

AEA Certification Exam

Questions and Answers (Verified Answers)

1. _____ is defined as the maximum force that can be exerted by a muscle or muscle group against a resistance

ANS muscular strength

2. what type of stretching activates the muscle spindles, specialized receptors in the muscle that monitor muscle length change and the speed of muscle length change?

ANS ballistic stretching

3. name the six skill-related components of fitness

ANS balance, coordination, speed, power, agility, and reaction time

4. what is the difference between maximal heart rate and heart rate reserve?

ANS maximal heart rate is the highest heart rate a person can achieve. it is measured with a max HR test or estimated with $220 - \text{age}$. Heart rate reserve is your maximal HR minus your resting heart rate.

5. how does compression lower your heart rate in the water?

ANS water compresses all the body systems, including the vascular system, causing a smaller venous load to the heart, reducing heart rate.

6. what is the ACSM (2018) recommended frequency for resistance training?-

ANS two to three days/week for each major muscle group

7. define body composition

ANS the body's relative percentage of fat as compared to lean tissue (bones, muscles, and organs)

8. list five benefits of regular exercise

ANS improves physical appearance, increases functional capacity, heart becomes stronger, strengthens the walls of the blood vessels, improves strength and endurance,

9. when calculating exercise intensity, a popular method is the Karvonen Formula, which is also known as the _____

ANS Heart Rate Reserve method

10. _____ is a subjective method of assessing effort, strain, discomfort, and fatigue experienced during exercise.

ANS rating of perceived exertion

11. The skeletal system provides our bodies with support, protection, and ____. **ANS** Structure

12. _____ During the cardiac cycle, ____ is the active contraction of the heart muscle and ____ is the relaxation of the heart muscle.

ANS Systole, Diastole

13. Which characteristic of muscle allows it to shorten and thicken
ANS Contractility

14. The ____ muscle group flexes the leg at the knee.
ANS Hamstrings

15. What is a motor neuron

ANS Efferent neurons that relay outgoing information from the central nervous system to the muscle cells

16. Describe the valsalva maneuver

ANS Holding one's breath while exerting. Creates unequal pressure in the chest, causing blood pressure to drop and decreasing blood flow to the heart. Resuming normal breathing creates a surge of blood flow to the heart, causing a sharp increase in blood pressure.

17. Name the 5 systems of the body most actively involved in movement and exercise