Board Exam Desk

Physical Therapy Reviewer

Physical Therapy Licensure Examination | PRC | 120 original questions

2026 Edition | Updated November 2026

Original board-style practice questions with an answer key.

Practice questions

Anatomy and Physiology

1. After a fall, a 68-year-old woman has a fracture of the surgical neck of the humerus and numbness over the lateral upper arm. Which nerve is most likely injured?

A. Radial nerve
B. Musculocutaneous nerve
C. Suprascapular nerve
D. Axillary nerve

2. A jeepney driver sustains a midshaft humeral fracture and cannot extend his wrist or fingers. Which nerve is most likely damaged?

A. Median nerve at the elbow
B. Ulnar nerve at the medial epicondyle
C. Axillary nerve at the quadrangular space
D. Radial nerve in the spiral groove

3. Following a mastectomy with axillary node dissection, a patient's scapula protrudes from the thorax when she pushes against a wall. Which muscle is weak?

A. Rhomboid major
B. Lower trapezius
C. Serratus anterior
D. Pectoralis minor

4. During single-limb stance on the right leg, a patient's left side of the pelvis drops. Which nerve is most likely impaired?

A. Left superior gluteal nerve
B. Right inferior gluteal nerve
C. Right superior gluteal nerve
D. Right femoral nerve

5. A basketball player fractures the neck of the fibula and now has foot drop with numbness over the dorsum of the foot. Which nerve is involved?

A. Tibial nerve
B. Saphenous nerve
C. Sural nerve
D. Common fibular nerve

6. Which muscle unlocks the fully extended knee at the start of flexion in weight bearing?

A. Biceps femoris
B. Gastrocnemius
C. Popliteus
D. Sartorius

7. Which rotator cuff muscle is the primary internal rotator of the shoulder?

A. Infraspinatus
B. Teres minor
C. Subscapularis
D. Supraspinatus

8. A patient with a deep laceration at the wrist cannot oppose the thumb, and the thenar eminence is flattened. Which nerve was cut?

A. Ulnar nerve
B. Superficial radial nerve
C. Anterior interosseous nerve
D. Median nerve

9. A patient pinching a sheet of paper flexes the thumb interphalangeal joint strongly to hold it. Which muscle is weak?

A. Flexor pollicis longus
B. Opponens pollicis
C. Adductor pollicis
D. Abductor pollicis brevis

10. Which receptor mediates autogenic inhibition, the relaxation of a muscle in response to high tension in its own tendon?

A. Muscle spindle
B. Golgi tendon organ
C. Pacinian corpuscle
D. Ruffini ending

11. Which muscle fiber type is best suited for maintaining upright posture for long periods?

A. Type IIa fast oxidative-glycolytic
B. Type IIx fast glycolytic
C. Type IIb fast glycolytic
D. Type I slow oxidative

12. A patient at rest has a heart rate of 75 beats/min and a stroke volume of 70 mL. What is the cardiac output?

A. 4.50 L/min
B. 5.25 L/min
C. 6.25 L/min
D. 1.07 L/min

13. A patient breathes 14 times per minute with a tidal volume of 500 mL. What is the minute ventilation?

A. 5.6 L/min
B. 7.0 L/min
C. 3.5 L/min
D. 8.4 L/min

14. A patient reports numbness along the little finger and the medial border of the hand. Which dermatome is most likely affected?

A. C6
B. C7
C. C8
D. T2

15. On myotome screening, a patient has isolated weakness of great toe extension. Which nerve root is most likely involved?

A. L3
B. L4
C. L5
D. S2

16. A patient with a lumbar disc herniation has a markedly reduced ankle (Achilles) reflex on one side. Which root is most likely compressed?

A. L2
B. L3
C. S1
D. L4

17. After a displaced femoral neck fracture, avascular necrosis of the femoral head is a concern mainly because of disruption of which artery?

A. Deep external pudendal artery
B. Superficial circumflex iliac artery
C. Descending genicular artery
D. Medial circumflex femoral artery

18. Which rotator cuff tendon passes beneath the acromion and is most commonly involved in subacromial impingement?

A. Supraspinatus
B. Subscapularis
C. Teres minor
D. Long head of triceps

19. After a difficult delivery with shoulder dystocia, a newborn holds one arm adducted, internally rotated and pronated with the elbow extended. Which part of the brachial plexus is injured?

A. Lower trunk (C8-T1)
B. Posterior cord
C. Upper trunk (C5-C6)
D. Medial cord

20. Which structure passes through the carpal tunnel?

A. Median nerve
B. Ulnar nerve
C. Ulnar artery
D. Palmaris longus tendon

Kinesiology

21. The biceps brachii flexing the elbow while the hand holds a load is an example of which lever class?

A. First class
B. Third class
C. Second class
D. Fourth class

22. Nodding the head at the atlanto-occipital joint, with the axis between the weight of the face and the pull of the neck extensors, is which lever class?

A. Second class
B. Third class
C. First class
D. Compound class

23. With the forearm horizontal, a patient holds a 20 N weight 30 cm from the elbow axis. If the elbow flexors insert 4 cm from the axis, what force must they produce? Ignore forearm weight.

A. 150 N
B. 120 N
C. 200 N
D. 75 N

24. A lever has an effort arm of 5 cm and a resistance arm of 35 cm. What is its mechanical advantage?

A. About 0.14
B. About 7.0
C. About 0.7
D. About 1.4

25. During open-chain knee extension, in which direction does the tibial articular surface glide on the femur?

A. Posteriorly, opposite to the bone movement
B. Anteriorly, the same direction as the bone moves
C. Medially, toward the midline
D. Inferiorly, away from the femur

26. During glenohumeral abduction, in which direction does the humeral head glide?

A. Superiorly
B. Inferiorly
C. Anteriorly
D. Medially

27. Using a 2:1 scapulohumeral rhythm, how much scapular upward rotation accompanies 150 degrees of total arm elevation?

A. 50 degrees
B. 75 degrees
C. 30 degrees
D. 60 degrees

28. What is the close-packed position of the glenohumeral joint?

A. Full abduction with lateral rotation
B. Slight flexion with medial rotation
C. Neutral adduction at the side
D. About 55 degrees abduction with 30 degrees horizontal adduction

29. During the last degrees of open-chain knee extension, what rotation occurs at the tibia?

A. Medial rotation of the tibia on the femur
B. Lateral rotation of the tibia on the femur
C. No rotation, only gliding
D. Lateral rotation of the femur on the tibia

30. A patient grips a dynamometer weakly when the wrist is held in full flexion but strongly in slight extension. This is mainly due to which phenomenon?

A. Passive insufficiency of the finger flexors
B. Active insufficiency of the finger flexors
C. Active insufficiency of the wrist extensors
D. Reciprocal inhibition of the finger flexors

31. A patient lying supine cannot raise the straight leg beyond 60 degrees of hip flexion, yet hip flexion with the knee bent reaches 120 degrees. What explains this?

A. Passive insufficiency of the hamstrings
B. Active insufficiency of the hamstrings
C. Active insufficiency of the iliopsoas
D. Passive insufficiency of the rectus femoris

32. In normal walking at a comfortable speed, approximately what percentage of the gait cycle is stance phase?

A. 40 percent
B. 50 percent
C. 60 percent
D. 80 percent

33. A patient throws the trunk backward right after initial contact on the involved limb. Which muscle group is most likely weak?

A. Hip abductors
B. Hip flexors
C. Ankle plantarflexors
D. Hip extensors

34. Just after heel contact, a patient's forefoot slaps loudly onto the floor. Which muscle action is deficient?

A. Concentric action of the plantarflexors
B. Eccentric control of the hip extensors
C. Concentric action of the quadriceps
D. Eccentric control of the ankle dorsiflexors

35. Shoulder flexion in the anatomical position occurs in which plane and around which axis?

A. Frontal plane, anteroposterior axis
B. Sagittal plane, mediolateral axis
C. Transverse plane, vertical axis
D. Sagittal plane, vertical axis

36. When a person slowly lowers into a squat, what type of contraction do the quadriceps perform?

A. Concentric
B. Eccentric
C. Isometric
D. Isokinetic

37. In the adult standing in anatomical position, the center of gravity lies approximately where?

A. Slightly anterior to the second sacral vertebra
B. At the level of the umbilicus behind L1
C. Slightly posterior to the hip joint centers
D. At the level of the xiphoid process

38. An elbow with an angle between the arm and the extended supinated forearm far greater than normal is described as what?

A. Cubitus varus
B. Genu recurvatum
C. Cubitus valgus
D. Cubitus recurvatum

39. An X-ray shows a femoral neck-shaft angle of 110 degrees in an adult. How is this described?

A. Coxa valga
B. Normal inclination
C. Excessive anteversion
D. Coxa vara

40. An increased Q-angle at the knee predisposes the patella to which tendency?

A. Medial tracking or subluxation
B. Superior migration (patella alta)
C. Lateral tracking or subluxation
D. Inferior migration (patella baja)

Pathology

41. A 40-year-old woman has symmetric swelling of the MCP and PIP joints of both hands with morning stiffness lasting over an hour. Which condition is most likely?

A. Rheumatoid arthritis
B. Osteoarthritis
C. Gouty arthritis
D. Psoriatic arthritis

42. Bony enlargements of the distal interphalangeal joints in an older adult with osteoarthritis are called what?

A. Bouchard nodes
B. Heberden nodes
C. Rheumatoid nodules
D. Tophi

43. A 25-year-old man has low back pain and stiffness that improve with activity, reduced chest expansion, and bilateral sacroiliitis on imaging. What is the likely diagnosis?

A. Lumbar spinal stenosis
B. Ankylosing spondylitis
C. Mechanical low back strain
D. Diffuse idiopathic skeletal hyperostosis

44. Parkinson disease results mainly from degeneration of which neurons?

A. Dopaminergic neurons of the substantia nigra
B. Cholinergic neurons of the nucleus basalis
C. Purkinje cells of the cerebellum
D. Anterior horn cells of the spinal cord

45. A 30-year-old woman notes blurred vision and leg weakness that worsen after a hot bath and improve when she cools down. Which condition is most consistent?

A. Myasthenia gravis
B. Multiple sclerosis
C. Amyotrophic lateral sclerosis
D. Guillain-Barre syndrome

46. Two weeks after a diarrheal illness, a patient develops symmetric weakness that started in the legs and is spreading upward, with absent reflexes. What is the likely diagnosis?

A. Transverse myelitis
B. Multiple sclerosis
C. Poliomyelitis
D. Guillain-Barre syndrome

47. A patient has muscle atrophy and fasciculations together with hyperreflexia and a positive Babinski sign, with normal sensation. Which disease fits best?

A. Spinal muscular atrophy
B. Amyotrophic lateral sclerosis
C. Multiple sclerosis
D. Peripheral neuropathy

48. A 5-year-old boy rises from the floor by walking his hands up his thighs and has enlarged calves. Which condition is most likely?

A. Spinal muscular atrophy type I
B. Duchenne muscular dystrophy
C. Spastic diplegic cerebral palsy
D. Myotonic dystrophy

49. A postmenopausal woman has a hip bone density T-score of -2.7. How is this classified?

A. Normal bone density
B. Osteopenia
C. Osteoporosis
D. Osteomalacia

50. A stroke patient has contralateral hemiparesis affecting the face and arm much more than the leg, with aphasia. Which artery is most likely occluded?

A. Left anterior cerebral artery
B. Left middle cerebral artery
C. Right posterior cerebral artery
D. Basilar artery

51. After a stab wound to one side of the thoracic cord, a patient has ipsilateral paralysis and loss of proprioception, with contralateral loss of pain and temperature. Which syndrome is this?

A. Brown-Sequard syndrome
B. Central cord syndrome
C. Anterior cord syndrome
D. Posterior cord syndrome

52. An elderly man with cervical spondylosis falls and hyperextends his neck. His arms are much weaker than his legs. Which syndrome is most likely?

A. Anterior cord syndrome
B. Brown-Sequard syndrome
C. Central cord syndrome
D. Cauda equina syndrome

53. A 13-year-old basketball player has a tender, enlarged tibial tuberosity that hurts with jumping. What is the likely condition?

A. Osgood-Schlatter disease
B. Sinding-Larsen-Johansson syndrome
C. Patellofemoral pain syndrome
D. Osteochondritis dissecans of the knee

54. A 6-year-old boy has a painless limp and limited hip abduction and internal rotation; imaging shows avascular necrosis of the femoral head. What is the diagnosis?

A. Slipped capital femoral epiphysis
B. Developmental dysplasia of the hip
C. Transient synovitis of the hip
D. Legg-Calve-Perthes disease

55. An obese 13-year-old reports knee pain and limps; the hip goes into external rotation when passively flexed. What should be suspected?

A. Legg-Calve-Perthes disease
B. Slipped capital femoral epiphysis
C. Osgood-Schlatter disease
D. Septic arthritis of the knee

56. Which spirometry finding is characteristic of an obstructive lung disease such as COPD?

A. Reduced FEV1/FVC ratio
B. Normal FEV1/FVC with reduced total lung capacity
C. Increased FEV1 with reduced residual volume
D. Reduced residual volume and total lung capacity

57. A patient with idiopathic pulmonary fibrosis would most likely show which pattern on pulmonary function testing?

A. Increased total lung capacity with a low FEV1/FVC
B. Increased residual volume with air trapping
C. Reduced lung volumes with a normal or high FEV1/FVC
D. Normal lung volumes with a low FEV1/FVC

58. Prolonged bed rest after surgery raises the risk of deep vein thrombosis mainly through which component of Virchow triad?

A. Endothelial injury
B. Venous stasis
C. Hypercoagulability
D. Arterial hypertension

59. A patient reports ptosis and double vision that worsen through the day and limb weakness that improves with rest. What is the underlying mechanism?

A. Demyelination of peripheral nerves
B. Antibodies against acetylcholine receptors
C. Loss of anterior horn cells
D. Degeneration of dorsal columns

60. Spastic diplegia in a child born at 29 weeks of gestation is most often associated with which brain lesion?

A. Basal ganglia kernicterus
B. Cerebellar hypoplasia
C. Cortical middle cerebral artery infarct
D. Periventricular leukomalacia

Physical Agents and Electrotherapy

61. A therapist wants to heat a tendon lying about 1.5 cm below the skin with ultrasound. Which frequency is most appropriate?

A. 1 MHz
B. 0.5 MHz
C. 3 MHz
D. 45 kHz

62. Pulsed ultrasound is set with an on-time of 2 ms and an off-time of 8 ms. What is the duty cycle?

A. 20 percent
B. 25 percent
C. 40 percent
D. 80 percent

63. An ultrasound unit delivers 6 W through a transducer with an effective radiating area of 5 cm2. What is the spatial average intensity?

A. 0.8 W/cm2
B. 1.5 W/cm2
C. 1.2 W/cm2
D. 30 W/cm2

64. Over which area is therapeutic continuous ultrasound contraindicated?

A. A chronic healed hamstring strain
B. A shoulder with adhesive capsulitis
C. The low back and abdomen of a pregnant patient
D. A chronic lateral epicondylalgia

65. At what temperature range is the water in a hydrocollator unit usually kept for moist hot packs?

A. About 71 to 79 degrees Celsius
B. About 40 to 45 degrees Celsius
C. About 50 to 55 degrees Celsius
D. About 90 to 100 degrees Celsius

66. What is the usual temperature of a paraffin bath for hand treatment?

A. About 38 to 40 degrees Celsius
B. About 52 to 54 degrees Celsius
C. About 62 to 65 degrees Celsius
D. About 70 to 75 degrees Celsius

67. During an ice massage, in what order does a patient usually feel the sensations?

A. Cold, burning, aching, numbness
B. Numbness, cold, aching, burning
C. Aching, cold, numbness, burning
D. Burning, numbness, cold, aching

68. A patient with fingers that turn white then blue in cold weather is referred for elbow pain. Which agent should be avoided?

A. Moist hot pack
B. Pulsed ultrasound
C. Conventional TENS
D. Ice massage

69. Which parameter set describes conventional (high-rate) TENS?

A. Low frequency, long pulse duration, motor-level intensity
B. Low frequency bursts at noxious intensity
C. High frequency at intensity producing strong tetany
D. High frequency, short pulse duration, sensory-level intensity

70. Acupuncture-like TENS at 2 Hz with visible muscle twitches is thought to relieve pain mainly through which mechanism?

A. Release of endogenous opioids
B. Closing the spinal gate through A-beta input
C. Direct blockade of C-fiber conduction
D. Increased local tissue temperature

71. An NMES program for the quadriceps uses 10 seconds on and 50 seconds off. What is the duty cycle?

A. About 20 percent
B. About 25 percent
C. About 17 percent
D. About 83 percent

72. A current is driven by 50 V through a tissue resistance of 1,000 ohms. What is the current?

A. 50 mA
B. 5 mA
C. 20 mA
D. 500 mA

73. Dexamethasone sodium phosphate carries a negative charge. Under which electrode should it be placed for iontophoresis?

A. Anode
B. Cathode
C. Either electrode equally
D. The dispersive electrode only

74. An iontophoresis dose of 40 mA-min is ordered and the current is set at 2.5 mA. How long should the treatment last?

A. 16 minutes
B. 10 minutes
C. 20 minutes
D. 12 minutes

75. Which patient should not receive continuous shortwave diathermy over the chest?

A. A patient with chronic low back stiffness
B. A patient with an implanted cardiac pacemaker
C. A patient with healed rib contusion
D. A patient with mild thoracic muscle spasm

76. An infrared lamp is moved from 50 cm to 75 cm from the skin. What fraction of the original intensity reaches the skin?

A. About 0.67
B. About 0.25
C. About 0.33
D. About 0.44

77. According to the cosine law, radiant energy is absorbed most when the rays strike the skin at what angle?

A. Perpendicular to the surface
B. At 45 degrees to the surface
C. Parallel to the surface
D. At 30 degrees to the surface

78. What term describes the smallest ultraviolet dose that produces a faint, just-perceptible reddening that fades within about a day?

A. Second-degree erythema
B. Suberythemal dose
C. Minimal erythemal dose
D. Third-degree erythema

79. A 70-kg patient is to receive lumbar mechanical traction. If separation of the vertebrae requires about half of body weight, roughly what force is needed?

A. 7 kg
B. 14 kg
C. 70 kg
D. 35 kg

80. An interferential unit uses carrier frequencies of 4,000 Hz and 4,100 Hz. What is the resulting beat frequency?

A. 50 Hz
B. 4,050 Hz
C. 100 Hz
D. 8,100 Hz

Therapeutic Exercise

81. Using the Karvonen formula, what is the target heart rate for a 50-year-old with a resting heart rate of 70 beats/min exercising at 60 percent intensity?

A. 102 beats/min
B. 130 beats/min
C. 112 beats/min
D. 142 beats/min

82. A 45-year-old is told to exercise at 70 percent of age-predicted maximal heart rate (220 minus age). What is the target?

A. About 123 beats/min
B. About 105 beats/min
C. About 140 beats/min
D. About 154 beats/min

83. On the 6 to 20 Borg scale, which rating corresponds to moderate, somewhat hard exercise commonly targeted in cardiac rehabilitation?

A. 12 to 13
B. 6 to 7
C. 9 to 10
D. 17 to 19

84. A patient's oxygen consumption during cycling is 24.5 mL/kg/min. How many METs is this?

A. 5 METs
B. 3.5 METs
C. 8.5 METs
D. 7 METs

85. A 60-kg patient walks at 5 METs for 30 minutes. Using kcal/min = METs x 3.5 x kg / 200, how many kilocalories are burned?

A. About 105 kcal
B. About 210 kcal
C. About 158 kcal
D. About 63 kcal

86. In the DeLorme progressive resistive exercise program, how are three sets of 10 repetitions organized?

A. 100 percent, 75 percent, then 50 percent of the 10-RM
B. 50 percent, 75 percent, then 100 percent of the 10-RM
C. Three sets at 100 percent of the 10-RM
D. 25 percent, 50 percent, then 75 percent of the 1-RM

87. Which progressive resistive approach starts with the full 10-RM and decreases the load in later sets to account for fatigue?

A. Oxford technique
B. DeLorme technique
C. DAPRE technique
D. Circuit weight training

88. In the upper extremity PNF D2 flexion pattern, which shoulder motions occur at the end of the pattern?

A. Flexion, abduction and external rotation
B. Flexion, adduction and external rotation
C. Extension, abduction and internal rotation
D. Extension, adduction and internal rotation

89. A patient with tight hamstrings performs an isometric hamstring contraction against resistance, then relaxes as the therapist moves the leg into more hip flexion. Which technique is this?

A. Rhythmic stabilization
B. Repeated contractions
C. Hold-relax
D. Slow reversal

90. Which PNF technique uses alternating isometric contractions of agonists and antagonists without relaxation to improve stability?

A. Contract-relax
B. Rhythmic stabilization
C. Rhythmic initiation
D. Agonist reversal

91. Which type of exercise is performed with a machine that keeps limb velocity constant while resistance varies with the patient's effort?

A. Isotonic
B. Isometric
C. Plyometric
D. Isokinetic

92. For most adults, what duration of a single static stretch is commonly recommended for improving muscle flexibility?

A. About 30 seconds
B. About 3 seconds
C. About 5 minutes
D. About 10 minutes

93. Shortly after a stable proximal humerus fracture, which exercise uses gravity to provide gentle shoulder motion with minimal muscle activity?

A. Wall push-ups
B. Resisted shoulder abduction
C. Overhead pulley with weights
D. Codman pendulum exercises

94. Which exercise program uses postural changes of elevation, dependency and horizontal rest to improve circulation in peripheral arterial insufficiency?

A. Frenkel exercises
B. Williams flexion exercises
C. Codman exercises
D. Buerger-Allen exercises

95. A patient with sensory ataxia from loss of proprioception would benefit most from which program?

A. Buerger-Allen exercises
B. Kegel exercises
C. Brandt-Daroff exercises
D. Frenkel exercises

96. A patient with low back pain and leg symptoms notes that the leg pain retreats toward the spine during repeated prone press-ups. Which approach is most appropriate?

A. Flexion-based Williams exercises
B. Strict bed rest for one week
C. Extension-based directional preference exercises
D. Lumbar flexion stretches in long sitting

97. Which training principle states that the body adapts specifically to the demands placed on it?

A. Overload principle
B. Reversibility principle
C. SAID principle
D. Detraining principle

98. A patient stands in a pool with water at the level of the anterior superior iliac spines. Approximately what percentage of body weight is borne on the legs?

A. About 10 percent
B. About 50 percent
C. About 75 percent
D. About 90 percent

99. During resistance training, what instruction helps a patient with coronary artery disease avoid the Valsalva maneuver?

A. Hold the breath at peak effort
B. Inhale during the lifting phase
C. Breathe only through the nose
D. Exhale during the lifting phase

100. A patient who began a downhill walking program reports sore thighs 48 hours later. What does this most likely represent?

A. Acute muscle rupture during exercise
B. Compartment syndrome needing surgery
C. Delayed-onset muscle soreness from eccentric work
D. Overload from concentric fatigue only

Physical Therapy Practice and Ethics

101. Which Philippine law regulates the practice of physical therapy and occupational therapy?

A. Republic Act 9173
B. Republic Act 10912
C. Republic Act 5680
D. Republic Act 7277

102. A neighbor of your patient asks you at a mall about the patient's diagnosis and progress. What should you do?

A. Politely decline and keep the information confidential
B. Share only the diagnosis since it is not sensitive
C. Share progress details since the neighbor is concerned
D. Tell the neighbor to read the patient's chart

103. A competent adult patient refuses the gait training planned for today after you explain its benefits and risks. What is the most appropriate action?

A. Proceed anyway because it is in the patient's best interest
B. Ask a family member to consent on the patient's behalf
C. Discharge the patient from therapy immediately
D. Respect the refusal, document it, and inform the referring physician

104. When measuring elbow flexion with a goniometer, where is the axis placed?

A. Over the olecranon process
B. Over the medial epicondyle of the humerus
C. Over the radial styloid process
D. Over the lateral epicondyle of the humerus

105. In manual muscle testing, a patient moves through full range against gravity but tolerates no added resistance. What grade is this?

A. 2 (Poor)
B. 4 (Good)
C. 3 (Fair)
D. 1 (Trace)

106. A patient can complete full range of motion only when the limb is positioned with gravity eliminated. What manual muscle test grade is this?

A. 1 (Trace)
B. 3 (Fair)
C. 0 (Zero)
D. 2 (Poor)

107. After a pivoting injury, a patient's knee shows increased anterior tibial translation with a soft end-feel when tested at 20 to 30 degrees of flexion. Which structure is likely torn?

A. Posterior cruciate ligament
B. Anterior cruciate ligament
C. Medial collateral ligament
D. Lateral meniscus

108. A click and joint-line pain occur when the knee is flexed, rotated and then extended. What does this test assess?

A. Anterior cruciate ligament tear
B. Patellar instability
C. Iliotibial band tightness
D. Meniscal tear

109. Supine with one knee held to the chest, a patient's opposite thigh rises off the table. What does this finding suggest?

A. Hip flexor tightness on the raised side
B. Hamstring tightness on the raised side
C. Hip abductor tightness on the flexed side
D. Quadriceps weakness on the raised side

110. In side-lying, the patient's upper leg remains abducted when the extended hip is allowed to drop toward the table. What does this suggest?

A. Tightness of the iliotibial band and tensor fasciae latae
B. Weakness of the gluteus medius
C. Tightness of the hip adductors
D. Piriformis syndrome

111. Extension, side-bending and axial compression of the neck reproduce a patient's arm pain. What does this suggest?

A. Thoracic outlet syndrome
B. Cervical muscle strain
C. Rotator cuff tendinopathy
D. Cervical radiculopathy

112. Holding both wrists in full flexion for one minute reproduces tingling in the thumb, index and middle fingers. Which condition is suspected?

A. Cubital tunnel syndrome
B. De Quervain tenosynovitis
C. Cervical radiculopathy at C8
D. Carpal tunnel syndrome

113. A new mother has pain at the radial wrist when she makes a fist over her thumb and deviates the wrist ulnarly. Which tendons are involved?

A. Abductor pollicis longus and extensor pollicis brevis
B. Extensor pollicis longus and extensor indicis
C. Flexor carpi radialis and palmaris longus
D. Extensor carpi radialis longus and brevis

114. A patient opens the eyes to pain, speaks inappropriate words, and localizes to painful stimuli. What is the Glasgow Coma Scale score?

A. 8
B. 9
C. 10
D. 12

115. On the Modified Ashworth Scale, a catch followed by minimal resistance through less than half of the remaining range is graded as what?

A. 1
B. 1+
C. 2
D. 3

116. In Brunnstrom's stages of motor recovery after stroke, at which stage does spasticity peak while voluntary movement occurs within synergies?

A. Stage 1
B. Stage 3
C. Stage 2
D. Stage 5

117. A patient with a complete spinal cord injury has strong wrist extensors but no elbow extension. A tenodesis grasp would be trained. What is the most likely neurological level?

A. C4
B. C8
C. T1
D. C6

118. What is the maximum total score on the Berg Balance Scale?

A. 56
B. 40
C. 48
D. 64

119. A patient's hip width measured in sitting is 38 cm. Using the common rule of adding 5 cm, what wheelchair seat width is appropriate?

A. 38 cm
B. 48 cm
C. 40 cm
D. 43 cm

120. A patient with a painful right knee uses a single cane in the left hand and must climb up a flight of stairs without a handrail. What sequence should you teach?

A. Step up with the right leg, then bring up the left leg and cane
B. Step up with the left leg, then bring up the right leg and cane
C. Place the cane first, then step up with the right leg
D. Step up with both legs together, then lift the cane

Answer key

Physical Therapy

1. D. Axillary nerve

The axillary nerve wraps around the surgical neck and supplies the deltoid, teres minor and the skin over the lateral shoulder.

2. D. Radial nerve in the spiral groove

The radial nerve runs in the spiral groove of the humeral shaft; injury there produces wrist drop.

3. C. Serratus anterior

Medial winging on wall push-up indicates serratus anterior weakness from injury to the long thoracic nerve, which is at risk during axillary surgery.

4. C. Right superior gluteal nerve

The stance-side hip abductors (gluteus medius and minimus, superior gluteal nerve) keep the opposite pelvis level; right-side weakness lets the left pelvis drop.

5. D. Common fibular nerve

The common fibular nerve winds around the fibular neck; its deep and superficial branches supply the dorsiflexors and dorsum of the foot.

6. C. Popliteus

The popliteus laterally rotates the femur on the fixed tibia, reversing the screw-home lock so flexion can begin.

7. C. Subscapularis

The subscapularis inserts on the lesser tubercle and medially rotates the humerus; the other cuff muscles abduct or laterally rotate.

8. D. Median nerve

The recurrent branch of the median nerve supplies the thenar muscles; loss produces ape-hand deformity. The anterior interosseous branch arises above the wrist and has no thenar supply.

9. C. Adductor pollicis

Froment sign: weakness of the ulnar-innervated adductor pollicis is compensated by flexor pollicis longus (median nerve).

10. B. Golgi tendon organ

Golgi tendon organs sense tension and, through Ib afferents and inhibitory interneurons, reduce activity in the same muscle.

11. D. Type I slow oxidative

Type I fibers have high mitochondrial and capillary density, making them highly fatigue resistant for sustained postural work.

12. B. 5.25 L/min

Cardiac output = heart rate x stroke volume = 75 x 70 mL = 5,250 mL/min = 5.25 L/min.

13. B. 7.0 L/min

Minute ventilation = tidal volume x respiratory rate = 0.5 L x 14 = 7.0 L/min.

14. C. C8

The C8 dermatome covers the little finger and ulnar side of the hand; C6 covers the thumb and C7 the middle finger.

15. C. L5

Extensor hallucis longus is the classic L5 key muscle; L4 is tested with ankle dorsiflexion and S1 with plantarflexion.

16. C. S1

The Achilles reflex is mediated mainly by the S1 root; the patellar reflex is mainly L4.

17. D. Medial circumflex femoral artery

Retinacular branches of the medial circumflex femoral artery supply most of the femoral head and run along the neck.

18. A. Supraspinatus

The supraspinatus tendon lies in the subacromial space, where it can be compressed between the humeral head and the coracoacromial arch.

19. C. Upper trunk (C5-C6)

This waiter's tip posture is Erb palsy, from traction on the upper trunk that weakens the shoulder abductors, external rotators and elbow flexors.

20. A. Median nerve

The median nerve and the long finger and thumb flexor tendons pass deep to the flexor retinaculum; the ulnar nerve and artery pass through Guyon canal.

21. B. Third class

In elbow flexion the effort (biceps insertion) lies between the axis (elbow) and the resistance (load in the hand), a third-class lever.

22. C. First class

The axis lies between the effort and the resistance, which defines a first-class lever.

23. A. 150 N

Moments balance: F x 4 cm = 20 N x 30 cm, so F = 600 / 4 = 150 N.

24. A. About 0.14

Mechanical advantage = effort arm / resistance arm = 5 / 35 = 0.14, typical of a third-class lever that favors speed and range.

25. B. Anteriorly, the same direction as the bone moves

The concave tibial plateau moves on the convex femoral condyles, so roll and glide occur in the same direction as the shaft.

26. B. Inferiorly

The convex humeral head moves on the concave glenoid, so it glides opposite to the direction of the shaft's movement.

27. A. 50 degrees

With a 2:1 ratio, one third of the motion is scapular: 150 / 3 = 50 degrees scapular and 100 degrees glenohumeral.

28. A. Full abduction with lateral rotation

Maximal abduction with lateral rotation tightens the capsule and gives maximal congruence; the 55/30 position is the resting (loose-packed) position.

29. B. Lateral rotation of the tibia on the femur

In the screw-home mechanism the tibia rotates laterally in open chain; in closed chain the femur rotates medially on the tibia.

30. B. Active insufficiency of the finger flexors

Shortened across both wrist and fingers, the multijoint finger flexors cannot generate adequate tension.

31. A. Passive insufficiency of the hamstrings

The two-joint hamstrings cannot lengthen enough over both hip and knee at once, so they limit hip flexion only when the knee is extended.

32. C. 60 percent

Stance takes about 60 percent and swing about 40 percent of the cycle at normal speed.

33. D. Hip extensors

A backward lean moves the line of gravity behind the hip, reducing the demand on weak hip extensors (gluteus maximus lurch).

34. D. Eccentric control of the ankle dorsiflexors

From initial contact to foot flat, the tibialis anterior lowers the foot eccentrically; weakness causes foot slap.

35. B. Sagittal plane, mediolateral axis

Flexion and extension occur in the sagittal plane about a mediolateral (frontal) axis.

36. B. Eccentric

The quadriceps lengthen while producing tension to control knee flexion against gravity.

37. A. Slightly anterior to the second sacral vertebra

The center of gravity of the adult body is commonly located just anterior to S2.

38. C. Cubitus valgus

An exaggerated carrying angle, with the forearm deviated laterally, is cubitus valgus; a reduced or reversed angle is cubitus varus.

39. D. Coxa vara

The normal adult angle of inclination is about 125 degrees; a smaller angle is coxa vara.

40. C. Lateral tracking or subluxation

A larger Q-angle increases the lateral pull of the quadriceps on the patella.

41. A. Rheumatoid arthritis

Symmetric small-joint polyarthritis with prolonged morning stiffness is typical of rheumatoid arthritis.

42. B. Heberden nodes

Heberden nodes are osteophytes at the DIP joints; Bouchard nodes occur at the PIP joints.

43. B. Ankylosing spondylitis

Inflammatory back pain in a young male with sacroiliitis and reduced chest expansion suggests ankylosing spondylitis.

44. A. Dopaminergic neurons of the substantia nigra

Loss of nigrostriatal dopaminergic neurons causes bradykinesia, rigidity and resting tremor.

45. B. Multiple sclerosis

Temporary worsening with heat (Uhthoff phenomenon) is characteristic of demyelinating disease such as multiple sclerosis.

46. D. Guillain-Barre syndrome

Acute ascending, symmetric, areflexic weakness after an infection is typical of Guillain-Barre syndrome, a peripheral demyelinating polyneuropathy.

47. B. Amyotrophic lateral sclerosis

Combined upper and lower motor neuron signs without sensory loss are the hallmark of ALS.

48. B. Duchenne muscular dystrophy

The Gowers sign and calf pseudohypertrophy in a young boy point to X-linked Duchenne muscular dystrophy.

49. C. Osteoporosis

A T-score of -2.5 or lower is osteoporosis; between -1.0 and -2.5 is osteopenia (low bone mass).

50. B. Left middle cerebral artery

MCA territory covers the lateral motor cortex for face and arm and, in the dominant hemisphere, language areas.

51. A. Brown-Sequard syndrome

Hemisection affects the ipsilateral corticospinal tract and dorsal columns and the already-crossed spinothalamic fibers.

52. C. Central cord syndrome

Central cord lesions affect the medially placed cervical fibers of the corticospinal tracts, so upper limbs are weaker than lower limbs.

53. A. Osgood-Schlatter disease

Traction apophysitis at the tibial tuberosity in an active adolescent is Osgood-Schlatter disease.

54. D. Legg-Calve-Perthes disease

Idiopathic avascular necrosis of the femoral head in a boy aged about 4 to 8 years is Legg-Calve-Perthes disease.

55. B. Slipped capital femoral epiphysis

SCFE often presents with referred knee pain in obese adolescents and obligatory external rotation with hip flexion.

56. A. Reduced FEV1/FVC ratio

Airflow obstruction reduces FEV1 more than FVC, lowering the ratio, often with increased residual volume.

57. C. Reduced lung volumes with a normal or high FEV1/FVC

Fibrosis restricts lung expansion, reducing volumes proportionally so the FEV1/FVC ratio is preserved or elevated.

58. B. Venous stasis

Immobility reduces the calf muscle pump, leading to slow venous flow (stasis).

59. B. Antibodies against acetylcholine receptors

Myasthenia gravis is an autoimmune disorder of the neuromuscular junction causing fatigable weakness.

60. D. Periventricular leukomalacia

Preterm white-matter injury around the ventricles affects fibers to the legs, producing spastic diplegia.

61. C. 3 MHz

Higher frequency is absorbed more superficially; 3 MHz targets roughly 1 to 2 cm, while 1 MHz reaches deeper tissues.

62. A. 20 percent

Duty cycle = on / (on + off) = 2 / 10 = 20 percent.

63. C. 1.2 W/cm2

Intensity = power / ERA = 6 W / 5 cm2 = 1.2 W/cm2.

64. C. The low back and abdomen of a pregnant patient

Ultrasound over the pregnant uterus may harm the fetus, so it is contraindicated there.

65. A. About 71 to 79 degrees Celsius

Hot packs are stored in water around 71 to 79 C (160 to 170 F) and applied over several towel layers.

66. B. About 52 to 54 degrees Celsius

Paraffin mixed with mineral oil melts at a lower point and is used at roughly 52 to 54 C (125 to 130 F).

67. A. Cold, burning, aching, numbness

The typical progression with cold application is cold, then burning, then aching, then numbness.

68. D. Ice massage

Raynaud phenomenon is a contraindication to cold therapy because cold triggers vasospasm.

69. D. High frequency, short pulse duration, sensory-level intensity

Conventional TENS uses about 80 to 150 Hz with short pulses at a comfortable tingling level, acting through the gate control mechanism.

70. A. Release of endogenous opioids

Low-frequency, motor-level stimulation is associated with endorphin release, giving a slower but longer-lasting effect.

71. C. About 17 percent

Duty cycle = 10 / (10 + 50) = 10 / 60 = about 16.7 percent, an on:off ratio of 1:5.

72. A. 50 mA

By Ohm's law, I = V / R = 50 / 1,000 = 0.05 A = 50 mA.

73. B. Cathode

Like charges repel, so a negatively charged drug is driven into the tissue from the negative electrode (cathode).

74. A. 16 minutes

Time = dose / current = 40 / 2.5 = 16 minutes.

75. B. A patient with an implanted cardiac pacemaker

Electromagnetic fields can interfere with pacemakers and heat metal leads, so diathermy is contraindicated.

76. D. About 0.44

Inverse square law: (50/75)^2 = 0.444.

77. A. Perpendicular to the surface

Absorption is greatest when the angle between the rays and the normal to the surface is zero.

78. C. Minimal erythemal dose

The minimal erythemal dose is used as the reference unit for dosing UV therapy.

79. D. 35 kg

About 50 percent of body weight is commonly cited for lumbar separation: 0.5 x 70 kg = 35 kg.

80. C. 100 Hz

The beat frequency equals the difference between the two carriers: 4,100 - 4,000 = 100 Hz.

81. B. 130 beats/min

HRmax = 220 - 50 = 170; HRR = 170 - 70 = 100; THR = 0.60 x 100 + 70 = 130 beats/min.

82. A. About 123 beats/min

HRmax = 220 - 45 = 175; 0.70 x 175 = 122.5, about 123 beats/min.

83. A. 12 to 13

Ratings of about 12 to 14 correspond to somewhat hard effort, a common moderate training range.

84. D. 7 METs

One MET is 3.5 mL/kg/min, so 24.5 / 3.5 = 7 METs.

85. C. About 158 kcal

5 x 3.5 x 60 / 200 = 5.25 kcal/min; 5.25 x 30 = 157.5, about 158 kcal.

86. B. 50 percent, 75 percent, then 100 percent of the 10-RM

DeLorme progresses from lighter to full 10-RM loads as a warm-up; the Oxford technique reverses the order.

87. A. Oxford technique

The Oxford method uses 100, 75 and then 50 percent of the 10-RM.

88. A. Flexion, abduction and external rotation

D2 flexion ends with the arm up and out, as in drawing a sword back overhead: flexion, abduction and external rotation.

89. C. Hold-relax

Hold-relax uses an isometric contraction of the tight muscle followed by relaxation and passive lengthening, using autogenic inhibition.

90. B. Rhythmic stabilization

Rhythmic stabilization applies alternating isometric resistance to promote co-contraction and joint stability.

91. D. Isokinetic

Isokinetic devices fix the angular velocity and accommodate resistance to the force applied.

92. A. About 30 seconds

Holding a static stretch for about 30 seconds is a widely recommended and effective dose for flexibility.

93. D. Codman pendulum exercises

Pendulum exercises let the arm hang and swing, distracting and moving the joint with little active contraction.

94. D. Buerger-Allen exercises

Buerger-Allen exercises alternate leg positions to promote collateral circulation.

95. D. Frenkel exercises

Frenkel exercises use slow, precise, visually guided repeated movements to improve coordination.

96. C. Extension-based directional preference exercises

Centralization with repeated extension indicates a directional preference, so extension exercises are indicated.

97. C. SAID principle

Specific Adaptation to Imposed Demands means training gains match the type of exercise performed.

98. B. About 50 percent

Immersion to the ASIS reduces weight bearing to about half; to the xiphoid about one third; to C7 about 10 percent.

99. D. Exhale during the lifting phase

Breath holding against a closed glottis sharply raises blood pressure; exhaling on exertion prevents it.

100. C. Delayed-onset muscle soreness from eccentric work

DOMS typically peaks 24 to 72 hours after unaccustomed eccentric activity such as downhill walking.

101. C. Republic Act 5680

RA 5680 (1969) is the Philippine Physical and Occupational Therapy Law; RA 9173 is nursing, RA 10912 is CPD and RA 7277 is the Magna Carta for disabled persons.

102. A. Politely decline and keep the information confidential

Patient information may be disclosed only with the patient's consent or legal authority.

103. D. Respect the refusal, document it, and inform the referring physician

Respecting autonomy requires honoring an informed refusal while documenting and communicating it.

104. D. Over the lateral epicondyle of the humerus

The goniometer axis is aligned with the lateral epicondyle, the stationary arm along the humerus and the moving arm along the radius.

105. C. 3 (Fair)

Grade 3 is full range against gravity without resistance.

106. D. 2 (Poor)

Grade 2 means full range in the gravity-minimized position; grade 1 is only a palpable contraction.

107. B. Anterior cruciate ligament

The Lachman test assesses anterior translation near 20 to 30 degrees of flexion and is sensitive for ACL tears.

108. D. Meniscal tear

The McMurray test uses rotation and extension to trap a torn meniscus between the femur and tibia.

109. A. Hip flexor tightness on the raised side

In the Thomas test, the extended thigh lifting off the table indicates tightness of the hip flexors.

110. A. Tightness of the iliotibial band and tensor fasciae latae

A positive Ober test shows that the ITB and TFL prevent the limb from adducting.

111. D. Cervical radiculopathy

A positive Spurling test narrows the intervertebral foramen and reproduces radicular symptoms.

112. D. Carpal tunnel syndrome

The Phalen test compresses the median nerve in the carpal tunnel.

113. A. Abductor pollicis longus and extensor pollicis brevis

A positive Finkelstein test indicates De Quervain tenosynovitis of the first dorsal compartment.

114. C. 10

Eye 2 + verbal 3 + motor 5 = 10, which falls in the moderate injury range of 9 to 12.

115. B. 1+

Grade 1+ is a slight increase in tone with a catch and minimal resistance through the rest (less than half) of the range.

116. B. Stage 3

In stage 3, spasticity is at its height and the patient gains voluntary control of synergy patterns.

117. D. C6

C6 is the level with functional wrist extension, which drives tenodesis grasp; triceps (C7) is absent.

118. A. 56

The Berg has 14 items scored 0 to 4, giving a maximum of 56.

119. D. 43 cm

Seat width = hip width + about 5 cm (2 inches): 38 + 5 = 43 cm.

120. B. Step up with the left leg, then bring up the right leg and cane

Going up, the stronger leg leads and the involved leg follows with the cane; going down, the cane and involved leg lead.

Topics to review

• Functional anatomy and biomechanics

• Musculoskeletal and neurological examination

• Cardiopulmonary rehabilitation and exercise selection

• Outcome measures and professional practice

Online question banks and study resources

Physical Therapy - Pass Harbor (Question bank)

Official PRC board information

Current PRC exam programs

Independent study material prepared by Board Exam Desk.