MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) What term is used to refer to the process of electrical discharge and the flow of electrical activity?  
   A) repolarization     B) polarization     C) depolarization     D) polarized

2) When stimulated, the ________ branch of the nervous system will increase heart rate, AV conduction, and irritability.  
   A) pacemaker     B) parasympathetic     C) inherent     D) sympathetic

3) The inherent rate of the AV junction is ________ beats per minute.  
   A) 100–120     B) 60–100     C) 40–60     D) 20–40

4) The inherent rate of the ventricle is ________ beats per minute.  
   A) 20–40     B) 60–100     C) 40–60     D) 100–120

5) After leaving the area of the AV node, impulses go through the ________ to reach the right and left bundle branches.  
   A) AV junction     B) Purkinje fibers     C) Bundle of His     D) SA node

6) Part of the parasympathetic branch of the autonomic nervous system is the ________ nerve.  
   A) inherent     B) SA node     C) vagus     D) AV conduction

7) The inherent rate of the SA node is ________ beats per minute.  
   A) 100–120     B) 40–60     C) 30–60     D) 60–100

8) The built-in rate of each of the three major areas of the conduction system is referred to as the ________ rate.  
   A) escape     B) inherent     C) heart     D) fast

9) If polarizing is considered the ready state, then ________ would be considered the recovery state.  
   A) discharge     B) depolarization     C) repolarization     D) polarization

10) In a cardiac cell the electrical charges are provided primarily by which two electrolytes?  
    A) calcium and magnesium     B) sodium and potassium     C) chloride and sodium     D) magnesium and potassium
11) The deflections above and below the isoelectric line are referred to as:
   A) waves.        B) voltage.        C) atria.        D) repolarization.

12) A series of cardiac cycles makes up a(n):
   A) P-P interval.  B) QRS complex.  C) EKG rhythm strip.  D) wave segment.

13) The PR interval reflects all _______ activity.
   A) QRS          B) atrial          C) ventricular          D) cardiac

14) The horizontal lines on the EKG graph paper measure:
   A) pattern.     B) speed.         C) time.          D) voltage.

15) The distance between two "tic" marks is _______ seconds.
   A) 6            B) 5              C) 3            D) 4

16) A strong impulse can cause a premature abnormal discharge during the _______ refractory period.
   A) impulse      B) absolute       C) relative       D) original

17) When an EKG machine is turned on but not yet connected to the patient, the stylus will produce a straight line called the _______ line.
   A) standard     B) isoelectric    C) straight       D) equal force

18) A measurement of _______ seconds is NOT a normal QRS measurement.
    A) .11          B) .08           C) .20           D) .06

19) On EKG graph paper, the time between two heavy vertical lines is five small boxes or _______ seconds.
    A) .20          B) .30           C) .10           D) .15

20) The PR interval begins at the first sign of the P wave and ends at the first sign of the next deflection, which is called the:
    A) T wave.      B) PR segment.    C) QRS complex.   D) AV node.

21) The EKG machine will produce an upright deflection on the graph paper if the flow of electricity is toward the _______ electrode.
    A) inverted     B) straight       C) negative      D) positive
22) P waves usually appear before:
   A) T waves.       B) upright waves.
   C) QRS complexes. D) PR intervals.

23) To find out if a rhythm is regular or irregular, measure the ________ across the entire strip.
   A) QRS complex    B) PR intervals    C) R–R intervals    D) PR segment

24) The standard systematic approach to arrhythmia interpretation consists of all of the following EXCEPT:
   A) QRS complex.       B) refractory periods.
   C) P waves and PR interval. D) heart rate and rhythm.

25) A major EKG finding that can help you distinguish between supraventricular and ventricular rhythms is the width of the:

26) When a P wave originates in the SA node, it is smooth, rounded, and:

27) The QRS complex wave is indicative of ventricular ________ and thus should correspond to the patient’s pulse.
   A) sinus rhythm       B) cardiac cycle       C) depolarization       D) pacemaker

28) The cardiac activity that takes place above the ventricles is referred to as ________ activity.
   A) AV rhythm       B) ventricle rhythm
   C) supraventricular       D) fast

29) A Normal Sinus Rhythm should have a QRS of less than ________ seconds.
   A) .12       B) .20       C) .30       D) .18

30) If a rhythm is regular, the MOST accurate way to calculate heart rate is to count the number of small squares between two R waves and divide the total into:
   A) 150.       B) 1300.       C) 1500.       D) 100.

31) The term "tachycardia" means:
   A) sinus rhythm.       B) fast heart.       C) slow heart.       D) normal heart.

32) For Sinus Tachycardia, the QRS complex should be less than ________ seconds.
   A) .18       B) .12       C) .01       D) .20
33) The rate for Sinus Bradycardia is ________ beats per minute.
   A) less than 60
   B) more than 100
   C) equal to 110
   D) between 60 and 100

34) In Normal Sinus Rhythm, the heart rate is ________ beats per minute.
   A) 60–100
   B) 100–120
   C) 40–60
   D) 80–120

35) In Sinus Arrhythmia, the heart rate is usually ________ beats per minute.
   A) greater than 100
   B) less than 60
   C) less than 80
   D) 60–100

36) In Sinus Arrhythmia, the R–R intervals are:
   A) normal.
   B) constant.
   C) slow.
   D) irregular.

37) In Sinus Arrhythmia, the rate changes with the patient’s:
   A) pulse.
   B) AV node.
   C) SA node.
   D) respirations.

38) The rate for Sinus Tachycardia is ________ beats per minute.
   A) less than 80
   B) 60–100
   C) greater than 100
   D) less than 60

39) The QRS in Atrial Fibrillation is ________ seconds.
   A) .12–.20
   B) greater than .12
   C) less than .12
   D) .20

40) Which one of the following does NOT describe an atrial P wave?
   A) It may dip below the isoelectric line.
   B) It is uniformly rounded.
   C) It can be flattened or peaked.
   D) It may be diphasic.

41) The rhythm in which there is a series of atrial waves with a sawtooth appearance is called:
   A) Atrial Tachycardia.
   B) Premature Atrial Contraction.
   C) Atrial Fibrillation.
   D) Atrial Flutter.

42) In Atrial Fibrillation, the rhythm is:
   A) irregular in a repeating pattern.
   B) grossly irregular with no pattern.
   C) normal in appearance.
   D) reliably regular.

43) Atrial Tachycardia usually has a rate of ________ beats per minute.
   A) 150–250
   B) 250–300
   C) 60–100
   D) 100–150
44) An atrial arrhythmia caused when the pacemaker role switches from the SA node to the atria and back again is called:  
C) sinus rhythm.  D) Normal Sinus Rhythm.  

45) A single beat that arises from a focus outside of the SA node is called a(n):  
A) compensatory pause.  B) Atrial Tachycardia.  
C) ectopic beat.  D) Premature Ventricular Contraction.  

46) The rate for an Accelerated Junctional Rhythm is _______ beats per minute.  
A) 100–180  B) 100–120  C) 60–100  D) 40–60  

47) A Premature Junctional Contraction is a(n):  
A) Normal Sinus Rhythm.  B) single beat.  
C) inverted rhythm.  D) normal beat.  

48) In a junctional rhythm, the impulse that depolarizes the ventricles travels toward the _______ electrode.  
A) positive  B) wandering  C) pacemaker  D) negative  

49) The mechanism that enables the AV junction to depolarize the atria with a backward flow of electricity is called _______ conduction.  
A) retrograde  B) non-  C) positive  D) normal  

50) Junctional Tachycardia is:  
A) regular.  B) irregular.  C) inverted.  D) slow.  

51) The rate for Junctional Escape Rhythm is _______ beats per minute.  
A) 40–60  B) 60–100  C) 30–60  D) 100–120  

52) In Second Degree Heart Block (Type II), you will have more _______ than QRS complexes.  
A) P waves  B) ectopics  C) T waves  D) heart beats  

53) In a First Degree Heart Block, the pacemaker site is usually in the:  
A) ventricles.  B) SA node.  C) AV node.  D) Bundle of His.  

54) In a Wenckebach rhythm, not every P wave is followed by a:  
55) In a Complete Heart Block, the PR interval is:
   A) constant.  B) normal.  C) unrelated.  D) longer than normal.

56) In First Degree Heart Block, the PR interval will be:

57) In Complete Heart Block, if a junctional focus is controlling the ventricles, the rate will be _______ beats per minute.
   A) 60–100  B) below 20  C) 20–40  D) 40–60

58) Multifocal PVCs have:
   A) a classic configuration.  B) a variety of configurations.
   C) constant configuration.  D) constant pacemakers.

59) The heart rate for Ventricular Tachycardia is _______ beats per minute.
   A) 100–120  B) 40–60  C) 60–100  D) 150–250

60) The rhythm that is the result of an absence of cardiac electrical activity is referred to as:
   C) Ventricular Tachycardia.  D) Idioventricular Rhythm.

61) PVCs falling in a pattern of every other beat are referred to as:
   A) quadrigeminy.  B) bigeminy.  C) trigeminy.  D) runs.

62) The rate for an Idioventricular Rhythm is _______ beats per minute.
   A) 60–100  B) 20–40  C) 100–120  D) 40–60

63) The short period of electrical inactivity that follows a P wave is called the:

64) On EKG graph paper, the distance in time between two light vertical lines, or across one small square, is _______ seconds.
   A) .10  B) .08  C) .04  D) .06

65) The vertical lines on the EKG graph paper measure:
   A) pattern.  B) speed.  C) voltage.  D) time.
66) No impulse can cause depolarization during the ________ refractory period.
   A) absolute         B) impulse         C) relative         D) original

67) A Normal Sinus Rhythm originates in the:
   A) AV junction.     B) AV node.        C) SA node.         D) ventricle.

68) In Normal Sinus Rhythm, the PR interval must fall between ________ seconds.
   A) .04-.06          B) .08-.22        C) .20-.60          D) .12-.20

69) A Normal Sinus Rhythm has all of the following characteristics EXCEPT:
   A) P waves are uniform.     B) the R–R intervals vary.
   C) QRS is less than .12 seconds.  D) heart rate is normal.

70) An early or premature ectopic beat could be an indication of:
   A) Normal Sinus Rhythm.     B) normal QRS complex.
   C) irritability.            D) PRI.

71) In the rhythm called "Atrial Flutter," the atrial rate is usually in the range of ________ beats per minute.
   A) 200–240          B) 60–100         C) 100–130         D) 250–350

72) The atrial rate in Atrial Fibrillation is ________ beats per minute.
   A) greater than 350   B) 200            C) less than 250   D) less than 300

73) In a Junctional Escape Rhythm, the QRS complex is ________ seconds.
   A) greater than .20   B) greater than .12   C) less than .04   D) less than .12

74) In a junctional rhythm, the electrical impulses originate in the:
   A) AV junction.      B) atrial node.    C) bundle branch.  D) SA node.

75) The rate for Junctional Tachycardia is ________ beats per minute.
   A) 40–60            B) 100–120        C) 60–100          D) 100–180

76) A First Degree Heart Block is caused by a delay at the:
   A) AV node.         B) Bundle of His.  C) SA node.       D) ventricles.
77) In First Degree Heart Block, the QRS complex is:
   A) .12-.20 seconds.  
   B) changing.  
   C) less than .12 seconds.  
   D) .12 seconds or greater.

78) A Second Degree Heart Block is caused by the:
   A) loss of fail-safe mechanism.  
   B) SA node failure.  
   C) resistance in ventricles.  
   D) intermittent AV conduction.

79) A Premature Ventricular Contraction is a(n):
   A) escape mechanism.  
   B) single irritable beat.  
   C) atrial malfunction.  
   D) heart block.

80) Two PVCs attached to each other are referred to as a:
   A) trigeminy PVC.  
   B) bigeminy PVC.  
   C) couplet.  
   D) PVC.

81) Atrial Fibrillation has:
   A) normal P waves.  
   B) normal R-R intervals.  
   C) no discernible P waves.  
   D) wide QRS complexes.

82) It is very common for the P waves in Atrial Tachycardia to be:
   A) hidden in the T wave.  
   B) biphasic.  
   C) premature.  
   D) inverted.

83) In junctional rhythms, the P wave can be:
   A) upright or normal.  
   B) upright or inverted.  
   C) normal or inverted.  
   D) hidden or inverted.

84) The type of block in which the P waves have no relationship to the QRS complexes is:
   A) First Degree Heart Block.  
   B) Second Degree Heart Block (Type II).  
   C) Third Degree Heart Block.  
   D) Wenckebach (Second Degree Heart Block—Type I).

85) Third Degree Heart Block is a(n):
   A) First Degree Block.  
   B) bundle branch block.  
   C) SA node block.  
   D) Complete Heart Block.
86) The term "agonal" is used to describe a:
   A) rapid rhythm.       B) lethal arrhythmia.
   C) painful arrhythmia. D) chronic arrhythmia.

87) The rhythm in which ALL atrial activity is depicted as chaotic undulations of the baseline is called:
   A) Atrial Flutter.       B) Atrial Tachycardia.
   C) Atrial Fibrillation. D) Sinus Tachycardia.

88) When the conduction ratio varies in Type II Second Degree Heart Block, the R-R interval will be:
   A) irregular.       B) consistently decreasing.
   C) methodically increasing. D) randomly increasing.

89) The QRS complexes in Ventricular Fibrillation are:
   A) wide and uniform.       B) less than .12 seconds.
   C) .12 seconds or greater. D) not discernible.

90) Atrial rhythms originate in the:
   A) atrial pathways.       B) AV junction.
   C) sino-atrial node.      D) atrio-ventricular node.

91) In a Third Degree Heart Block:
   A) some beats are conducted, while others are not.
   B) the SA node and ventricles are blocked.
   C) atria and ventricles are completely dissociated.
   D) the Bundle of His is blocked.

92) Unifocal PVCs have:
   A) changing conduction.       B) constant configuration.
   C) multifocal configurations. D) changing pacemakers.

93) Atrial rhythms include all of the rhythms listed below EXCEPT:
   C) Premature Atrial Contraction.      D) Atrial Fibrillation and Atrial Flutter.

94) A Wenckebach rhythm is a ________ Heart Block.
   A) First Degree       B) Type I Second Degree
   C) Type II Second Degree D) Third Degree
95) PVCs that appear in every third beat are referred to as:
   A) bigeminy.  B) runs.  C) trigeminy.  D) quadrigeminy.

96) In First Degree Heart Block, the PR interval is ________ seconds.
   A) .12  B) less than .12  C) greater than .20  D) less than .20

97) A compensatory pause is a(n):
   A) AV conduction defect.  B) delay that causes a PVC.
   C) delay following a PVC.  D) delay within atria.

98) The PR interval in Ventricular Tachycardia is:
   A) not present.  B) less than .08 seconds.
   C) less than .12 seconds.  D) greater than .12 seconds.

99) Ventricular Tachycardia that has a rate below 150 is identified as:
   A) blocked Ventricular Tachycardia.  B) slow Ventricular Tachycardia.
   C) Asystole.  D) Ventricular Fibrillation.

100) A basic rule for ventricular arrhythmias is that the QRS measurement will be:
     A) less than .12 seconds.  B) .12 seconds or greater.
     C) not discernible.  D) variable.
Answer Key
Testname: ARRHYTHMIAS

1) C
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   Page Ref: 4

2) D
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   Page Ref: 10

3) C
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4) A
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5) C
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6) C
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37) D
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38) C
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