High School Physical Education Theory

Physical Education Theory · Answer Key · 9 Questions

1. In the human musculoskeletal system, which type of lever operates when the gastrocnemius contracts to elevate the body during a calf raise?

A) First-class lever
B) Second-class lever
C) Third-class lever
D) Fourth-class lever

2. Which metabolic pathway yields the highest net ATP output per molecule of fully oxidized glucose?

A) ATP-PC system
B) Anaerobic glycolysis
C) Aerobic oxidative phosphorylation
D) Lactic acid pathway

3. Which physiological property is characteristic of Type IIx (fast-glycolytic) muscle fibers compared to Type I (slow-oxidative) fibers?

A) Higher capillary density
B) Higher mitochondrial density
C) Higher myosin ATPase activity
D) Greater resistance to fatigue

4. According to Fitts and Posner's stages of learning model, in which stage does the learner shift focus away from mechanical execution toward environmental cues and strategy?

A) Cognitive stage
B) Associative stage
C) Autonomous stage
D) Reflexive stage

5. According to the Fick Equation, maximal oxygen consumption (VO2 max) is the product of maximal cardiac output and which variable?

A) Arterial-venous oxygen difference
B) Stroke volume
C) Resting heart rate
D) Pulmonary ventilation rate

6. A gymnast performing a routine composed of distinct, chained motor skills (such as a cartwheel into a back handspring) is executing which class of motor skill?

A) Discrete skill
B) Continuous skill
C) Serial skill
D) Open skill

7. A barbell bicep curl performed in the anatomical position takes place within which anatomical plane and around which axis of rotation?

A) Frontal plane around a sagittal axis
B) Sagittal plane around a transverse axis
C) Transverse plane around a longitudinal axis
D) Sagittal plane around a longitudinal axis

8. What type of muscle contraction occurs when muscle length increases while developing force, such as lowering a weight during a bench press?

A) Isometric contraction
B) Concentric isotonic contraction
C) Eccentric isotonic contraction
D) Isokinetic contraction

9. During the fast component of Excess Post-Exercise Oxygen Consumption (EPOC), oxygen consumption remains elevated primarily to accomplish which process?

A) Lactate clearance and oxidation
B) Resynthesis of ATP and phosphocreatine stores
C) Reduction of core body temperature
D) Repair of micro-damaged muscle tissue