

ESSENTRICS[®] ACADEMY

ESSENTRICS TRAINING SERIES EVALUATION PACKAGE LEVEL 4 STRENGTHENING EXERCISES MULTIPLE CHOICE

CIRCLE ONE LETTER THAT BEST ANSWERS EACH QUESTION

1. Muscular endurance refers to which of the following?

- a. The muscles ability to exert force against a resistance for a period of five minutes
- b. The muscles ability to exert force against a resistance
- c. The muscles ability to exert force against a resistance for a sustained period of time
- d. How much weight a muscle can lift in a single effort

2. Bone tissue is a type of dense connective tissue

- a. True
- b. False

3. The strength of a joint is determined by a number of biomechanical parameters, including which of the following?

- a. The distance from the center of gravity
- b. Distance between muscle insertions, pivot points and muscle size
- c. Distance between ligaments, tendons, pivot points and muscle size
- d. The size of the bones that make up the joint.

4. Muscular strength and power refers to which of the following?

- a. Convert fast glycolytic fibers into fast oxidative fibers
- b. The maximum force a muscle or muscle groups can exert during a contraction
- c. Running a marathon
- d. The length of time or the duration a muscle or muscle group can exert force without fatigue

5. In your opinion why do you think Danielle P. regained $\frac{3}{4}$ inches in height?

- a. She stopped using weights and running
- b. She began doing a workout program that focused on decompressing her joints rather than doing exercises that compressed them
- c. She would have regained the height anyway simply by stopping the running and weights and Essentrics had nothing to do with her height change
- d. She changed her diet

6. Which one the following statements is true?

- a. Next to water, adipose tissue is the most plentiful substance in the body.
- b. Next to water, minerals are the most plentiful substance in the body.
- c. Next to water, protein is the most plentiful substance in the body.
- d. Protein is the most abundant substance in the body.

7. Bones produce red and white blood cells and store minerals.

- a. True
- b. False

8. Which of the following explanations of the strengthening techniques of *pulling up and pulling out* are true?

- a. Pulling up and out weakens the muscles.
- b. When you are pulling up and out the muscles concentrically contract recruiting more muscle fibres.
- c. The law of physics states that the longer the lever the heavier the load therefore pulling up and out is more challenging on the muscles.
- d. Pulling up and out creates bulky muscles.

9. The slow-twitch fibres contain large and numerous mitochondria.

- a. True
- b. False

10. If a person does not exercise while dieting can they still lose weight?

- a. Yes
- b. No

11. Fruits and vegetables are carbohydrates.

- a. True
- b. False

12. Simple carbohydrates have no nutritional value.

- a. True
- b. False

13. How many calories make up one pound?

- a. 2500
- b. 3500
- c. 4500
- d. It varies depending on the person

14. What organelle is known as the energy factory of the cells

- a. Mitochondria
- b. Adenosine triphosphate (ATP)
- c. Actin
- d. Muscles

15. Plies strengthen the quadriceps and gluteus group of muscles. Why is that important for weight loss?

- a. Those are the largest muscle groups in the body, which house the greatest number of mitochondria
- b. Strong quads prevent weak hamstrings
- c. Strong quadriceps and gluteus help prevent arthritis
- d. There is a larger amount of red blood cells

16. Carbohydrates are used to create ATP or energy.

- a. True
- b. False

17. Which of the following statements is correct?

- a. It is recommended that our diet contains 15% to 25% protein during weight loss periods and between 10% to 15% protein for weight maintenance.
- b. It is recommended that our diet contains 25% to 35% protein during weight loss periods and between 20% to 25% protein for weight maintenance.
- c. It is recommended that our diet contains 35% to 45% protein during weight loss periods and between 30% to 35% protein for weight maintenance.
- d. None of the above

18. Which of the following statements is correct?

- a. Protein contains 4 calories per gram
- b. Protein contains 10 calories per gram
- c. Protein contains 30 calories per gram
- d. There are no calories in protein.

19. Bones consist of several tissues including mineralized osseous tissue, marrow, endosteum and periosteum, nerves, blood vessels and cartilage.

- a. True
- b. False

20. Which best describes muscular strength and power?

- a. Yoga Workout
- b. Holding your arms above your head
- c. Long distance running
- d. Lifting a television set

21. Relaxation is not an effective technique to achieve strength.

- a. True
- b. False

22. Muscle force is proportional to what?

- a. Physiologic cross-sectional area in the myosin and actin
- b. Physiologic cross-sectional strength in the myosin and actin
- c. Physiologic cross-sectional flexibility in the myosin and actin
- d. None of the above

23. Which of the following describes eccentric contractions in the fitness industry?

- a. Positives
- b. Derivatives
- c. Shortening
- d. Negatives

24. Muscles require approximately how much more strength to perform an eccentric contraction compared to concentric contractions?

- a. 10%
- b. 15%
- c. 5%
- d. It takes the same amount of strength.

25. When performing the Airplane exercise, always try to begin with the legs straight to see if client can do it safely before bending the knees.

- a. True
- b. False

26. Concentric contractions normally occur as a braking force in opposition to an eccentric contraction to protect joints from damage.

- a. True
- b. False

27. During the kicks exercise, the most important thing to focus on is how high you can lift the leg.

- a. True
- b. False

28. If you pick up a two kilogram dumbbell and move it around in space. What does this movement describe no matter what?

- a. Concentric contraction
- b. Eccentric contraction
- c. Isometric contraction
- d. Isotonic contraction

29. Unsaturated fats are good for your heart.

- a. True
- b. False

30. What is the most important thing to remember when performing a lever stretch to ensure safety for your clients.

- a. The longer the lever the heavier the load.
- b. Do not bend the elbow while doing any lever stretches.
- c. Never overwork a lever stretch.
- d. Both B and C

31. Atrophy can be reversed and prevented through regular exercise.

- a. True
- b. False

32. What is/are the best example(s) of an endurance exercise?

- a. Essentrics[®] workout
- b. Cardio workout
- c. Long distance running
- d. Both A and C

33. How much essential body fat is the correct amount necessary for the maintenance of life?

- a. 10% to 15% for men and 4% to 8% for women
- b. None
- c. 3% to 5% for men and 8% to 12% for women
- d. 8-12% for both men and women

34. Processed foods, sugar, honey, candy, sodas, fruit juices and white breads are examples of simple carbohydrates.

- a. True
- b. False

35. The antagonist muscles act as a 'brake' for the agonist muscles throughout the contraction.

- a. True
- b. False

36. Which of the following statements is true?

- a. The basal metabolic rate (BMR) accounts for approximately 60% of the calories burned for an average person.
- b. The basal metabolic rate (BMR) accounts for approximately 80% of the calories burned for an average person.
- c. The basal metabolic rate (BMR) accounts for approximately 40% of the calories burned for an average person.
- d. The basal metabolic rate (BMR) accounts for approximately 50 % of the calories burned for an average person.

37. When muscles atrophy they also lose mitochondria.

- a. True
- b. False

38. Lifting external weights is the only effective method to strengthen muscles.

- a. True
- b. False

39. Which of the following statements is true?

- a. The basal metabolic rate is raised by 10% through regular strength training.
- b. The basal metabolic rate is raised by 15% through regular strength training.
- c. The basal metabolic rate is raised by 25% through regular strength training.
- d. None of the above.

40. Fast twitch muscle fibres burn more calories than slow twitch muscle fibres.

- a. True
- b. False