

**PE 100**  
**Exam #1**

Please answer the following questions with best possible answer. (1pt. each)

1. One MET is equal to:
  - a. 5.3 ml · kg · min
  - b. **3.5 ml · kg · min**
  - c. 3.2 ml · kg · min
  - d. 2.3 ml · kg · min
  
2. John has a Max VO<sub>2</sub> of 44 ml · kg · min. How many METS does that equal?
  - a. 15.4 METS
  - b. 12 METS
  - c. **12.57 METS**
  - d. 13 METS
  
3. Intensity can be based on:
  - a. RPE reserve
  - b. % VO<sub>2</sub> max
  - c. HR reserve
  - d. **A, b, and c**
  - e. B and c
  
4. Mode typically describes:
  - a. What kind of mood you are in
  - b. How hard you are working
  - c. **Type of exercise**
  - d. Where you exercise (i.e., indoor/outdoor)
  
5. Improvement of VO<sub>2</sub> max is directly related to
  - a. Mode
  - b. Intensity
  - c. Duration
  - d. Body size
  - e. **A, b, and c**
  
6. The recommended frequency for weight training is
  - a. Every day
  - b. Every other day
  - c. 5 days a week
  - d. **2-3 day a week**
  
7. Walking, running, riding a bike are examples of:
  - a. **Aerobic type activity**
  - b. Activity involving the large muscle groups
  - c. Mode
  - d. All of the above
  
8. Which statement is true in reference to dose response and benefits from exercise:
  - a. Benefits can be achieved between 500-1000 Kcal a work out.
  - b. Benefits can be achieved between 700-2000 Kcal a day.
  - c. **Benefits can be achieved between 700-2000 Kcal a week.**
  - d. Benefits can be achieved between 1400-4000 Kcal a week.

**PE 100**  
**Exam #1**

9. A 20 year-old female exercising at 85% will have a THR of  
a. **170**  
b. 187  
c. 150  
d. 17000
10.  $\text{VO}_2$  max is lower in women than men due to primarily to a lower cardiac output.  
a. **True**  
b. False
11. Despite the gender difference men will still achieve more benefits than women from cardiovascular conditioning.  
a. True  
b. **False**
12. We see significant reduction in cardiovascular fitness after 3 weeks of detraining.  
a. True  
b. **False**
13. To increase strength one should:  
a. **Perform 8-12 repetitions**  
b. Perform 12-15 repetitions  
c. Perform 6-8 repetitions  
d. Perform 3 sets
14. To increase strength in older populations the recommendation is:  
a. **10-15 repetitions**  
b. 8-12 repetitions  
c. 15-20 repetitions  
d. 3 sets of 10 repetitions
15. FFM \_\_\_\_\_ F \_\_\_\_\_
16. FM \_\_\_\_\_ E \_\_\_\_\_
17. 3.5ml/kg/min \_\_\_\_\_ H \_\_\_\_\_
18. Endurance \_\_\_\_\_ J \_\_\_\_\_
19. Strength \_\_\_\_\_ B \_\_\_\_\_
20. Running \_\_\_\_\_ I \_\_\_\_\_
21. RPE \_\_\_\_\_ C \_\_\_\_\_
22. Ballistic \_\_\_\_\_ G \_\_\_\_\_
23. ROM \_\_\_\_\_ D \_\_\_\_\_
24.  $\text{VO}_2$  max \_\_\_\_\_ A \_\_\_\_\_
- a. Oxygen consumed and utilized  
b. 1 RM  
c. Borg scale 6-20  
d. Flexibility around a joint  
e. Fat weight  
f. Muscle weight  
g. Movement  
h. 1 MET  
i. Mode  
j. low to moderate weight, high repetitions
25. A trained individual will have lower lactate threshold than a untrained individual.  
a. True  
b. **False**
26. Maximal heart rate formula is the same as the Karvonen formula.  
a. **True**

**PE 100**  
**Exam #1**

b. False

27. Exercising in ten minute increments is just as affective as exercising for thirty minutes, as long as you accumulate 20 plus minutes.

- a. **True**
- b. False

28. The decrement in strength occurs between the ages of 20-75 with the majority of loss occurring after the age of 30.

- a. True
- b. **False**

29. Which statement is true in reference to stretching:

- a. **the three types of stretches are PNF, ballistic, and Static, with PNF being the most affective.**
- b. the three types of stretches are PNF, Isometric, and Static, with Isometric being the most affective.
- c. the three types of stretches are PNF, ballistic, and Isokinetic, with ballistic being the most affective.
- d. the three types of stretches are PNF, isometric, and Isokinetic, with PNF being the most affective.

The following questions are short answer questions. To receive full credit you must answer the whole question. (Hint: looking for three sentences or more) (**5pts. Each**)

30. Please write the ACSM's general guidelines for cardiorespiratory fitness.

The ACSM recommends that one should develop their cardiorespiratory fitness three to five days per week. The intensity of each workout should be 55/65%-90% of maximum heart rate, or 40/50%-85% of maximum oxygen uptake reserve. However, lower intensity values of maximum heart rate and maximum oxygen uptake reserve are applicable to unfit individuals. The duration of the training should correspond to the intensity of the activity. Therefore, lower intensity workouts should be conducted for longer periods of time (30 minutes or more). Higher intensity workouts should be at least 20 minutes or longer.

31. Please write the ACSM's general guidelines for muscular strength and endurance.

According to the ACSM, muscular strength and endurance training should be progressive in nature, individualized, and provide a stimulus to all the major muscle groups. Individuals should perform sets of 8-10 exercises that conditions the major muscle groups 2-3 days per week. Most people should complete 8-12 repetitions of each exercise; however, 10-15 repetitions may be more appropriate for older and frailer people.

32. Discuss the gender differences relative to cardiovascular fitness, body composition, and muscle mass.

The body composition of men and women differ. Women have fewer and small muscle fibers. They also have lower FFM and bone mineral density, and a greater percentage of FM. When strength is compared for FFM, gender differences become smaller in the lower limbs. Also, there appear to be no gender differences in  $VO_2$  max improvement in endurance training.

33. What are the three components in maintaining the training effect? Of the three what appears to be the most important?

The three components in maintaining the training effect are frequency, intensity, and duration. According to an experiment where all three components were isolated and manipulated, lower intensity appeared to

**PE 100**  
**Exam #1**

have the most dramatic loss of fitness. Therefore, intensity is the most important component of maintaining the training effect.