

Advanced ECG Reading Study Guide

MASTER LIST OF POTENTIAL DIAGNOSES FOR ADVANCED ECG/SAT PRACTICE EXAM

SINUS MECHANISMS

1. Sinus arrhythmia
2. Sinus tachycardia
3. Sinus bradycardia
4. Sinus pause
5. Sinus arrest
6. Sinus exit block

ATRIAL MECHANISMS

7. Atrial extrasystole (premature beat - APB)
8. APB conducted with aberration
9. APBs conducted with and without aberration
10. APB nonconducted
11. Atrial tachycardia (AT)
12. AT with 3:2 AV (Wenckebach) conduction
13. Multifocal AT
14. Atrial flutter with 2:1 AV conduction
15. Atrial flutter with 4:1 AV conduction
16. Atrial flutter with varying AV conduction
17. Atrial fibrillation (AF)
18. AF with slow ventricular response (<50/min.)
19. AF with rapid ventricular response (>100/min.)
20. Atrial escape
21. Ectopic atrial rhythm
22. Atrial parasystole
23. Wandering (shifting) atrial pacemaker
24. Bradycardia-tachycardia syndrome (sick sinus)

JUNCTIONAL MECHANISMS

25. Junctional extrasystole (premature beat - JBP)
26. JPB with ventricular aberration
27. Concealed JPB
28. Junctional rhythm (<50/min.)
29. Junctional rhythm with reciprocal beating
30. Accelerated junctional rhythm (>50/min.)
31. Junctional parasystole
32. Wandering (shifting) pacemaker
33. Atrial echo beat
34. Probable AV nodal reentrant tachycardia
35. Probable orthodromic tachycardia
36. Probable antidromic tachycardia
37. Probable automatic (ectopic) junctional tachycardia

VENTRICULAR MECHANISMS

38. Ventricular extrasystole (premature beat - VPB)
39. VPB with retrograde conduction to atria
40. VPB with concealed retrograde conduction
41. Interpolated VPB
42. Paired VPBs
43. Multiform VPBs
44. Ventricular bigeminy
45. Idioventricular rhythm (<50/min.)
46. Accelerated idioventricular rhythm (AIVR >50/min.)
47. AIVR with retrograde conduction to atria
48. Ventricular parasystole
49. Ventricular tachycardia (VT)
50. VT with retrograde conduction to atria
51. Ventricular flutter
52. Torsades de pointes
53. Ventricular fibrillation

AV DISSOCIATION AND RELATED PHENOMENA

54. AV dissociation (AVD) owing to sinus bradycardia
55. AVD owing to an accelerated junctional rhythm
56. AVD owing to AV block
57. AVD owing to pause-producer
58. Junctional escape
59. Ventricular escape
60. Ventricular fusion beat
61. Ventricular capture beat

AV BLOCK

62. 1st degree AV block
63. Type I 2nd degree AV block with Wenckebach phenomenon and 2:1 AV conduction
64. Type I 2nd degree AV block with only 2:1 AV conduction
65. Type I 2nd degree AV block with block-acceleration dissociation and no ventricular captures
66. AV Wenckebach conduction interrupted by nonconducted APB
67. Type II 2nd degree AV block
68. Type II AV block with 2:1 conduction
69. High-grade (advanced) AV block
70. 3rd degree (complete) AV block with idioventricular rhythm
71. 3rd degree (complete) AV block with junctional escape

PACEMAKERS

72. Dual chambered pacemaker
73. In atrial mode (AAI)
74. In ventricular mode (VVJ)
75. In atrial-tracking mode (VDD)
76. In sequential mode (DVI)
77. Failure to capture ventricle
78. Failure to capture atrium
79. Failure to sense ventricular activation
80. Failure to sense atrial activation
81. Ventricular pacing with retrograde conduction to atria
82. Pacemaker-mediated tachycardia

CHAMBER ENLARGEMENT

83. Left ventricular enlargement
84. Right ventricular enlargement
85. Combined ventricular enlargement
86. Left atrial enlargement/abnormality
87. Right atrial enlargement
88. Combined atrial enlargement

INTRAVENTRICULAR

CONDUCTION ABNORMALITY

89. Right bundle branch block
90. Left bundle branch block
91. Left anterior hemiblock
92. Left posterior hemiblock
93. Atypical intraventricular block
94. Ventricular preexcitation, W-P-W type
95. Ventricular aberration, uncertain type
96. Ventricular aberration, RBBB type
97. Ventricular aberration, LBBB type

MYOCARDIAL INFARCTION

98. Acute anteroseptal infarction
99. Old anteroseptal infarction
100. Acute extensive anterior infarction
101. Old extensive anterior infarction
102. Acute inferior infarction
103. Old inferior infarction
104. Acute anterolateral infarction
105. Old anterolateral infarction
106. Acute inferoposterior infarction
107. Old inferoposterior infarction
108. Acute lateral infarction
109. Old lateral infarction
110. Acute global (anterior-inferior) infarction
111. Old global infarction

TRACING SUGGESTIVE OF:

112. Hyperkalemia
113. Hypokalemia
114. Hypocalcemia
115. Hypocalcemia
116. Hypothyroidism
117. Hypothermia
118. Mitral valve disease
119. Chronic cor pulmonale
120. Acute cor pulmonale
121. Pericarditis
122. Hypertrophic cardiomyopathy
123. Myocardial ischemia
124. Digitalis effect
125. Quinidine effect

MISCELLANEOUS

126. Dextrocardia
127. Early repolarization (normal variant)
128. Misapplied leads
129. Electrical alternans
130. Abnormal left axis deviation (-30 to -90 degrees)
131. Abnormal right axis deviation (+101 to +180 degrees)
132. Prolonged QT interval
133. U-wave inversion
134. Post-extrasystolic T-wave change
135. Nonspecific ST-T abnormalities
136. Low voltage
137. Concealed conduction, anterograde
138. Concealed conduction, retrograde