False

Chapter 18

68. Which of the following is a description of the De-Musset sign of aortic regurgitation?
   a. To and from head bobbing
   b. Visible pulsation of the uvula
   c. Capillary pulsations seen on light compression of the nail bed
   d. Bruits heard over femoral artery on light compression by stethoscope

69. What is the imaging method of choice for evaluating patients with aortic regurgitation (AR)?
   a. Cardiac catheterization
   b. Echocardiography
   c. CT
   d. MRI

70. A regurgitant fraction greater than _____ denotes severe AR.
   a. 30%
   b. 40%
   c. 50%
   d. 60%

71. Aortic valve replacement is recommended in patients with chronic severe AR and left ventricular ejection fraction of _____.
   a. 50%
   b. 55%
   c. 60%
   d. 65%
Chapter 19

72. Mitral stenosis accounts for what percentage of native valve pathology?
   a. 5%
   b. 7%
   c. 10%
   d. 12%

73. What percentage of mitral stenosis cases are associated with rheumatic fever or rheumatic heart disease?
   a. 75%
   b. 80%
   c. 85%
   d. 90%

74. What is a classic symptom of mitral stenosis?
   a. Dyspnea
   b. Fatigue
   c. Hypertension
   d. A & B

75. What is the mortality rate for surgical commissurotomy in isolated mitral valve repair or replacement?
   a. 0.5 – 1.5%
   b. 1.75 – 3.0%
   c. 2.0 – 3.5%
   d. 2.0 – 5.0%

Chapter 20

76. Degenerative mitral regurgitation is also called what?
   a. Primary
   b. Secondary
   c. Functional
   d. A & C

77. Which of the following is a possible medical history of chronic mitral regurgitation?
   a. Acute rheumatic fever
   b. Coronary artery disease
   c. Cardiomyopathy
   d. All the above

78. Color-flow Doppler of a systolic regurgitant jet across the mitral valve into the left atrium is diagnostic of mitral regurgitation.
   a. True, page 447
   b. False

79. A clinical indicator for the need for tricuspid valve repair or replacement is a mean right atrial pressure of more than ____ mm Hg.
   a. 13
   b. 14
   c. 15
   d. 16
80. What is the estimated life span of a bioprosthetic valve?
   a. 5 – 8 years
   b. 10 – 15 years
   c. 17 – 20 years
   d. 22 – 25 years

Chapter 21

81. Tricuspid valve prolapse seen in patients with mitral valve prolapse occurs in what percent of cases?
   a. 45%
   b. 50%
   c. 55%
   d. 60%

82. Tricuspid valve disease is not difficult to clinically recognize.
   a. True
   b. False

83. A valve orifice area of _____ is considered consistent with severe tricuspid stenosis.
   a. > 180 ms
   b. > 185 ms
   c. > 190 ms
   d. > 195 ms

84. Which of the following are indications for surgery for patients with tricuspid valve endocarditis?
   a. Apnea
   b. Uncontrollable infection
   c. Septic emboli
   d. B & C

85. What percent of pulmonic stenosis is due to a congenital disorder?
   a. 75%
   b. 80%
   c. 85%
   d. 95%

86. Balloon valvotomy is recommended if the RV-to-pulmonary artery peak-to-peek gradient is greater than what?
   a. 20 mm Hg
   b. 25 mm Hg
   c. 30 mm Hg
   d. 35 mm Hg

Chapter 22

87. What valve has vegetations that are typically attached within 1-2 cm of the leaflet tip on the left side?
   a. Aortic
   b. Mitral
   c. Tricuspid
   d. Pulmonic
88. Which of the following is not a characteristic of acute endocarditis?
   a. Shaking chills
   b. Fever
   c. Normal gamma globulins
   d. Weight loss

89. S aureus accounts for _____ of all cases of endocarditis in the developed world.
   a. One eighth
   b. One fourth
   c. One third
   d. One half

90. S aureus causes valve destruction in approximately what percentage of left-sided cases?
   a. 30%
   b. 32%
   c. 34%
   d. 36%

91. What is the mortality rate of pacemaker endocarditis?
   a. 25%
   b. 27%
   c. 30%
   d. 33%

Chapter 23

92. How many people in the United States have hypertrophic cardiomyopathy (HCM)?
   a. 700,000
   b. 750,000
   c. 800,000
   d. 850,000

93. What is the success rate of surgical septal myectomy to relieve HCM outflow obstruction?
   a. 95%
   b. 96%
   c. 97%
   d. 98%

Chapter 24

94. What percent of primary restrictive cardiomyopathy (RCM) may be due to hereditary contractile protein mutations?
   a. 40%
   b. 45%
   c. 50%
   d. 55%
Chapter 25

95. What percent of patients with myocarditis will progress to dilated cardiomyopathy (DCM)?
   a. 30%
   b. 32%
   c. 34%
   d. 35%

96. Toxic cardiomyopathy develops as a result of exposure to which of the following?
   a. Illicit drugs
   b. Alcohol
   c. Chemotherapy drugs
   d. B & C

Chapter 26

97. What is the 5-year mortality after a heart failure diagnosis?
   a. 45%
   b. 50%
   c. 55%
   d. 60%

98. During physical examination of patients with systolic HF there is evidence of which of the following symptoms?
   a. Diaphoresis
   b. Pallor
   c. Peripheral cyanosis
   d. All the above

Chapter 27

99. What percentage of patients have elevated pulmonary artery systolic pressure (PASP) on echocardiography?
   a. 75%
   b. 78%
   c. 82%
   d. 85%

100. What is the most important risk factor for heart failure with preserved ejection fraction?
    a. Age
    b. Hypertension
    c. Obstructive sleep apnea
    d. Coronary artery stenosis

Chapter 28

101. What is the most common cause of pericardial disease?
    a. Bactria
    b. Fungus
    c. Virus
    d. Parasite
102. The cornerstone therapy for pericardial fluid is drainage.
   a. True
   b. False

Chapter 29

103. Which of the following is not a common risk factor for VTE?
   a. Factor V Leiden
   b. Protein C deficiency
   c. Prothrombin gene mutation
   d. Hyperhomocysteinemia

104. Which of the following is the first choice for anticoagulation for acute PE?
   a. Low-molecular weight heparin
   b. Unfractionated heparin
   c. Coumadin
   d. Fondaparinux

Chapter 30

105. What diagnostic test is considered the gold standard to diagnosis pulmonary hypertension (PH)?
   a. ECG
   b. Pulmonary function test
   c. Right heart catheterization
   d. Lung biopsy

106. What is the 6-month survival prognosis for a patient with PH and interstitial lung disease?
   a. 38%
   b. 40%
   c. 42%
   d. 45%

Chapter 31

107. Congenital aortic stenosis constitutes what percentage of all forms of congenital heart disease?
   a. 5%
   b. 6%
   c. 7%
   d. 8%

108. What is the average life expectancy for severe untreated pulmonary valve stenosis?
   a. 20 years
   b. 25 years
   c. 30 years
   d. 35 years
Chapter 32

109. Approximately 50% of all primary cardiac tumors are ________.
   a. Fibromas
   b. Teratomas
   c. Papillary fibroelastomas
   d. Myxomas, page 768, paragraph 1

110. What is the most common malignant tumor of the heart?
   a. Sarcoma, page 775, B.1.A
   b. Lymphoma
   c. Malignant fibrosis histiocytoma
   d. Lipoma

Chapter 33

111. Which of the following high-risk conditions have a 50% risk of inheriting the syndrome and warrant advice against pregnancy?
   a. Eisenmenger syndrome
   b. Marfa syndrome
   c. Loeys-Dietz syndrome

112. Hypertension is responsible for what percentage of maternal deaths in the United States?
   a. 18%, page 816, paragraph 3
   b. 20%
   c. 22%
   d. 24%

Chapter 34

113. What is the most common cause of hypothyroidism in the United States?
   a. Iodine deficiency
   b. Thyroid hormone resistance
   c. Hashimoto thyroiditis, page 836, paragraph 2
   d. Infiltrative diseases

114. Parathyroidectomy is not a difficult surgery.
   a. True
   b. False, page 842, paragraph 1

Chapter 35

115. What disease in clinically the most important and frequent of systemic lupus erythematosus (SLE)?
   a. Valvular heart disease, page 865, paragraph 4
   b. Myocarditis
   c. Cardiomegaly
   d. Cardiac arrhythmias

116. Deep venous thrombosis, pulmonary embolism and peripheral or cerebral thrombosis are not common in SLE patients.
   a. True
   b. False, page 875, paragraph 7
Chapter 36

117. In the United States, what is the most common cause of sudden cardiac death in athletes younger than 35 years of age?
   a. Myocarditis
   b. Aortic rupture
   c. Hypertrophic cardiomyopathy, page 917, paragraph 3
   d. Coronary artery disease

118. Which of the following ECG findings common in athletes is not a cause for concern if the athlete is asymptomatic?
   a. Bradycardia as low as 30 bpm
   b. Sinoatrial block
   c. Prolonged PR interval up to 300ms
   d. All the above, page 920, paragraph 1

Chapter 37

119. What is the overall survival rate for ascending aortic aneurysm repair at experienced centers?
   a. 80%
   b. 85%, page 956, paragraph 1
   c. 90%
   d. 95%

120. The subacute and chronic stages of aortic dissection are managed differently from acute dissection.
   a. True, page 957, paragraph 2
   b. False