

Sample Questions for the SCCC Written Certification Examination

Scientific Questions:

1. Early increases in strength are most readily explained by:
 - a. Small increases in fiber numbers
 - b. Increases in numbers of fibers recruited
 - c. Neural adaptation facilitating fiber contraction
 - d. B & C

2. The primary factor determining substrate utilization during exercise is:
 - a. Duration
 - b. Temperature
 - c. Intensity
 - d. Mode of exercise, resistance vs. rhythmic

3. Energy production during weight-lifting for strength is primarily via:
 - a. ATP-PC system
 - b. Glycolytic system
 - c. Lipid oxidation system
 - d. Beta-oxidation system

4. With detraining, the blood lactate levels are _____ compared to values obtained at the same submaximal rates of work when highly trained.
 - a. Much lower
 - b. Somewhat lower
 - c. Approximately the same
 - d. Higher

5. Which of the following is recognized as a factor influencing energy expenditure during exercise?
 - a. Age
 - b. Duration
 - c. Exercise mode
 - d. All of the above

6. How would you correctly describe one metabolic equivalent?
 - a. 35ml.kg.min
 - b. 5L/min
 - c. 3.5ml.kg.min
 - d. None of the above

7. An individual who exercises maximally for 90 seconds will provide most of their energy using which system?
 - a. ATP-PC system
 - b. Anaerobic glycolysis
 - c. Aerobic oxidation
 - d. Protein deamination

8. All of the following describe caffeine's role in improving athletic performance EXCEPT:
 - a. Delayed fatigue
 - b. Glycogen sparing
 - c. Increased alertness
 - d. Decreased urine production

9. Which of the following substances has been shown by multiple research studies to improve performance?
 - a. Androstenedione
 - b. Creatine
 - c. L-carnitine
 - d. Chromium

10. Which of the following best explains the requirement for increased protein intake by athletes?
 - a. Decreased protein oxidation during aerobic exercise
 - b. Increased need for tissue repair
 - c. Restriction of calories to lose weight
 - d. The quality of protein consumed

Practical Questions:

11. A sprinter just completed a semi-final 800-m sprint. Which of the following should he do to facilitate removal of lactic acid from the blood in preparation for the finals?
 - a. Perform stretching exercises
 - b. Sit in a shady area
 - c. Perform moderate-intensity jogging
 - d. Drink several glasses of water

12. Long-term recovery from exercise is best achieved with:
 - a. Proper nutritional intake
 - b. Cold water immersion
 - c. A proper cool-down
 - d. Massage of the agonist muscle

13. In organizing a periodization training chart, which of the following makes most sense?
- Make sure there is a high volume of work close to the competitive season
 - Incorporating agility and speed work together
 - Allowing adequate time in the off-season for aerobic base building
 - B & C
14. Which of the following procedures should be followed when testing cardiovascular fitness in the heat?
- Use salt tablets to retain water
 - Use an indoor facility
 - Test in the morning
 - Drink fluids during exercise
- I, II, and III only
 - II, III, and IV only
 - I and III only
 - II and IV only
15. The basketball coach says his players need to jump higher. In addition to beginning a plyometric program, which of the following resistance training exercises are most essential to this goal?
- Power clean
 - Leg curl
 - Front squat
 - Seated calf (heel) raise
- I and III only
 - II and IV only
 - I, II, and III only
 - II, III, and IV only
16. Which of the following would be the most appropriate warm-up routine for a soccer player?
- Static stretching
 - Passive static stretching
 - Dynamic warm-up
 - Light jogging
17. Which of the following about free weights versus machine weights is correct?
- Proprioception is better developed with machine weights
 - Symmetry is better developed with free weights
 - Core stabilizing muscles are better developed with machine weights
 - Movement patterns are more correct with machine weights

18. During which of the following exercise should a spotter's hands be placed on the athlete's elbows/wrists?
- Bend press
 - Dumbbell incline bench press
 - Upright row
 - Overhead triceps extension
19. Which of the following exercises would develop the antagonists of a squat?
- Vertical jump
 - Box jumps
 - Hamstring curls
 - Lunges
20. The order of fiber recruitment with increasing muscular force (light to maximal) is:
- Type I; Type IIa; Type IIx
 - Type IIa; Type I; Type IIx
 - Type IIx; Type IIa; Type I
 - Type I; Type IIx; Type IIa

Answer Key:

- D
- C
- A
- D
- D
- C
- B
- D
- B
- B
- C
- A
- D
- B
- A
- C
- B
- C
- A