Define the following terms. (6 points)

1. systole:__________________________________________________________

2. diastole:__________________________________________________________

3. cardiac cycle:_______________________________________________________

4. tachycardia:________________________________________________________

5. bradycardia:________________________________________________________

6. fibrillation:________________________________________________________

7. ECG:______________________________________________________________

8. pulse:_____________________________________________________________

9. blood pressure:_____________________________________________________

10. pulse pressure:____________________________________________________

11. Why is this measurement important? __________________________________

______________________________________________________________________

______________________________________________________________________
12. List the elements of the intrinsic conduction system in order, starting from the SA node. (2 points)

SA node → __________________________ → __________________________ →

____________________________ → __________________________

13. At what structure in the transmission sequence is the impulse temporarily delayed? (1 point)

__________________________________________________________________________________________________________

Why? _________________________________________________________________________________________________

14. Draw an ECG wave representing one heartbeat. Label the P, QRS, and T waves; the P-R interval; the S-T segment; and the Q-T interval. (3 points)

15. Describe what happens in the cardiac cycle in the following situations. (3 points)

Immediately before the P wave: ________________________________________________________________

During the P wave: _________________________________________________________________

Immediately after the P wave (P-R) segment: ____________________________________________

During the QRS wave: ________________________________________________________________

Immediately after the QRS wave (S-T interval): __________________________________________

During the T wave: ________________________________________________________________
Answer the following questions concerning events of the cardiac cycle. (4 points)

16. When are the AV valves closed?

17. What event within the heart causes the AV valves to open?

18. When are the semilunar valves closed?

19. What event causes the semilunar valves to open?

20. What event results in the pressure deflection called the dicrotic notch?

21. At what point in the cardiac cycle is the pressure in the heart is
   Highest?
   Lowest?

22. Describe the procedure used to take the pulse (1 point):

23. Identify the artery palpitated at each of the pressure points listed. (1 point)
   At the wrist:
   On the dorsum of the foot:
   In front of the ear:
   At the side of the neck:
Answer the following questions. (5 points)

24. You may sometimes observe a slight difference between the value obtained from an apical pulse (beats/min) and that from an arterial pulse taken elsewhere on the body.

   What is this difference called? ___________________________________________________

25. What is the name of the instrument used to compress the artery and record pressures in the auscultatory method of determining blood pressure? ________________________________

26. What are the sounds of Korotkoff? _______________________________________________

   ___________________________________________________________________________

27. What causes systolic sound? ____________________________________________________

   ___________________________________________________________________________

28. What causes the disappearance of the sound? _____________________________________

   ___________________________________________________________________________

29. Interpret 145/85/82: __________________________________________________________

   ___________________________________________________________________________

   ___________________________________________________________________________

30. How do venous pressures compare to arterial pressures? __________________________

   Why? _________________________________________________________________________
Extra Credit (2 points)

31. Why does heart rate increase during running?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

32. Even though cardiac muscle has an inherent ability to beat, the nodal system plays a critical role in heart physiology. What is that role?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________