IFA Trainer Certification Test Answer Form

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Place an 'X' in the appropriate box for True/False questions. For questions 80 to 100 match the question to the appropriate letter.

Cardiovascular Physiology			Kinesiology		Aerobics			Weight Training			Muscle Groups					
	T	F		T	F		T	F		T	F		T	F		
1			16			31			50			69			80	
2			17			32			51			70			81	
3			18			33			52			71			82	
4			19			34			53			72			83	
5			20			35			54			73			84	
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12			27			42			61						91	
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						48			67						97	
						49			68						98	
															99	
															100	

Cardiovascular

- 1. Cardiac Output is the volume of blood pumped by each ventricle in one minute.
- 2. Stroke volume is the volume of blood in the extremities.
- 3. Vital Capacity is the greatest volume of air that can be forcibly expired in one breath.
- 4. The Valsalva Maneuver can increase blood pressure to extremely high and dangerous levels.
- 5. An Artery is a blood vessel that carries blood away from the heart to the body.
- 6. Systolic pressure is the vascular pressure created during the contraction of the left ventricle.
- 7. Diastolic pressure is the vascular pressure created during the pulmonary resting phase.
- 8. Arteriosclerosis is the hardening and obstruction of the exterior arterial wall.
- 9. Caffeine has the effect of stimulating the cardiovascular response.
- 10. Hyperventilation is characterized by slow and shallow breathing.
- 11. Raising the arms overhead during exercise increases the heart rate.
- 12. Abruptly stopping intense exercise causes blood to pool in the lower extremities.
- 13. The two anatomical sites for checking heart rate are the carotid artery and posterior wrist.
- 14. Aerobic exercise increases cardiovascular output.
- 15. Resting Heart Rate (RHR) is determined immediately before exercise.

Physiology

- 16. Anaerobic exercise utilizes oxygen for energy production.
- 17. Aerobic exercise can utilize carbohydrate, protein and fat for energy production.
- 18. Muscles require Adenosine Triphosphate (ATP) for both aerobic and anaerobic activity.
- 19. Anaerobic exercise can utilize only carbohydrates for energy production.
- 20. Anaerobic energy production provides high power for a short duration.
- 21. Aerobic energy production provides low to moderate power for a long duration.
- 22. Anaerobic Threshold is the point at which aerobic oxygen demands exceed capability.
- 23. Aerobic Capacity is the ability of the body to process carbohydrates for exercise.
- 24. Lactic acid and heat are the by-products of aerobic exercise.
- 25. Carbon dioxide, heat and water are the by-products of aerobic exercise.
- 26. Glycogen is a form of glucose stored in the muscles and liver for exercise.
- 27. Triglycerides are a form of fatty acids stored in adipose tissue for energy.
- 28. Glucose is a simple sugar carried in the blood for long-term energy.
- 29. Fast twitch muscles are for explosive type movements and are easily fatigued.
- 30. Slow twitch muscles are for high power type activities.

Kinesiology

- 31. Tendons connect bone to bone.
- 32. Ligaments attach muscle to bone.
- 33. An inflamed tendon is called tendonitis.
- 34. The Frontal plane divides the body from front to back.
- 35. The Sagittal plane divides the body from front to back.
- 36. The Horizontal plane divides the body from upper to lower.
- 37. Anterior refers to the anatomical rear.
- 38. The Prone position refers to face down.
- 39. Isometric contraction means constant tension with no increase in muscle length.
- 40. Isotonic contraction means constant muscle tension at varying length.
- 41. Isokinetic contraction means both varying muscle tension and length.
- 42. Agonist muscle group refers to the prime mover.
- 43. The Antagonist muscle to the Biceps is the Deltoids.
- 44. The Antagonist muscle to the Quadriceps is the Hamstrings.
- 45. The Antagonist muscle to the Rectus Abdominis is the Erector Spinae.
- 46. A sprain is the stretching or tearing of a tendon.
- 47. A strain is a muscle injury.
- 48. Extension is defined as an increasing joint angle.
- 49. Abduction is defined as movement away from the body centerline.

Aerobic Training

- 50. Fitness Level improvement is determined by Aerobic Frequency, Intensity and Duration.
- 51. Recommended Aerobic Frequency is 3 to 5 days a week.
- 52. During the first 15 minutes of aerobic exercise only stored glycogen is utilized for energy.
- 53. Recovery heart rate should be below 120 bpm after 2 to 5 minutes after exercise stops.
- 54. Recommended music tempo for Step and cool-down is 122 to 128 bpm.
- 55. Recommended music tempo for warm-up is 120 to 134 bpm.
- 56. Moves that require stepping forward off the step is not recommended.
- 57. Power moves should be limited to a duration of 5 minutes.
- 58. Repeater moves should be limited to no more than 1 at a time.
- 59. Hanging the heels off the board can strain the Achilles Tendon.
- 60. Heels should be kept off the floor during stretches and lunges.
- 61. A 25 square foot area is recommended for each step participant.
- 62. For an experienced class, heart rate should be checked every 15 to 20 minutes.
- 63. Warm-up should always precede stretching exercises.
- 64. Sprains are treated with Rest, Ice (for 20min/every 2hrs), Compression and Emergency Response.
- 65. One of the benefits of aerobic exercise is increased flexibility.
- 66. Beginner target heart rates should be 60% to 70% of maximum.
- 67. During class, only one move should be changed at a time.
- 68. Aerobic Training develops muscles for power.

Weight Training

- 69. Weight Training develops muscles for endurance.
- 70. Circuit Training provides a significant increase in cardiovascular endurance.
- 71. The role of a spotters/trainer is to insure safe lifting and proper form.
- 72. Jerking weights can damage muscles and connective tissue.
- 73. Proper body alignment prevents injury and isolates muscles to be targeted.
- 74. 1RM is the maximum weight that can be lifted once.
- 75. 3 to 4 sets and 6 8 repetitions are recommended for building at the fastest rate.
- 76. Maximum muscle building is achieved by 6 to 8 repetitions at 85% to 90% of 1RM.
- 77. Warm-up exercises provide increased blood oxygen levels and warm the muscles.
- 78. Rest periods between sets for medium weight training should be 1 minute.
- 79. Specific muscle groups should be trained a minimum of 3 times per week.

Muscle Groups/Exercises

Match the Exercise to the muscle group:

80.	Pushup, Bench Press	A.	Trapezius
81.	Pec Deck, Flyes	B.	Pectorals, Anterior Deltoids
82.	Shrugs	C.	Pectorals, Triceps, Anterior Deltoids
83.	Pull-ups	D.	Erector Spinae
84.	Back Extension	E.	Biceps, Rhomboids
85.	Seated Row	F.	Anterior/Medial Deltoid
86.	Lateral Pull down	G.	Erector Spinae, Latissimus Dorsi, Biceps
87.	Lateral Raises	H.	Latissimus Dorsi, Biceps
88.	Front Raises	I.	Forearms
89.	Biceps Curl	J.	Anterior/Posterior Deltoids
90.	Wrist Curls	L.	Biceps
91.	Triceps Kickback	M.	Triceps
92.	Squats, Lunges, Leg Press	N.	Hamstrings
93.	Calf Raises	Ο.	Adductor, Inner Thigh
94.	Hip Extension	P.	Abductors, Outer Thigh
95.	Hip Abduction	Q.	Gluteus Maximus
96.	Hip Adduction	R.	Gastrocnemius, Soleus
97.	Leg Curl	S.	Outer Obliques
98.	Upper/Lower Crunches	T.	Gluteus Maximus, Quads, Hamstrings
99.	Side Crunches	U.	Upper/Lower Abdomen
100.	Leg Extension	V.	Quadriceps