Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. If a patient jams their metacarpal thumb bone in toward the hand, which carpal bone will be compressed?
   a. hamate
   b. pisiform
   c. capitate
   d. trapezium

2. Which incident can easily cause a fracture within the carpal bone structure?
   a. bracing one’s fall with an extended wrist when falling to the ground
   b. throwing a baseball repeatedly, even after arm is fatigued
   c. performing an excessive amount of bicep curl exercises
   d. pushing a heavy object above one’s head with misaligned arms

3. Making a fist will create which action of the metacarpophalangeal joints?
   a. extension
   b. flexion
   c. abduction
   d. adduction

4. Which muscle will have impeded nerve supply with injury to the radial nerve?
   a. flexor carpi radialis
   b. palmaris longus
   c. extensor carpi radialis
   d. pronator quadratus

5. Which muscle aids in performing a “thumbs up” sign?
   a. anconeus
   b. supinator
   c. abductor pollicis longus
   d. flexor pollicis longus

6. Extending the proximal and distal interphalangeal joints (PIP & DIP) will create which action?
   a. straighten fingers
   b. curl fingers
   c. spread fingers
   d. bring fingers together

7. Damage to the deep transverse metacarpal ligaments will most directly impact the functionality of which muscle set?
   a. lumbricals
   b. flexors
   c. extensors
   d. hypothenar
8. Gripping an item tightly in one’s hand involves the engagement of which muscle?
   a. extensor carpi ulnaris
   b. palmaris longus
   c. flexor carpi radialis
   d. pronator teres

9. Which of the following is an important contraindication to consider prior to performing joint mobilizations on a patient’s wrist?
   a. recent distal radius fracture
   b. healed distal radius fracture
   c. carpal tunnel syndrome
   d. joint capsule tightness

10. MCP joint abduction of the fingers is limited with the MCPs in flexion. Which of the following is the best explanation for this phenomenon?
    a. The MCP collateral ligaments are taut in the flexed position.
    b. The MCP collateral ligaments are lax in the flexed position.
    c. Tightness of the lumbricals inhibits abduction with the MCPs flexed.
    d. The palmar interossei are taut in this position and unable to abduct the MCPs.

11. Place your hands on a keyboard with your right index finger on the letter “L.” Which intrinsic muscle will allow you to move your index finger to the letter “K” without moving your wrist?
    a. 1st palmar interosseous
    b. 1st dorsal interosseous
    c. extensor digitorum
    d. adductor pollicis

12. The flexor and extensory muscles of the wrist contribute to occupational performance by:
    a. positioning the thumb for pinch
    b. contributing to force for finger flexion for gripping
    c. contributing to force for finger extension for object release
    d. stabilizing the wrist for gripping and object manipulation

13. Your patient had a laceration at the proximal, medial elbow with a complete transection of the nerve coming out of the cubital tunnel. If the injured nerve is left unrepaired, which of the following motions of the hand do you predict will be weak?
    a. forearm supination
    b. thumb abduction
    c. wrist extension
    d. ab/adduction at the MCP joints

14. Which muscle allows you to pinch a piece of paper between your thumb and side of your index finger without flexing the IP joint of the thumb (key pinch)?
    a. adductor pollicis
    b. flexor pollicis brevis
    c. 1st dorsal interossei
    d. flexor pollicis longus

15. Which of the following is the best explanation for why the MCP joints of the fingers cannot abduct in the flexed position?
    a. The volar interossei are insufficient with the MCPs flexed.
    b. The lumbricals prevent abduction with the MCPs flexed.
    c. The collateral ligaments of the MCPs are lax in flexion.
    d. The collateral ligaments of the MCPs are taut in flexion.
16. You are seeing a patient in the clinic who sustained a complete radial nerve injury at the level of the midshaft of the humerus. Which of the following activities would be most difficult for the patient to perform?
   a. zipping a jacket  c. typing on a keyboard
   b. picking up a small item from a flat surface  d. lateral pinch of a piece of paper

17. Pinching the fingers together highlights which muscle at the wrist?
   a. flexor carpi radialis  b. flexor carpi ulnaris
   c. extensor digitorum  d. palmaris longus

18. Wiggling your fingers, as if typing or playing piano, will create an undulating contraction of which muscle?
   a. extensor carpi radialis longus  b. extensor carpi radialis brevis
   c. extensor digitorum  d. extensor carpi ulnaris

19. What muscles contribute to the position of the hand when holding a sandwich for self-feeding?
   a. primarily intrinsics  c. lumbricals only
   b. primarily extrinsics  d. dorsal interossei only

20. Which of the following specialized sensory receptors provide the brain with the most information on limb and joint position in space?
   a. nociceptors  c. osmoreceptors
   b. baroreceptors  d. proprioceptors

21. In order to produce purposeful movement, the brain requires what to occur in advance?
   a. muscle memory  c. stereognosis
   b. proprioception  d. sensory input

22. Which of the following best describes sensation that comes solely from the skin?
   a. proprioception  c. cutaneous sensation
   b. somatosensation  d. dermaception

23. Having the ability to identify an object by touch alone is known as:
   a. stereognosis  c. muscle memory
   b. proprioception  d. primary sensation

24. Mechanoreceptors send information to the brain about what specific sensations?
   a. position in space  c. light touch
   b. angle of a joint  d. muscle tension

25. Pain or coarse touch travels up the spinal cord via which tracts?
   a. lateral corticospinal  c. anterior corticospinal
   b. dorsal column  d. spinothalamic

26. Sensory input passes into the spinal cord via which structure?
   a. dorsal nerve root  c. spinal tracts
   b. ventral nerve root  d. sensory cortex
27. Which of the following is a primary motor tract that transmits information to and from the brain and body about voluntary movement?
   a. corticospinal  
   b. spinothalamic  
   c. dorsal column  
   d. cutaneous

28. Conscious sensory information is received and processed by which area of the brain?
   a. vestibular system  
   b. cerebellum  
   c. basal ganglia  
   d. sensory cortex

29. The motor planning areas of the brain are located in which lobe?
   a. parietal  
   b. frontal  
   c. occipital  
   d. temporal

30. A gait pattern that results from a patient attempting to avoid pain is known as:
   a. ataxic gait  
   b. antalgic gait  
   c. circumduction gait  
   d. Trendelenburg gait

31. What is the formal term for walking?
   a. navigation  
   b. compensation  
   c. transportation  
   d. ambulation

32. What is the most important factor to consider when determining appropriate mobilization methods?
   a. age  
   b. body structure  
   c. safety  
   d. ground surface

33. Which technique is used to help patients transition from lying on the back to sitting on the edge of the bed without rotating the spine or hips?
   a. steamroller  
   b. logroll  
   c. bridging  
   d. planking

34. What is the purpose of a trapeze bar?
   a. to entertain the bedridden patient  
   b. to elevate a swollen extremity  
   c. to use the upper body for movement  
   d. to hold personal items for easy retrieval

35. What is the correct sequence of events within the stance phase of the gait cycle?
   a. heel strike > midstance > foot flat > heel-off > toe-off  
   b. toe-off > heel-on > mid stance > heel-off > heel strike  
   c. midstance > foot flat > heel-off > toe-off > heel strike  
   d. heel strike > foot flat > mid stance > heel-off > toe-off

36. During acceleration of the gait cycle, what type of force is applied to the foot from the ground?
   a. anterior shear force  
   b. downward compressive force  
   c. posterior shear force  
   d. left and right rotational force

37. Which muscle(s) are primarily involved with deceleration during the gait cycle?
   a. gluteals  
   b. gastrocnemius  
   c. quadriceps  
   d. fibularis
38. During the “heel-off” portion of the stance phase within the gait cycle, in what position is the hip joint of the stance leg?
   a. flexion  
   b. medial rotation  
   c. extension  
   d. adduction

39. Stride is best described as:
   a. a single stance phase for each extremity  
   b. a single swing phase for each extremity  
   c. a single stance and swing phase for each extremity  
   d. a single stance and swing phase for one extremity

40. In midstance of the gait cycle, the pelvis moves in which direction?
   a. shifts laterally toward the stance leg  
   b. rotates posteriorly to advance the swing leg  
   c. elevates with the stance leg  
   d. shifts laterally toward the swing leg

41. Which of the following determines the base of support while walking?
   a. step length  
   b. step width  
   c. cadence  
   d. stride

42. Which muscle plays a primary role in stabilizing the pelvis during ambulation?
   a. iliopsoas  
   b. quadratus lumborum  
   c. gluteus maximus  
   d. gluteus medius

43. An abnormal gait pattern that occurs due to weakness in the gluteus medius causing the pelvis to drop excessively on the swing leg side with each step is called:
   a. Trendelenburg gait  
   b. circumduction gait  
   c. pelvis drop  
   d. ataxic gait

44. Paralysis or weakness of an entire side of the body resulting from a neurological pathology will result in what type of gait pattern?
   a. scissor gait  
   b. antalgic gait  
   c. ataxic gait  
   d. hemiplegic gait

45. Narrowing or crossing-over of the legs while walking is what type of gait pattern?
   a. antalgic gait  
   b. ataxic gait  
   c. scissor gait  
   d. hemiplegic gait

46. What abnormal gait pattern is caused by weakness or paralysis of the ankle dorsiflexors, resulting in the toes coming into contact with the ground prior to heel strike?
   a. hemiplegic gait  
   b. steppage gait  
   c. circumduction gait  
   d. equinus gait

47. When range of motion and strength are not compromised, but a lack of coordination causes impairment in the gait pattern, it is known as:
   a. scissor gait  
   b. ataxic gait  
   c. Parkinsonian gait  
   d. antalgic gait
48. Circumduction gait is characterized by which of the following?
   a. staggering movements and loss of coordination
   b. isolated weakness of the dorsiflexors with preserved hip and knee strength
   c. swinging the leg out to the side of the body to propel it forward
   d. excessive dropping of the pelvis on the swing leg side

49. Shuffling the feet with flexion of the trunk is characteristic of which abnormal gait pattern?
   a. scissor
   b. Parkinsonian
   c. Trendelenburg
   d. equinus

50. For a patient with severe instability, which mobility device would provide the most support?
   a. walker
   b. single-point cane
   c. crutches
   d. quad cane

51. The top of a cane should be situated at the height of which anatomical structure in order to provide the most leverage?
   a. wrist crease
   b. mid-forearm
   c. greater trochanter
   d. palm

52. Tightness of which muscle group would contribute to a scissor gait pattern?
   a. hip abductors
   b. hip adductors
   c. hip extensors
   d. hip flexors

53. A person with weak hip flexors, hemiparesis, and/or foot drop is most likely to demonstrate which gait pattern?
   a. circumduction
   b. Parkinsonian
   c. Trendelenburg
   d. antalgic

54. The inability to flex the thumb, index, and middle fingers, as well as loss of the web space of the thumb due to high median nerve injury is known as:
   a. claw hand
   b. hand of benediction
   c. wrist drop
   d. stereognosis

55. Which aspect of the hand is designed for fine motor control?
   a. ulnar
   b. palmar
   c. radial
   d. volar

56. When splinting the hand to immobilize after an injury or surgery, which position is often preferred to prevent adaptive shortening and contractures of the joints of the fingers?
   a. claw hand
   b. intrinsic minus
   c. intrinsic plus
   d. cylindrical

57. In order for tenodesis to be useful in providing a functional grip for an individual with paralysis of the finger flexors, which other structure(s) of the hand and forearm must be intact?
   a. wrist extensors
   b. wrist flexors
   c. finger extensors
   d. hypothenars

58. Which of these is considered the most functionally limiting impairment?
   a. ulnar motor impairment
   b. radial motor impairment
   c. median motor and sensory impairment
   d. radial motor and sensory impairment
59. All but which of the following are recommendations to safely support a patient during a stand-pivot transfer?
   a. flex the knees and hips with a neutral spine
   b. direct the patient to surrender their full body weight
   c. pivot with the patient toward the transfer surface
   d. place one foot between the patient’s feet prior to transfer

60. A patient who functionally requires maximum assistance has a level of need within what percentage range?
   a. 1-25
   b. 26-50
   c. 51-75
   d. 76-100

61. Which transfer technique requires the patient to demonstrate the ability to safely bear weight through the legs and come to a full stand?
   a. squat-pivot
   b. sliding transfer
   c. stand-pivot
   d. dependent

62. Which transfer technique is the best option for patients who can only come to a half-standing position?
   a. stand-pivot
   b. squat-pivot
   c. sliding board
   d. dependent

63. Which of the following transfer techniques is considered advanced and should not be performed without sufficient competency?
   a. sliding board transfer
   b. harness transfer
   c. two-person squat transfer
   d. squat transfer

64. In a sliding board transfer, transfer surfaces are positioned:
   a. two-feet apart
   b. on either side of the patient
   c. across from each other
   d. adjacent to one another

65. All but which of the following are essential considerations when determining occupational performance regardless of the practice setting?
   a. positioning
   b. postural control
   c. functional mobility
   d. stage of healing

66. You are working with a patient with COVID who demonstrates significant weakness and requires minimal (less than 25%) assistance for ADLs and mobility. They have full knee extension and demonstrate a 4/5 MMT for hip extension and knee flexion.

Which of the following transfer techniques would be most appropriate?
   a. two-person stand-pivot
   b. one-person squat pivot
   c. one-person stand-pivot
   d. sliding board transfer
Completion
Complete each statement.

Please identify the following structure(s).

1. A
2. B
3. C
4. D
5. E
6. F