

Sem-4
2018
BC

P P SAVANI UNIVERSITY

Fourth Semester of B. P.T Examination

February 2021

SPPT2073 EXERCISE THERAPY IV

17.02.2021, Wednesday

Time: 10:00 a.m. To 12:30 p.m.

Maximum Marks: 70

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

(Multiple Choice Questions) 20 MARKS: [Each question carries maximum 01 marks]

- 1] Which of the following statements best describes the purpose of arm swing in gait?
 - A]. Serves to slow down the lower limbs to maintain balance and control
 - B]. Provides counter rotation effect of the trunk
 - C]. Helps to propel the lower limbs forward in space
 - D]. None of the above
- 2] A gait pattern characterized by a wide base of support and unsteady movements is called?
 - A]. Parkinsonian gait
 - B]. Scissor gait
 - C]. Ataxic gait
 - D]. Antalgic gait
- 3]. Which of the following is true regarding the changes in gait that occur with an elderly person?
 - A]. Increase time in stance phase
 - B]. Shorter step length
 - C]. Decreased vertical displacement
 - D]. All of the above are true regarding gait changes with age
- 4]. Cause of poor posture can be which of the following?
 - A]. Habit
 - B]. Congenital malformation
 - C]. Paralysis of key postural muscles
 - D]. All of the above

5] Chronic stress is:

- A]. A stage of stress
- B]. Pleasant or unpleasant, real or imagined.
- C]. Caused by prolonged physical or emotional stress, more than an individual can cope with or control.
- D]. None of the above

6] The relaxation process that is most commonly taught is based on Jacobson's (1938) deep muscle relaxation technique. It involves ____ throughout the body in a/an ____.

- A] Tensing and relaxing muscle groups; ordered sequence
- B] Tensing and relaxing muscle groups; random sequence
- C] Tensing muscle groups; ordered sequence
- D] Relaxing muscle groups; ordered sequence

7]. Skillful use of the fingers during fine motor tasks is known as:

- A]. Dexterity
- B]. Motor Control
- C]. Agility
- D]. Coordination

8] Which of the following NOT describe coordination impairments?

- A]. Awkward
- B]. Extraneous/ uneven
- C]. Smooth
- D]. Inaccurate

9] Which of the following are NOT Non-equilibrium coordination tests?

- A]. Alternate/ Reciprocal motion
- B]. Movement composition/ Accuracy
- C]. Static sitting
- D]. Fixation or limb holding

10] Which of the following muscle groups are NOT activated during forward sway Ankle strategy?

- A]. Gastrocnemius Muscle
- B]. Tibialis Anterior Muscle.
- C]. Hamstrings Muscle
- D]. Para spinal Muscle

11] Match the following hierarchical levels:

A] Basal Ganglia (highest level)

B] Cerebellum & motor cortex
(Middle)

C] Brain stem & Spinal Cord
(Lowest level)

1] Execution- activation of the motor neuron & interneuron generate goal - directed movement.

2] Strategy-movement that best achieves the goal.

3] Tactics-Sequences of muscle contractions require.

12] A general term used to describe loss of muscle coordination and affects gait, posture, patterns of movement, ADLs, initiation & timing of movement is known as:

- A]. Ataxia
- B]. Hypotonia
- C]. Hypertonia
- D]. Dysmetria

13] Movement that occurs with the distal segment of a limb moving freely in space is called:

- A]. Open kinematic chain exercise
- B]. Closed kinematic chain exercise
- C]. Functional exercise
- D]. Reverse action

14] Constriction of blood vessels to reduce blood flow is achieved by:

- A]. increased parasympathetic activity
- B]. reduced parasympathetic activity
- C]. Increased sympathetic activity

D]. Reduced sympathetic activity

15] Preload is determined by:

- A]. The volume of blood returned to the heart
- B]. Aortic or pulmonary artery pressure
- C]. Ventricular contractility
- D]. All of the above

16] A Which type of proprioceptors are found in ligaments and around joints?

- A] Free nerve endings
- B] Golgi-type receptors
- C] Pacinian corpuscles
- D] None of the above.

17] When designing training programs, the following should be considered:

- A]. The principle of progressive overload
- B]. The all-or-none principle
- C]. The Fick principle
- D]. Boyle's law

18]. Adverse prognostic signs in exercise stress testing include all except

- A] Failure of blood pressure to increase
- B] Development of angina
- C] Severe ST segment depression at low workload
- D] ST segment depression persisting for > 3 minutes after termination of exercise

19] Contraindications to exercise stress tests include all except

- A] Acute myocarditis
- B] Uncontrolled heart failure
- C] Hypertension
- D] Active infective endocarditis

20] All of the following are indications of discontinuing exercise stress testing except

- A] Chest discomfort
- B] Severe shortness of breath
- C] Dizziness
- D] Rise in systolic blood pressure >40 mmHg

SECTION - II

- Attempt any **TEN** questions. Each question carries maximum 05 marks. Write your answer on a paper (Preferably A4 sheet) and make sure to include following information on each sheet:
- **50 Marks (Total Time 2 hours)**

1. Definition of Active and Inactive Postures. Write down factors affecting postures.
2. Write about extension exercises for spine.
3. Types of Abnormal Gaits.
4. List out Types of Relaxation methods and describe about Jacobson's relaxation technique.
5. What to include in Examination & evaluation of impaired balance?
6. What are the types of balance training we can encounter in patients with imbalance?
7. Write about Frenkel's exercise and technique of Frenkel's exercise.
8. Equilibrium and non-equilibrium test.
9. Define: Oxygen debt and Oxygen Deficit
10. Describe Chronic response to exercise of different bodily systems.
 - I] On Cardio Respiratory system
 - II] On musculoskeletal system
11. brief about
 - 1] 6-minute walk test and
 - 2] Cooper's 12 minute run test
12. Mention phases of Aerobic training.
