

Questions for test-control on the theme: "Vectorial analysis of electrocardiogram"

- 1. The depolarization wave spreads through the ventricular muscle:**
 1. From the epicardial surface to the entire endocardial surface
 2. From the entire endocardial surface to the epicardial surface
 3. To the epicardial and endocardial surfaces simultaneously
- 2. The repolarization wave spreads through the ventricular muscle:**
 1. From the epicardial surface to the entire endocardial surface
 2. From the entire endocardial surface to the epicardial surface
 3. To the epicardial and endocardial surfaces simultaneously
- 3. The amplitude of R wave will be highest:**
 1. If the vector of a depolarization is perpendicular to axis of lead
 2. If the angle between the vector of depolarization and axis of lead is equal 30°
 3. If the angle between the vector of depolarization and axis of lead is equal 60°
- 4. Choose the polarity of P wave in lead aVR when mean vector of depolarization of both atria has normal direction:**
 1. Positive P wave
 2. Negative P wave
 3. Two-phase P wave
- 5. Choose the polarity of T wave in lead aVR when mean vector of repolarization of both ventricles has normal direction:**
 1. Positive T wave
 2. Negative T wave
 3. Two-phase T wave
- 6. Point out the sequence of depolarization of various departments of ventricles of heart:**
 1. The apex and walls of both ventricles are excited by the first
 2. An interventricular septum is excited by the first
 3. The basis of ventricles of heart is excited by the first
- 7. Choose the sequence of spread of excitement of the atria:**
 1. The right atrium is excited by the first
 2. The left atrium is excited by the first
 3. The both atria are excited at the same time
- 8. Normal amplitude of Q wave in the lead system on a standard surface ECG has not to exceed $\frac{1}{4}$ from amplitude of wave:**
 1. ...R
 2. ...S
 3. ...algebraic sum of R and S
- 9. Electrical diastole of heart is in accord with:**
 1. P-Q interval
 2. T-P interval
 3. T-P segment
 4. Q-T interval
- 10. What of the following ECG-leads are bipolar?**

1. aVF, aVL, aVR
2. I, II, III
3. V₁-V₆

11. What is an interval of intrinsic deviation (ventricular activation time)?

1. Time spread of excitation from the endocardium to the epicardium of the right and left ventricles
2. Time spread of excitation from the atria to the ventricles
3. Time difference of excitation myocardium of the left and right ventricles
4. Time difference of excitation atrial and ventricular myocardium

12. Mean vector of EMF of heart in the horizontal plane is registered in following leads:

1. V₁-V₆
2. aVR, aVL, aVF
3. I, II, III

13. Normally, interval of intrinsic deviation in lead V₁ should not exceed:

1. 0,03 sec
2. 0,05 sec
3. 0,3 sec
4. 0,5 sec

14. Normally, interval of intrinsic deviation in lead V₆ should not exceed:

1. 0,03 sec
2. 0,05 sec
3. 0,3 sec
4. 0,5 sec

15. A positive electrode on the left leg is in following leads:

1. aVF
2. aVL
3. I
4. II
5. III

16. A positive electrode on the left arm is in following lead:

1. aVR
2. aVL
3. I
4. II
5. III

17. Normally, an electrical axis of the heart is:

1. About the positive axis of lead, where the greatest amplitude R wave manifests
2. About the positive axis of lead, where the smallest amplitude R wave is shown
3. About the negative axis of lead, where the greatest amplitude S wave is shown
4. About the axis of lead, where the algebraic sum of the amplitudes of all the waves of QRS is equal to zero

18. During depolarization stage external surface of a membrane of a cardiomyocyte has:

1. Positive charge
2. Negative charge
3. No electrical charge

19. The negative electrode on the right arm is in following leads:

1. I
2. II
3. aVR

20. Combined (zero, passive) electrode in lead V₁ is:

1. On left arm
2. On right arm
3. On right leg
4. On left leg

21. Normal duration of P-Q interval should not exceed:

1. 0,02 sec 2. 0,1 sec 3. 0,2 sec
- 22. During repolarization stage external surface of a membrane of a cardiomyocyte has:**
1. No electrical charge 3. Negative charge
2. Positive charge
- 23. Positive electrode on the right arm is in following lead:**
1. I 2. II 3. aVR
- 24. Normal duration of P-Q interval should not exceed:**
1. 0,01 sec 2. 0,1 sec 3. 0,2 sec
- 25. Electrical ventricular systole is in accord with:**
1. P-T interval 3. Q-T interval
2. P-Q interval 4. R-R interval
- 26. Heart rate per minute in the right sinus rhythm can be calculated by the formula:**
1. The rate of the heartbeat= 60 sec/P-P sec
2. The rate of the heartbeat= 60 sec/Q-T sec
3. The rate of the heartbeat= 60 sec/R-R sec
4. The rate of the heartbeat= 60 sec/QRS sec
- 27. The maximal amplitude of the R wave at a deviation of an electrical axis of heart to the left is recorded in following lead:**
1. I 2. II 3. III
- 28. The maximal amplitude of the R wave at a deviation of an electrical axis of heart to the right is recorded in following lead:**
1. I 2. II 3. III
- 29. The maximal amplitude of the S wave at a deviation of an electrical axis of heart to the left is recorded in following lead:**
1. I 2. II 3. III
- 30. The maximal amplitude of the S wave at a deviation of an electrical axis of heart to the right is recorded in following lead:**
1. I 2. II 3. III
- 31. Normally, positive P wave is recorded in following leads:**
1. I 2. aVF 3. aVR
- 32. Normally, negative P wave is recorded in following lead:**
1. I 2. aVF 3. aVR
- 33. Normally, positive T wave is recorded in following leads:**
1. I 2. aVF 3. aVR
- 34. Normally, negative T wave is recorded in following lead:**
1. I 2. aVF 3. aVR
- 35. How the cardiac electrical axis in the frontal plane in norm is directed?**

1. Coincides with the direction of the anatomical axis of the heart
2. Perpendicular to the anatomical axis of the heart
3. Is an angle of 30° relative to the anatomical axis of the heart
4. Is an angle of 60° relative to the anatomical axis of the heart