

Final Examination Questions

1. While working with a patient with a stroke to enhance overhead reaching, a physical therapist notes differences in the patient's ability to perform the task whether seated or standing. The patient is able to flex the upper arm to about 90 degrees while standing, but the patient can flex the arm an additional 30 to 40 degrees while seated with back against the backrest. While seated, the patient may be:

 - a) Taking advantage of enhanced feedback.
 - b) Decreasing the need for spatial facilitation of shoulder motoneurons.
 - c) Minimizing the nervous system's need to use feed-forward processes.
 - d) Decreasing the need for temporal facilitation of shoulder motoneurons.
2. Important clinical consequence(s) of reflex switching is (are):

 - a) The context in which a stimulus is delivered has nothing to do with the type of response that might be elicited).
 - b) Reflexes can be switched on or off primarily by feedback from peripheral receptors.
 - c) Categorization of stimulus effects as being either positive or negative is a gross simplification of reflex function.
 - d) Both a and b are correct.
3. Your co-worker is working with a patient/client on standing balance using a high-tech balance trainer. The patient/client is practicing weight shifting, watching a cursor move on a computer screen that moves as the patient/client shifts weight. The physical therapist has the patient/client practice this for a while and then places a towel over the screen to obscure the view of the cursor. It is apparent that your co-worker knows that the following type of feedback can be detrimental for learning:

 - a) Augmented feedback.
 - b) Absolute feedback.
 - c) Concurrent feedback.
 - d) Summary feedback.
4. Your patient/client is independent in sit-to-stand from the mat after 30 minutes of practice. You decide to ask your patient/client to now show you one repetition of a sit-to-stand from each of these surfaces: wheelchair, a dining room chair, and a couch. This is an example of:

 - a) Savings.
 - b) Contextual interference.
 - c) Transfer test.
 - d) Variable practice.
5. The physical therapy discharge note regarding a new outpatient indicates that she is independent in household ambulation. You ask her to walk with you to the occupational therapy department. She is doing well, but she slows down dramatically when she starts speaking. This is an example of:

 - a) Contextual interference.
 - b) Dual-task.
 - c) Procedural learning.
 - d) Declarative learning.
6. A patient/client who had a stroke is working on improving reaching. The task is for the patient/client to reach for his wallet on a table. The physical therapist alters the location of the wallet on each trial so that the patient/client has to reach in numerous directions and for different distances. This is an example of:

 - a) Part-whole practice.
 - b) Variable practice.
 - c) Consolidation.
 - d) Manual guidance.
7. A physical therapist assistant is taking over some intervention sessions from a physical therapist who is going on vacation. One of the interventions involves proprioceptive neuromuscular facilitation, a technique that the physical therapist assistant has not practiced since physical therapist assistant school! The physical therapist assistant is worried that he or she will not be able to do the patterns, but after one short session practicing with the physical therapist, the physical therapist assistant has regained the skill. This is an example of:

- a) Consolidation.
 - b) Declarative learning.
 - c) Transfer.
 - d) Savings.
8. **After having a stroke, an individual is independent in his gait with a cane and activities of daily living, but he is no longer able to drive or play golf due to perceptual deficits and decreased arm function. What is his Rankin Scale disability level?**
- a) 1 = minor symptoms that do not interfere with lifestyle.
 - b) 2 = minor handicap.
 - c) 3 = moderate handicap.
 - d) 4 = moderately severe handicap.
9. **If a person who has had a stroke is having problems successfully completing a functional task, an optimal initial intervention would be to:**
- a) Inhibit abnormal muscle tone prior to task practice.
 - b) Facilitate normal muscle activation during task practice.
 - c) Alter aspects of environment to optimize performance during task practice.
 - d) Use resistive training to strengthen weak muscles prior to task practice.
10. **A primary role of a physical therapist in post-stroke rehabilitation is to:**
- a) Teach compensatory techniques.
 - b) Help the individual get the feel of normal movement.
 - c) Set up a learning environment for the individual.
 - d) Constrain the involved extremities.
11. **A patient is referred to physical therapy for a screening to determine initial impairment level and possible rehabilitation appropriateness. The physical therapist needs a tool that will measure all levels of impairment in a reasonable amount of time (about 20 minutes). Based on these qualifications, which tool should the therapist choose?**
- a) CNS
 - b) NIHSS
 - c) Fugl-Meyer Test
 - d) FIM
12. **While performing range-of-motion techniques to the lower extremities of a person with T2 paraplegia, the physical therapist notices that one leg has lost some hip range of motion, is slightly swollen, and is warm when touched. This patient is showing signs of:**
- a) Edema.
 - b) Deep vein thrombosis.
 - c) Severe spasticity.
 - d) Heterotopic ossification.
13. **In a patient with a classic C4 central cord syndrome, which of the following may not be a realistic functional outcome?**
- a) Ambulation
 - b) Independent feeding and grooming
 - c) Independent wheelchair locomotion
 - d) Independent bed mobility
14. **Impairments that occur as indirect effects of PD and that should be treated by a physical therapist include:**
- a) Bradykinesia, pain, and reduced spinal flexibility.
 - b) Pain, reduced spinal flexibility, and depression.
 - c) Cardiorespiratory deconditioning, tremor, and pain.
 - d) Pain, reduced spinal flexibility, and cardiorespiratory deconditioning.
15. **Of the following, the most appropriate outcomes of physical intervention for a patient in H&Y stage 1.5 would include:**
- a) Increase gastrocnemius and hamstring muscle flexibility and decrease depression.
 - b) Increase spinal flexibility and cardiorespiratory reserves.
 - c) Increase use of self-pacing strategies during sit-to-stand and bed mobility.
 - d) Prevent pneumonia and falls.
16. **Which of the following statements is false?**
- a) A positive sharp wave represents the summation of multiple muscle fibers.
 - b) Fibrillation potentials occur in denervated muscle tissue.
 - c) The electromyographic signal is electrically silent at rest.
 - d) Latency reflects the onset time of the motor action potential.

17. **Abnormal motor unit action potentials associated with lower motor neuron disease:**
- Have increased amplitude and duration.
 - Have a short duration and low amplitude.
 - Recruit early.
 - Are triphasic.
18. **If your patient had muscle weakness, and on electrical studies he demonstrated slowed conduction across the lesion site and muscle cell membrane instability was present, he would have:**
- Neuropraxia.
 - Axonopraxia.
 - Axonotmesis.
 - Neurotmesis.
19. **GBS is an acute inflammatory polyneuropathy that can result in primary demyelination. What else can occur?**
- Peripheral remyelination
 - Peripheral demyelination
 - Axonal degeneration
 - Anterior horn cell death
 - Spasticity
20. **Which of the following types of exercise is *not* recommended to a patient with ALS at any stage of the disease process?**
- Range of motion exercise
 - Stretching exercises
 - Mild to moderate aerobic conditioning
 - Exercise to the point of muscle fatigue
21. **Which of the following types of orthoses would *not* be an energy efficient option for a patient with ALS with bilateral leg weakness?**
- Knee-ankle-foot orthoses
 - Bilateral posterior leaf orthoses or posterior leaf splints
 - Hinged ankle-foot orthoses
 - None of the above—all would be energy-efficient options
22. **Which of the following strategies would not be appropriate for long-term management of cerebral perfusion pressure?**
- Maintaining neutral head and neck position
 - Providing mild hyperventilation
 - Removing space occupying masses
 - Preventing straining and Valsalva maneuvers
23. **A patient who is decerebrate (Glasgow Coma Scale score of 8) demonstrates bilateral ankle dorsiflexion range to neutral 2 weeks following traumatic brain injury. Which of the following interventions would be optimal to manage the patient's ankles at this stage of recovery?**
- Botulinum toxin injections
 - Serial casts
 - Bivalved serial casts
 - Motor point blocks
24. **Balanced input to the central nervous system is maintained during head movement in the healthy individual by:**
- A baseline symmetrical firing rate in the vestibular nuclei.
 - Monitoring of inputs by the cerebellum.
 - Symmetric changes in the firing rates of the right and left vestibular nerves.
 - Displacement of the cilia due to endolymph flow.
25. **Which of the intervention activities listed below is most likely to help improve the ability to use visual and vestibular inputs in a patient with reduced vestibular function?**
- Standing on a foam surface with eyes closed.
 - Tandem walking with eyes open on a firm surface.
 - Walking with eyes closed.
 - Tandem walking with eyes open on a foam surface.