



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY

END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2024

UNIT CODE: PHT 118

UNIT NAME: FITNESS & WELLNESS

DATE: 19th APRIL 2024

TIME: 6PM-8PM

INSTRUCTIONS

- 1. All students will have two (2) hours to complete the examination**
- 2. This is an online exam, Attempt all questions as per the instruction**
- 3. It is the student's responsibility to report any page and number missing in this paper.**
- 4. Check that the paper is complete**
- 5. Total number of pages is 6 including the cover.**
- 6. Read through the paper quickly before you start.**
- 7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.**

TOTAL: _____/70

PERCENT: _____/100%

POINTS EARNED TOWARDS FINAL GRADE _____/70

Section A (30mks)

1. The **main** role of a PT in a fitness and wellness programme is

- a. Educate clients and prescribe effective exercises
- b. Supervise clients during exercise
- c. Assist in prescribing exercises to the delicate population ONLY
- d. All of the above.

2. An assessment of health-related fitness uses

- a. Flexibility
- b. body composition
- c. cardiorespiratory/aerobic endurance
- d. muscle strength
- e. all of the above

3. The daily amount of physical activity recommended for weight loss purposes is

- a. 15 to 20 minutes.
- b. 20 to 30 minutes.
- c. 30 to 60 minutes.
- d. 60 to 90 minutes.
- e. Any amount is sufficient as long as it is done daily.

4. The vigorous-intensity cardiorespiratory training zone (60 to 85%) for a 22-year-old individual with a resting heart rate of 68 bpm is

- a. 120 to 148.
- b. 132 to 156.
- c. 138 to 164.
- d. 142 to 173.
- e. 154 to 188.

5. Which of the following activities does *not* contribute to the development of cardiorespiratory endurance?

- a. Low-impact aerobics
- b. Jogging
- c. 100-yard dash
- d. Basketball
- e. All of these activities contribute to its development.

6. The recommended duration for each cardiorespiratory training session is

- a. 10 to 20 minutes.
- b. 15 to 30 minutes.

- c. 20 to 60 minutes.
- d. 45 to 70 minutes.
- e. 60 to 120 minutes.

7. The ability of a muscle to exert submaximal force repeatedly over time is known as

- a. muscular strength.
- b. plyometric training.
- c. muscular endurance.
- d. isokinetic training.
- e. isometric training.

8. The training concept stating that the demands placed on a system must be increased systematically and progressively over time to cause physiological adaptation is referred to as

- a. the overload principle.
- b. positive-resistance training.
- c. specificity of training.
- d. variable-resistance training.
- e. progressive resistance

9. A “set” in strength training refers to

- a. the starting position for an exercise.
- b. the recovery time required between exercises.
- c. a given number of repetitions.
- d. the starting resistance used in an exercise.
- e. the sequence in which exercises are performed.

10. For health fitness, the recommendation of the American College of Sports Medicine is that a person should perform how many reps at a maximum during strength training

- a. 1 and 6 reps.
- b. 4 and 10 reps.
- c. 8 and 12 reps.
- d. 10 and 25 reps.
- e. 20 and 30 reps.

11. Muscular flexibility is defined as

- a. the capacity of joints and muscles to work in a synchronized manner.
- b. the achievable range of motion at a joint or group of joints without causing injury.
- c. the capability of muscles to stretch beyond their normal resting length without injury to the muscles.
- d. the capacity of muscles to return to their proper length following the application of a stretching force.
- e. the limitations placed on muscles as the joints move through their normal planes.

12.. Good flexibility

- a. promotes healthy muscles and joints.
- b. decreases the risk of injury in selected sport activities.
- c. improves posture.
- d. decreases the risk of chronic back pain.
- e. All are correct choices.

13. When you stretch, hold the final stretch for

- a. 1 to 10 seconds.
- b. 10 to 30 seconds.
- c. 30 to 90 seconds.
- d. 1 to 3 minutes.
- e. as long as you are able to sustain the stretch.

14. Regular aerobic activity helps

- a. lower LDL cholesterol.
- b. lower HDL cholesterol.
- c. increase triglycerides.
- d. decrease insulin sensitivity.

15. The following are health related fitness components **except**

- a. Cardiorespiratory/aerobic endurance
- b. Muscle strength and endurance
- c. Agility and coordination
- d. Body composition

Section B (20 mks)

SAQ 1

A 40 YO male, relatively sedentary, has been diagnosed with metabolic syndrome and has been advised to begin an exercise programme. After a comprehensive medical and exercise history, you have decided to begin him at moderate training intensity (40-60%). His resting HR is 70Bpm.

- I. Estimate his maximum heart rate (MHR)
- II. Calculate his heart rate reserve (HRR)
- III. Calculate his target heart rate/training zone

SAQ 2

4th year PT students were invited to give a health talk on lifestyle change in terms of effective regular exercises/ physical activity at a local community gym.

- a. State the difference between physical activity and exercise for them to understand
- b. As part of health education, high light the importance/benefits of regular exercising as a way of motivating them towards a healthy lifestyle
- c. Briefly discuss the elements of exercise prescription that will ensure that the recreational exercises reap the full benefits of exercises

- d. Highlight the various exercise modes/types you will include in your exercise prescription in order of priority

Section C (20 mks)

LEQ 1

Jane begun an exercise program six months ago with the aim of losing weight and enhancing her body image. She now runs 5km every morning, works out on stair climbers every day. She also plays tennis twice a week and strength trains daily. Evaluate her program and make suggestions for improvements.

LEQ 2

Ron is 60 YO male who exercise regularly for recreation and fitness. He has been categorized as being in “good” level of cardiorespiratory fitness. He attended a health talk recently on physical fitness and learnt about the unique benefits of strength training for senior citizens for the first time. He is motivated to improve his fitness by including resistance training in his routine, but is not sure of where to begin.

Educate Ron further on the benefits of strength training as you prescribe a comprehensive exercise program that would ensure that he gets adequate strength gains.

LEQ3

John, 70 Yo male, was diagnosed with COPD about 10 years ago, of which it is well managed. His doctor however noticed that his posture is gradually getting altered; with the shoulders obviously protracted, forward head and marked kyphosis of the thoracic spine, which risks compromising his pulmonary function further. His primary doctor therefore refers John to be reviewed by a PT. Upon examination, the PT decides that part of the intervention will be flexibility exercises.

Describe flexibility as part of physical fitness exercise prescription as you outline its benefits especially to the older population.

State the contra indications of flexibility exercises