

# HEART

1. In which muscle the temporal relationship of the action potential, refractory period and muscle twitch is equal?
2. What is the name of low-resistance pathways between myocardial cells that allow for the spread of action potentials?:
3. Why the tetanic contraction is impossible in cardiac muscle?
4. Is whole cardiac muscle has the all or none nature?
5. What is the cause for the prolonged repolarization of the cardiac action potential?
6. During which phase of the ventricular action potential is the conductance to  $\text{Ca}^{++}$  highest?
7. Myocardial contractility is best correlated with the intracellular concentration of \_\_\_\_\_
8. What is the membrane potential (threshold level) at which the sinoatrial node discharges?
9. If the atrioventricular node becomes the pacemaker of the heart, what is the expected heart rate?
10. Which of the following conditions at the sinoatrial node causes the heart rate to decrease?
11. Which of the following structures has the slowest rate of conduction of the cardiac action potential?
12. What is the resting membrane potential of the sinus nodal fibers?
13. Which part of the heart normally has a marked prepotential?
14. What is the purpose of having valves in the cardiovascular system?
15. What is the intercalated disc?
16. How change the force of contraction during the stretching a myocardial cell
17. The rapid depolarization phase of the action potentials of myocardial contractile cells is due to which ion(s)?
18. How long lasts the typical action potential of a myocardial contractile cell?
19. The P wave of the ECG is due to \_\_\_\_\_;
20. The QRS complex of the ECG is due to \_\_\_\_\_;
21. The T wave of the ECG is due to \_\_\_\_\_;
22. what a process reflects The PR interval of the ECG?
23. What is the normal P-R interval ?
24. The ventricles are completely depolarized during which isoelectric portion of the ECG?
25. What is the ECG?
26. How correctly termed a heart rate of 125 beats per minute?
27. In a resting adult, the typical ventricular ejection fraction has what value?
28. Please, explain the Starling's law of the heart.
29. Which phase of cardiac cycle occurs between the closing of aortic valve and opening of A-V valve?
30. Which phase of cardiac cycle occurs between the opening and closing of aortic valve?
31. Which phase of cardiac cycle occurs between the closing of A-V valve and opening of aortic valve?
32. Which process is associated with the second heart sound?
33. Which of the event is associated with the first heart sound?
34. During which phase of the cardiac cycle is ventricular volume lowest?
35. Which phase of the ventricular action potential coincides with diastole?
36. During which phase of the cardiac cycle does the mitral valve open?
37. The volume of blood ejected from each ventricle during a contraction is called the \_\_\_\_\_
38. The cardiac output is equal to \_\_\_\_\_
39. According to Starling's law of the heart, the cardiac output is directly related to the \_\_\_\_\_
40. What is the fuel for cardiac energetic needs?
41. Which event occurs at the end of isovolumic contraction?
42. What kind of influences has a negative inotropic effect on the heart?
43. How change the force of contraction by sympathetic stimulation of the heart?
44. The force of cardiac muscle contraction depends on intracellular concentration of \_\_\_\_\_
45. What is the preload for the left ventricle?
46. What is the afterload for the left ventricle?
47. The positive inotropic effect of catecholamines based on increased influx of \_\_\_\_\_ during the action potential