Name: _____ **Date:** _____

Answer Key: Peak Performance: 7th Grade Solo Sports Strategy Quiz

Calculate heart rate zones and design periodized training plans to reach the summit of individual athletic excellence.

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1. When designing a 'Periodization' plan for a solo sport like cycling, which phase focus is most likely to involve high-intensity intervals right before a major competition?

Answer: C) The Peaking or Tapering Phase

Peaking involves reducing volume while maintaining intensity to ensure the athlete is at maximum performance capacity for a specific event.

2. In competitive archery or riflery, the ability to control one's breathing and heart rate to find the 'quiet period' between heartbeats is known as _____.

Answer: B) Biofeedback Control

Biofeedback involves monitoring physiological functions to gain voluntary control over them, which is critical for precision in static individual sports.

3. True or False: Using a 'fartlek' training method involves a strictly timed, repetitive cycle of work and rest with no variation in terrain or pace.

Answer: B) False

Fartlek is Swedish for 'speed play'; it is unstructured and blends continuous training with interval training based on how the athlete feels.

4. A triathlete wants to improve her 'Transition 1' (T1) time. Which specific skill synthesis is most important for this individual sport segment?

Answer: B) Neuromuscular coordination for rapid gear changes

T1 requires the body to move from a horizontal swimming position to a vertical cycling position while performing complex motor tasks like removing a wetsuit and mounting a bike.

5. If a 13-year-old athlete wants to train in their 'Aerobic Zone' (70-80% of Max Heart Rate), and their MHR is roughly 207 bpm, their target range should be approximately _____.

Answer: B) 145 - 165 bpm

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Calculating 70-80% of 207 results in a range of roughly 145 to 165 beats per minute (bpm), which is the optimal zone for building cardiovascular endurance.

6. True or False: Plyometric exercises, such as depth jumps, primarily target the 'Stretch-Shortening Cycle' (SSC) to increase explosive power for events like the high jump.

Answer: A) True

Plyometrics use the SSC to store elastic energy in the tendons, which is then released to increase the force of the subsequent movement.

7. In the context of 'Skill Acquisition,' which stage of learning is an individual athlete in if they can perform a complex tennis serve while focusing on wind direction rather than their own grip?

Answer: D) Autonomous Stage

The autonomous stage is characterized by skills becoming automatic, allowing the athlete to focus on external environmental factors or strategy.

8. A climber practicing 'dynamic' movements versus 'static' movements is primarily manipulating their _____ to maintain upward momentum.

Answer: A) Center of Gravity

Climbing physics relies on the manipulation of the center of gravity; dynamic moves use momentum to reach holds that are otherwise out of range.

9. True or False: Hypertrophy training focuses specifically on increasing the number of muscle fibers rather than the size of existing muscle cells.

Answer: B) False

Hypertrophy is the increase in the volume/size of existing muscle cells, not an increase in the number of fibers (which is called hyperplasia).

10. Which training principle is being applied when an athlete slowly increases the resistance or duration of their workout to avoid a performance plateau?

Answer: C) Progressive Overload

Progressive overload requires continuously increasing the demands on the musculoskeletal system to make gains in muscle size, strength, and endurance.