Certified Master Trainer

Final Exam Master Copy

Correct Answers are listed at the bottom.

* How many ounces of water should an active adult consume per day?
* 12
* 24
* 68
* 192
* The human body contains how many bones?
* 192
* 300
* 206
* 220
* Muscle fibers are composed of the following filaments except?
* Actin
* Myosin
* Titin
* Lactate
* What is known as the “power house of the cell?
* Cell membrane
* Cell wall
* Mitochondria
* Sarcoplasmic reticulum
* What contraction produces the most muscle damage?
* Concentric
* Isometric
* Eccentric
* Isotension
* When a phosphate bond is broken in an ATP molecule what is produced?
* AMP
* CrP
* ADP
* H2O
* What equation will give you cardiac output?
* Stroke volume X heart rate
* Stroke volume X lung volume
* Heart rate X lung volume
* Heart rate X VO2max
* What pumps blood to the body?
* Right atrium
* Left ventricle
* Right ventricle
* Left atrium
* What pumps blood to the left ventricle?
* Right atrium
* Left atrium
* Aorta
* Right ventricle
* Deoxygenated blood is pumped to the lungs by what heart chamber?
* Left ventricle
* Left atrium
* Right atrium
* Right ventricle
* The truest test of aerobic capacity is \_\_\_\_\_\_\_\_\_\_\_.
* 1-mile
* 3-mile
* VO2max
* ½ marathon
* A sarcomere unit runs from \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_.
* Z line / Z line
* Z line / M zone
* A band / A band
* M zone / M zone
* Pull ups work all of the following except?
* Lats
* Biceps
* Abs
* Hamstrings
* The rate limiting enzyme in glycolysis is \_\_\_\_\_\_\_\_\_.
* Isocitrate dehydrogenase
* PFK
* Pyruvate
* Lactic acid
* All of the following are primary aerobic metabolic pathways except?
* Electron transport chain
* Krebs cycle
* Citric acid cycle
* Glycolysis
* All of the following are enzymes within the Krebs cycle except?
* Alpha-ketoglutarate dehydrogenase
* Citrate synthase
* Isocitrate dehydrogenase
* Latate dehydrogenase
* The Krebs cycle occurs in the \_\_\_\_\_\_\_\_\_\_\_.
* Cytoplasmic reticulum
* Mitochondria
* Cell membrane
* Cytosol
* Glycolysis is \_\_\_\_\_\_\_\_\_\_\_.
* Anaerobic
* Aerobic
* For marathons
* Best for swimming
* Glycolysis takes place in the \_\_\_\_\_\_\_\_\_\_\_.
* Mitochondria
* Cytosol
* Cell membrane
* Cell wall
* Hypertrophy occurs in all of the follow mechanisms except?
* Mechanical tension
* Metabolic stress
* Muscle damage
* Muscle pump
* Training should mimic movements used in an athlete’s sport is derived from what principle?
* Progressive overload
* Specificity
* Sport training
* Athletic training
* Gradual increase of stress placed on the body during exercise is the \_\_\_\_\_\_\_\_\_\_ principle.
* Mass building
* Progressive overload
* Specificity
* Hypertrophy
* What is the safest form of cardio for clients with knee injuries?
* Swimming
* Running
* Jumping
* Hiking
* All of the following are upper back muscles except?
* Rhomboids
* Lats
* Trapezius
* Semitendinosus
* All of the following are muscles in the leg except?
* Vastus lateralus
* Vastus medialus
* Seratus anterior
* Semimembranosus
* All of the following are primarily used for chest press except?
* Pectoralis minor
* Pectoralis major
* Levator scapulae
* External intercostals
* Athletes should consume at least \_\_\_\_ grams of protein per day to maintain and/or gain muscle.
* 0.5 / kg bodyweight
* 1.8 / kg bodyweight
* 50
* 85
* The vertical jump tests \_\_\_\_\_\_\_\_.
* Strength
* Power
* Flexibility
* Endurance
* The following are common aerobic tests except?
* 1-mile
* 3-mile
* VO2max
* Sit-n-reach
* Running at varied speeds and inclines is \_\_\_\_\_\_\_.
* Military training
* Cross country training
* Fartlek training
* Crossfit
* A 1-RM bench press test is testing \_\_\_\_\_\_\_\_\_.
* Strength
* Power
* Endurance
* Flexibility
* The maximal amount of force that can be produced by a muscle or group of muscles is \_\_\_\_\_\_\_.
* Strength
* Power
* ROM
* Endurance
* The time that it takes to produce a given amount of force is \_\_\_\_\_\_\_\_\_.
* Strength
* Power
* Acceleration
* Momentum
* The sit and reach test is commonly used to test \_\_\_\_\_\_\_\_\_.
* Strength
* Power
* Flexibility
* Endurance
* Bench pressing 225 pounds for as many reps as possible is testing \_\_\_\_\_\_\_\_\_\_\_\_.
* Strength
* Power
* Endurance
* Flexibility
* Type I fibers can be fully converted into Type IIb fibers if trained properly.
* True
* False
* \_\_\_\_\_\_\_\_ fatigue the fastest.
* Type I
* Type Ia
* Type IIa
* Type IIb
* \_\_\_\_\_\_\_\_ fatigue the slowest.
* Type I
* Type Ib
* Type IIa
* Type IIb
* \_\_\_\_\_\_\_\_ are capable of producing the greatest force.
* Type I
* Type Ia
* Type IIa
* Type IIb
* \_\_\_\_\_\_\_\_ are used primarily for marathons.
* Type I
* Type Ibx
* Type IIa
* Type IIb
* 4 grams of protein contains less calories than 2 grams of fat.
* True
* False
* All of the following phosphate containing molecules can bond the form ATP except?
* ATP
* ADP
* AMP
* CrP
* BMI isn’t a good indicator of health risk in athletic populations because \_\_\_\_\_\_\_\_.
* All athletes are healthy
* BMI increases with added lean muscle weight
* BMI isn’t accurate
* The BMI scale doesn’t go high enough
* \_\_\_\_\_\_\_\_\_ is the bone in the upper arm.
* Humerus
* Biceps
* Acromion
* Radius
* \_\_\_\_\_\_\_\_\_ is the bone in the upper leg.
* Humerus
* Quadriceps
* Femur
* Tibia
* \_\_\_\_\_\_\_\_\_ connects bone to bone.
* Tendons
* Bone tendons
* Ligaments
* Cartilage
* \_\_\_\_\_\_\_\_\_ connects muscle to bone.
* Tendons
* Ligaments
* Cartilage
* Nerves
* The 1st adaptation that occurs when a sedentary individual begins a cardio program is \_\_\_\_\_\_\_.
* Increase RBC
* Decreased RBC
* Increased plasma volume
* Increased WBC
* \_\_\_\_\_\_\_\_\_\_\_\_ is pressure exerted against the arterial walls when blood is ejected from the ventricles.
* Diastolic
* Systolic
* Heart pressure
* Ejection fraction pressure
* A nerve is composed of all of the following except?
* Axon
* Dendrite
* Cell body
* Red blood cells
* During fast glycolysis, the end product is converted into \_\_\_\_\_\_\_\_\_\_.
* Lactate
* AMP
* Fatty acids
* CrP
* \_\_\_\_\_\_\_\_ is the acronym used to describe muscle soreness.
* DMOS
* DOMS
* MOMS
* PTSD
* Lactate is used primarily in what metabolic pathway?
* Krebs cycle
* Glycolysis
* ETC
* Cori Cycle
* \_\_\_\_\_\_\_\_\_\_\_ separates the body into right and left halves.
* Sagittal plane
* Frontal plane
* Transverse plane
* Midfrontal plane
* \_\_\_\_\_\_\_\_\_\_ separates the body into upper and lower halves.
* Sagittal plane
* Frontal plane
* Transverse plane
* Midtransverse plane
* Torso rotation occurs in what plane?
* Sagittal
* Frontal
* Transverse
* Midsagital
* \_\_\_\_\_\_\_\_\_ is towards the front.
* Anterior
* Posterior
* Ventral
* Both A and C
* \_\_\_ vertebrae make up the lumbar spine.
* 5
* 6
* 7
* 8
* Which of the follow is a “ball and socket” joint?
* Hip
* Elbow
* Knee
* Ankle
* Gases are exchanged through \_\_\_\_\_\_ in the pulmonary system.
* Bronchi
* Alveoli
* Left ventricle
* Blood vessels
* \_\_\_\_\_\_\_\_\_ is used to test static strength.
* Dynamometer
* Fat grips
* Skin fold calipers
* Hydrostatic tank
* Which of the following best describes what occurs in asthma?
* Jdfsa
* Narrowing of the bronchial airways
* Fd
* D
* An imbalance in O2 demand and supply in the heart is known as \_\_\_\_\_\_\_\_.
* A
* Ischemia
* A
* A
* “Hardening” of the arteries is known as \_\_\_\_\_\_\_\_\_
* arteriosclerosis
* A
* A
* A
* The following lung condition is not fully reversible?
* A
* A
* Chronic obstructive pulmonary disease
* A
* \_\_\_\_\_\_\_\_\_ is the preferred form of exercise for senior adults.
* A
* swimming
* A
* A
* Sweating helps cool the body by \_\_\_\_\_\_\_\_.
* A
* Evaporation of sweat carries heat away from the body
* A
* A
* \_\_\_\_\_\_\_\_ are commonly referred to as “white blood cells.”
* A
* leukocytes
* A
* A
* During aerobic exercise, which would not be considered normal?
* A
* Increased diastolic blood pressure
* A
* A
* ATPase that produces muscle fiber contractions is found \_\_\_\_\_\_\_\_\_.
* A
* A
* On the myosin cross-bridge heads
* A
* Which of the following is composed on only one cell layer and functions to exchange waste and nutrients between the blood and tissues?
* Veins
* Arteries
* Capillaries
* Blood vessels
* Which of the following is a common site for a skin fold measurement?
* A
* subscapular
* A
* A
* Which of the following decreases joint angle and occurs in the sagittal plane around a mediolateral axis?
* A
* flexion
* A
* A
* Which valve does blood flow through when moving from the right atrium to the right ventricle?
* A
* A
* tricuspid
* A
* In a \_\_\_\_\_ class lever, the effort force lies closer to the axis of the lever than the resistance, and the force arm is smaller than the resistance arm.
* A
* 3rd
* A
* A
* In a \_\_\_\_\_ class lever, the resistance lies between the effort force and the axis of rotation and the force arm is greater than the resistance arm.
* A
* 2nd
* A
* A
* In a \_\_\_\_\_ class lever, the axis is between the force and the resistance arm, and the force arm may be greater than, smaller than, or equal to the resistance arm.
* A
* A
* 1st
* A
* Nerve transmissions occur by neurotransmitters crossing a synaptic cleft. What is the neurotransmitter that makes this possible?
* A
* ACh
* A
* A
* All of the following are hip bones except?
* A
* Patella
* A
* A
* \_\_\_\_ vertebrae make up the thoracic spine.
* A
* A
* 12
* A
* \_\_\_\_ vertebrae make up the cervical spine.
* A
* 7
* A
* A
* \_\_\_\_\_\_\_\_\_ is extension of the ankle joint.
* A
* A
* plantarflexion
* A
* \_\_\_\_\_\_\_\_\_ is flexion of the ankle joint.
* A
* dorsiflexion
* A
* A
* Posterior, or dorsal, is towards the \_\_\_\_\_\_\_\_\_\_.
* A
* A
* rear
* A
* Anterior, or ventral, is towards the \_\_\_\_\_\_\_\_\_\_.
* A
* front
* A
* A
* The \_\_\_\_\_\_\_\_\_ separates the body into superior and inferior divisions.
* A
* Transverse plane
* A
* A
* The \_\_\_\_\_\_\_\_\_ separates the body anteriorly and posteriorly.
* A
* A
* Frontal plane
* A
* The \_\_\_\_\_\_\_\_\_ separates the body into right and left divisions.
* A
* A
* Sagittal plane
* A
* The Appendicular skeleton includes all of the following except?
* A
* A
* ribs
* A
* All of the following are part of the Axial skeleton except?
* A
* arms
* A
* A
* The rating of perceived exertion is a \_\_\_\_\_\_\_\_\_.
* A
* Subjective form of measuring intensity
* A
* A
* The lactate threshold represents \_\_\_\_\_\_\_\_\_\_.
* A
* increased reliance on anaerobic metabolism
* A
* A
* The end product of slow glycolysis is used in the \_\_\_\_\_\_\_\_.
* A
* A
* Krebs cycle
* A
* During fast glycolysis, pyruvate is converted into \_\_\_\_\_\_\_\_.
* A
* A
* lactate
* A
* When an individual trains with cardiovascular activities \_\_\_\_\_\_\_\_.
* A
* RBC increase
* A
* A
* \_\_\_\_\_\_\_\_\_\_ is the blood pressure when no blood is being ejected from the ventricles.
* A
* diastolic
* A
* A
* What covers the axon that allows faster nerve conduction?
* RBC
* protein
* Myelin sheath
* Creatine
* \_\_\_\_\_\_\_\_\_\_ is an oxygen transport through the body?
* Lactic acid
* RBC
* WBC
* proteins
* Quickly squatting before performing a vertical jump results in a higher jump compared to a static squat jump due to?
* Stretch reflex
* More tempo
* Faster tempo
* Longer fibers

Correct Answers:

* C
* C
* D
* C
* C
* C
* A
* B
* B
* D
* C
* A
* D
* B
* D
* D
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* C
* C
* D
* A
* A
* B