



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF MAY-AUGUST 2023 SEMESTER EXAMINATIONS**

UNIT CODE: PHT 314

NAME: MUSCULOSKELETAL 2

DATE: TUESDAY 15TH AUGUST 2023

TIME: TWO HOURS

START: 6:00 PM STOP: 8:00pm

INSTRUCTIONS

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
3. This online exam shall take 2 hours
4. Late submission of the answers will not be accepted
5. Ensure your web-camera is on at all times during the examination period
6. No movement is allowed during the examination
7. Idling of your machine for 5 min or more will lead to lock out from the exam
8. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating
9. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
10. In case you have any questions call the invigilator for this exam on Tel 0727151422/0710632452 and or the Head of Department on Tel 0720 491032
11. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke
12. This exam questions are distributed as follows ;30 lower extremity and 20 global questions

All the Best!!

1. You are evaluating a 75-year-old male for right groin pain. The pain is along the groin and into the medial thigh. His pain is worst when he first wakes up in the morning and tries to walk. He also reports hip stiffness in the morning for about an hour until he "works it out." He also reports he has a lot of popping noise and a grinding sensation in hip when he stands from a low seat. On examination, he demonstrates decreased external rotation and flexion ROM. Which of the following special tests would be most helpful in diagnosing the MOST probable diagnosis?

- a. FADDIR
- b. Scour
- c. FABER
- d. Trendelenburg

2. You are evaluating a 14-year-old female with right groin pain. The pain began after she attempted to do a back flip at home. She reported she felt a sharp pulling sensation. She and her mother thought it would go away with rest. It has now been 4 days and she continues to have pain. She walks into the department with an antalgic gait pattern. She does not extend the right hip beyond neutral in terminal stance. Which of the following tests and results would be most probable based on the patient's history?

- a. Positive Thomas test with pain in the groin
- b. Positive scour with crepitus
- c. Positive Trendelenburg with hip drop
- d. Positive Obers with pain along the lateral thigh

3. You are examining a 55-year-old patient and find the following results: Limited hip flexion AROM with a deep aching pain, Limited hip internal rotation with a deep aching pain, Hip gross strength (flexion, extension, ABDuction, Internal rotation and external rotation) within normal limits, negative trendelenburg, negative scour, positive FADDIR.

What is the MOST probable diagnosis?

- a. Hip osteoarthritis
- b. Greater trochanteric bursitis
- c. Groin strain
- d. Labral tear

4. You are evaluating a patient with sharp shooting pain in the anterior thigh. He reports at times his thigh also feels like there are ants crawling on him. The pain worsens with fast walking or when he wakes up sleeping on his stomach. It relieves when sitting. He cannot recall an incident or accident that led to the pain outside of beginning a walking program. He began walking based on a new diagnosis of type II diabetes and recent weight gain of 45 pounds over the last year, his physician is encouraging a low sugar, low carb diet and 30 minutes of exercise a day in addition to a new pill he must take every morning. His goal is to be able to walk 10,000 steps a day. You perform a Thomas test and the patient notes a strong pull along his anterior thigh with the ant crawling sensation. His hip remains in 10 degrees flexion and his knee is relatively extended at 30 degrees knee flexion with goniometric measurement. Obers test is WNL without pain. Ely's test is limited to 20 degrees knee flexion due to a burning, shocking sensation in the anterior thigh. What is the MOST probable cause of the patient complaints?

- a. Tight iliopsoas muscle
- b. Femoral nerve Irritation
- c. Labral tear
- d. Hip osteoarthritis

5. You are evaluating a patient with low back and posterior hip pain. You obtain the following test results during the examination. Localized pain in the lower lumbar spine with lumbar flexion active range of motion and segmental range of motion. During segmental flexion ROM, the patient had pain with the movement of L4. In addition, increased motion with central PAs at L4 was noted. There was a lack of multifidi contraction with arm raise and weight shift. Negative straight leg raise with 100 degrees hip flexion without symptoms. The patient was unable to complete the prone instability test.

What is the MOST probable diagnosis?

- a. Low back pain with movement coordination impairment
- b. Low back pain with radiating pain
- c. Low back pain generalized
- d. Low back pain with mobility deficit

6. You are assessing a 32-year-old female with the complaint of low back pain. She is currently 8 months pregnant. She reports the pain started as an ache about 3 weeks ago in her lower lumbar spine and sacral area. The pain now occurs with most standing activities at work. She denies numbness and tingling. During your examination, you are NOT able to reproduce her symptoms with lumbar spine active range of motion, passive range of motion, or repeated movements. Neurotension tests are also negative. You note her symptoms are reproduced with palpation of the sacral sulcus, a modified Gaellen's test and thigh thrust (P4). What is your MOST probable diagnosis for the anatomical structures involved based on this information?

- a. Lumbar disc herniation
- b. Lumbar spondylolithesis
- c. Sacroiliac dysfunction
- d. Muscle strain

7. You are examining a 19-year-old male with complaints of anterior hip pain with stair climbing and squatting. He also has pain with sitting greater than 2 hours. The patient notes he played competitive rugby from age 4 to 18. He had hip pain two years ago and missed several months of playing. He has just started squatting/ weight lifting again recently. On examination, the Thomas test was limited on the involved side for iliopsoas tightness, however was pain free. Hip range of motion was within normal limits. The patient notes reproduction of his symptoms with the FADDIR/ FADIR. What is the MOST probable diagnosis based on this information?

- a. Femoroacetabular impingement syndrome (FAI)
- b. Hip flexor and Adductor strain
- c. Hip osteoarthritis
- d. Avascular necrosis

8. A 52-year-old male self refers to physiotherapy for evaluation and treatment of low back pain. He states he has had recurrent bouts of low back pain (LBP) over the past 12 years. For most previous episodes, the back pain resolves within a few days. In most instances, he was prescribed NSAIDs by his physician to decrease the pain. Now he feels these exacerbations last longer and occur more frequently. This most recent episode began 7 days ago. The pain is localized to the lumbar spine. He is a University professor and does not want this low back pain to cause him to miss work. His FABQ- W was 10. On examination, he demonstrates full hip range of motion bilateral without pain. He has limited and painful lumbar extension active range of motion and pain with segmental extension at L3/4. His lower extremity neurological testing (dermatomes, myotomes, reflexes and neurotension testing) was WNL. Which of the following would be the MOST appropriate treatment based on your findings.

- a. Repetitive flexion exercises
- b. Repetitive extension exercises
- c. Lumbar manipulation
- d. Aerobic conditioning and education

9. You are treating a 72-year-old patient who was referred to you with a diagnosis of lumbar radiculopathy. His primary complaint is pain in the groin and inner thigh. You would like to rule out the hip as a potential contributor to his symptoms. You determine that hip flexion, IR, ER, adduction and abduction are grossly normal with no pain when each motion is tested in isolation. Which test would you now use to SCREEN the hip for pain generating pathology? Choose the BEST answer.

- a. Thomas test
- b. Scour Test
- c. Trendelenburg test
- d. Trunk extension range of motion

10. A patient is referred to a physical therapist with a diagnosis of patellofemoral pain syndrome. Examination of the patient reveals the following: accentuated (increased) lateral gliding of the patella, lateral patellar tenderness, excessive pronation of the foot at mid-stance during gait, and anterolateral knee pain with partial squats. All other examination findings are negative. Which of the following would be a useful measure to determine treatment effectiveness for decreasing the patient's complaint of pain?

- a. Amount of mobility of the superior tibia- fibula articulation
- b. Independent motor control of the Vastus Medialis Oblique (VMO)
- c. Quadriceps strength
- d. Pain level during partial squat

11. A 30-year-old male is referred to your clinic by his physician with the diagnosis of knee strain. He was playing a pick-up game of basketball 2 weeks ago when he felt his knee give out and fell to the floor. He denies hearing a pop. He reports his knee swelled up quickly. Presently, he complains of medial knee pain at rest and with weight bearing. He has been using a knee immobilizer given to him by the doctor.

He notes a previous knee injury while playing football approximately 3 years ago in which he was hit by another player and he was unable to complete the game. His knee swelled and he had to be carried off the field. The patient was seen by a doctor, and a bloody effusion of the knee was aspirated. He was given a brace, which he wore for a few weeks. He never followed up with a physician because his knee eventually got better.

What would be the best tests to perform on this patient for differential diagnosis of structures most likely to be injured in this case?

- a. Magnetic resonance imaging should be performed prior to a physical therapy evaluation.
- b. Patellar apprehension test, varus stress test at 0°, posterior drawer test, and posterior sag test
- c. Step-down test, quadriceps make test, and measure effusion
- d. Valgus stress test at 0° and 30°, Anterior Drawer test, Thesslay's test, and palpation for joint line tenderness

12. A 26-year-old male reports knee pain following trauma sustained when he hit his knee against the dashboard in a motor vehicle accident (MVA) one week ago. He reports swelling was present immediately after the trauma. The swelling has now partially resolved, but the pain persists. Radiographs taken after the MVA were negative for fractures. Physical examination of the involved knee reveals that extension range of motion (ROM) is full, however flexion ROM is limited to 105 degrees with an empty end feel. There is a 12mm step off with the posterior drawer test. What is the MOST likely diagnosis?

- a. Anterior Cruciate Ligament Tear
- b. Posterior Cruciate Ligament Tear
- c. Medical Collateral Ligament Tear
- d. Lateral Collateral Ligament Tear

13. An 18-year-old, long-distance runner presents with knee pain described as a dull ache to the medial joint line of the knee. Symptoms developed following running several miles on a concrete surface 3 months ago and have slowly become more intense. The patient denies episodes of catching or locking, however indicates that the knee feels stiff and becomes swollen after running 2-3 miles. The pain and swelling subside with rest. Objective findings include normal range of motion as well as normal hip and knee strength compared to the contralateral

limb. Lower extremity joint play was within normal limits. What condition is MOST consistent with this patient's presentation?

- a. Articular cartilage/ meniscus lesion
- b. Deficient Anterior Cruciate Ligament (ACL)
- c. Deficient Posterior Cruciate Ligament (PCL)
- d. Hamstring tear

14. Your patient is a 38-year-old, recreational athlete who complains of pain deep on the posterior/medial aspect of his knee whenever he squats down to pick things up, whenever he goes up stairs, and when he jumps on one foot. Which combination of tests will give you the BEST information related to the presence or absence of potential meniscal injury in your patient?

- a. McMurrays, Apley's, varus/valgus stress testing
- b. McMurrays, joint line tenderness, varus/valgus stress testing
- c. McMurrays, joint line tenderness, single leg squat
- d. McMurrays, Thessalys, and joint line tenderness

15. Your patient lacks 15 degrees of knee extension due to joint capsule tightness. He is most likely to have limited accessory joint mobility with which tibial motions on femur?

- a. Posterior glide and internal rotation
- b. Posterior glide and external rotation
- c. Anterior glide and external rotation
- d. Anterior glide and internal rotation

16. Upon examining a patient, you find full passive knee extension with patient in supine and hip in extension, but there is 15 degrees lag in active knee extension. What is the MOST likely dysfunction?

- a. Limited capsular mobility
- b. Hamstring contracture
- c. Inhibited quadriceps muscle
- d. Patellar fracture

17. You are reviewing a knee evaluation done by a colleague. In the special tests section, you see that the patient is listed as (+) for Lachman's and (+) for valgus stress test at 30 degrees. Which of the following structures are implicated based on these results?

- a. Medial Collateral Ligament (MCL)Tear

- b. lateral Collateral Ligament (LCL) Tear
- c. Meniscus Tear
- d. Patellar Alignment

18. A 21-year-old male rugby player presents to physiotherapy with a two-week history of left heel pain. He reports burning pain, numbness, and tingling in the medial arch, heel, and plantar aspect of his left foot. His symptoms exacerbate following football practices. Physical examination reveals a positive Tinel's sign, tenderness to palpation in the region posterior to the medial malleolus, impaired sensation in the medial and lateral plantar aspects of the foot and 3+/5 strength of the tibialis posterior with manual muscle testing. Observation reveals depressed medial longitudinal arch, excessive foot pronation, and decreased left toe-off during gait. These findings are most consistent with which of the following diagnoses?

- a. Avulsion fracture
- b. Plantar fasciitis
- c. Retrocalcaneal bursitis
- d. Tarsal tunnel syndrome

19. A 13-year-old, female presents with the complaint of right anterior knee pain. She reports the pain began in physical education class approximately 2 weeks ago without incident or accident. She reports a recent increase in activity due to school-based activities. She is required to run/ walk a 15 minute mile within 3 months. She also has pain when walking up three flights of stairs to class. On examination, she has pain with resisted knee extension and squatting. The physical therapist notes bilateral knee valgus collapse during the squat. The patient also has a positive Obers test on the right. There is no evident swelling. Which of the following is the MOST probable diagnosis?

- a. Anterior Cruciate Ligament (ACL) tear
- b. Medial Collateral Ligament (MCL) tear
- c. Patellofemoral pain syndrome
- d. Pre- patellar bursitis

20. You are evaluating a 28-year-old patient with the complaint of limited knee extension range of motion. She reports a history of tibial plateau fracture (non-repaired) 2 years ago. She does not currently have pain. On examination, you note decreased ability to perform eccentric knee flexion in weight bearing (step down), decreased active and passive knee extension ROM at -10 degrees, and limited knee joint mobility. Which of the following joint mobilizations would be MOST appropriate to address the patient's complaint?

- a. Anterior glide of tibia on femur
- b. Posterior glide of tibia on femur

- c. Anterior glide of fibula on tibia
- d. Posterior glide of fibula on tibia

21. You are evaluating a 22-year-old female with knee pain. You note bilateral valgus collapse on squatting below 100 degree flexion. Which of the following foot positions is MOST commonly associated with this finding?

- a. Supination
- b. Pronation
- c. Pes cavus
- d. Hallux valgus

22. James is a 17-year-old rugby player being seen for physiotherapy examination 5 days post inversion ankle sprain after stepping on an opponent's foot during a match. He was able to walk off the pitch on his own, but was not able to re-enter the match. No radiographs were taken at the hospital. He ambulates without an assistive device with a moderate limp and decreased dorsiflexion with moderate toeing out on the involved side. Swelling is most notable at the distal fibula, lateral rearfoot to midfoot. James has moderate tenderness to palpation just anterior to the distal aspect of the fibula. Which examination technique would be MOST appropriate given the above presentation?

- a. Anterior Drawer Test of the ankle
- b. Windlass test
- c. Matles test
- d. Lachman test

23. A student athlete comes into your office after football practice and complains of foot and ankle pain. Which of the following findings would cause you to refer the patient for plain radiographs of the foot and ankle?

- a. Patient unable to take two steps with complaints of severe pain (10/10) along the lateral malleolus limiting his ability to ambulate
- b. Patient unable to fully dorsiflex the ankle with complaints of 3 out of 10 pain along the anterior ankle
- c. Pain at a 2 out of 10 with full inversion Active and Passive ROM
- d. Swelling locally along the lateral ankle

24. A 45-year-old female presents to a physiotherapy outpatient clinic with the complaints of right foot medial arch pain. She reports she has been attempting to jog for the first time over the past month. She is now jogging 2 miles and walking 5 miles per session. She has pain along her

medial arch that is sharp especially with walking. She has minimal pain in the morning when she gets up however, the pain occurs almost immediately when she runs. She denies numbness or tingling. On observation, you note a decreased arch on the right and slight eversion of the calcaneus in standing. The pain is reproduced with palpation near the navicula and resisted inversion of the ankle. What is the MOST probable cause of the patients symptoms?

- a. Plantar fasciitis
- b. Tarsal tunnel syndrome
- c. Posterior tibialis tendonopathy
- d. Stress fracture of the fifth metatarsal

25. You are working with a 50-year-old patient with the complaint of calf pain. He reports he recently joined a gym to lose 25 pounds after being diagnosed with type II diabetes and hypertension 2 months ago. The pain began after a workout in which his personal trainer had him running 0.25 miles on the treadmill followed by 10 power jacks (plyometric exercise) with a 15 pound medicine ball. It was on the 5th repetition of the series of exercises that he felt a sharp pain in his calf. He attempted to walk it out on the treadmill, however the pain persisted causing him to stop the workout. He has not exercised in 2 weeks, yet continues to have significant pain especially with stair climbing and fast walking. In addition, he notes he cannot seem to get his leg to move forward when walking causing him to limp. Which of the following tests would be MOST appropriate based on the patient symptoms to rule out pathology?

- a. Anterior drawer
- b. Talar/calcaneal tilt test
- c. Thompson's test
- d. Dorsiflexion compression test

26. A physiotherapist is examining a 15-year-old basketball player with complaints of anterolateral ankle pain. He notes no incident or accident to initiate the pain. He notes intermittent ankle swelling and tenderness along the right lateral ankle. On examination, he reports reproduction of his pain with passive dorsiflexion with overpressure and single leg squat. Based on thin information, what is the MOST probable diagnosis?

- a. Inversion ankle sprain
- b. Anterolateral impingement
- c. Plantar fasciitis
- d. Fifth metatarsal stress fracture

27. A patient presents with weakness of the gastroc and soleus, tibialis posterior and flexor hallucis longus. He is strong and painfree with hamstring and anterior tibialis contractions. He

also reports tingling along the posterior calf. Which of the following nerves is MOST likely contributing to the patient's symptoms?

- a. Tibial Nerve
- b. Fibular nerve
- c. Sciatic nerve
- d. Femoral nerve

28. A patient arrives to physiotherapy with the diagnosis right hallux valgus (bunion). On examination, you note significant lateral displacement of the first digit with the second toe now overlapping the first. Her gait is limited with a decreased swing phase on right. Which of the following is most likely contributing to the gait deviation based on the above history?

- a. Limited first Metatarsal Phalangeal (MTP) dorsiflexion range of motion (ROM)
- b. Hip flexor weakness
- c. Weak gluteal muscles
- d. Limited hip extension range of motion (ROM)

29. A patient presents to physical therapy with knee pain. The MRI report notes a medial collateral ligament tear with medial meniscus tear. Which motions of the knee are limited by the medial and lateral collateral ligaments?

- a. Anterior glide of tibia on femur
- b. External rotation of tibia on femur
- c. Posterior glide of tibia on femur
- d. Internal rotation of tibia on femur

30. An 85-year-old patient presents to physical therapy complaining of medial knee pain. During the examination, the physical therapist determine the pain is being referred from the patients hip joint. Which nerve innervates both the hip and medial knee resulting in the common referral pattern for hip dysfunction?

- a. Sciatic nerve
- b. Femoral nerve
- c. Obturator nerve
- d. Fibular nerve

31. A 17-year-old patient is being seen in the clinic. He notes he has plantar foot pain. It began after a weekend backpacking trip with friends. This was his first backpacking experience. The pain is localized to the medial arch. It is worst first thing in the morning when he gets out of bed

making it difficult to walk. After 5 steps, it begins to lessen. The pain consistently returns after every class. His high school classes are 90 minutes long. On examination you note the patient has a BMI of 52.4. He demonstrates bilateral foot pronation in static, relaxed standing.

What is the most probable diagnosis based on the above information?

- a. lateral ankle sprain
- b. distal tibia and fibula fracture
- c. plantar fasciitis
- d. achilles tendonopathy

32. A physiotherapist is evaluating a patient with complaints of radial wrist pain. He reports he fell while trail running landing on an outstretched hand. The pain was immediate. He points to both the palmar and dorsal sides of the radial wrist as the pain location. Weight bearing through his hand, such as performing push ups, makes his pain considerable worse. He has significant pain with palpation along the anatomical snuff box. He denies numbness and tingling and all dermatomes are intact. Which special test would assist in ruling in the MOST probable diagnosis?

- a. Wrist compression test
- b. Phalen's Test
- c. Scaphoid compression tenderness
- d. Tinel's sign

33. A patient reports he recently fell and caught himself with his outstretched right hand. He has diffuse pain along the ulnar side of his wrist. He has been unable to bowl secondary to pain. He also notes pain at a 2 or 3 on a 1-10 scale along the ulnar wrist when attempting to rise from a low chair by pushing up from the armrests. When you have the patient perform active and passive pronation and supination there is a palpable clicking on the ulnar side of the wrist. What is the MOST probable diagnosis?

- a. Triangular fibrocartilage tear
- b. Smith's fracture
- c. Ulnar nerve impingement
- d. Dequervain's tenosynovitis

34. A 40-year-old patient presents to physiotherapy with lateral elbow pain. There was no single incident or accident. The pain began after the patient accepted additional work as a transcriptionist. The pain is exacerbated with typing for long periods. The patient denies

numbness and tingling. There is pain along the lateral epicondyle with palpation. Which of the following tests would assist with assessing this patient for the MOST probable diagnosis?

- a. Moving valgus stress test
- b. Combine pressure and flexion
- c. Cozen's test (resisted wrist extension)
- d. Tinel's sign at the Arcade of Froese

35. A 64-year-old patient is referred to physiotherapy with a diagnosis of rotator cuff strain and the complaint of pain along the superior shoulder. During the examination the physical therapist finds weakness of the deltoid and supraspinatus muscles during resisted tests and decreased sensation to light touch over the superior aspect of the shoulder. Hawkins Kennedy testing, empty can, and drop arm testing were negative. The patient's pain is only reproduced with Spurling's test. Which of the following is the most probable cause of this patient's symptoms?

- a. C5 radiculopathy
- b. Rotator cuff tear
- c. Labral tear (SLAP lesion)
- d. Suprascapular nerve entrapment

36. A 53-year-old female complains of a six-month gradual onset of right lateral shoulder pain. Her symptoms became quite severe last month. Currently, she feels much better, but is unable to comb her hair or fasten her bra with her right hand behind her back. She can lie on the left side, however awakens with pain when she turns onto the right side. Relief is immediate once she rolls off the shoulder. She experiences no pain at rest and has consequently stopped using the extremity. The patient has a moderately increased thoracic kyphosis. Cervical spine exam is negative. Active and Passive shoulder range of motion reveals abduction to 85 degrees, external rotation to 30 degrees, flexion to 100 degrees, and internal rotation to 40 degrees. Pain is reported at the end range of motion at the area of the deltoid insertion as well as generally throughout the shoulder. All resisted motions are strong and painless when performed with the shoulder in neutral. What is the MOST likely diagnosis for this case?

- a. Cervical radiculopathy
- b. Chronic recurrent bursitis
- c. Glenohumeral adhesive capsulitis
- d. Rotator cuff syndrome

37. A 24-year-old male sustained an injury ten days ago when lifting a heavy box at work. He states he felt a "pop" and the pain immediately began in his low back. The next morning, when getting out of bed, he noticed the pain in his right buttock, right thigh and posterior calf. He

finds that the pain is worst when driving his car or sitting on the couch. He is also concerned because he is unable to "stand up straight." Upon examination, the physiotherapist observes that the patient has a left lateral shift of his thorax relative to his pelvis when standing. When corrected, the patient has centralization of his symptoms with repetitive extension. What procedures are the most appropriate initial intervention for this patient?

- a. Lateral shift procedure and extension exercise
- b. Spinal manipulation
- c. Pain neuroscience education
- d. Lumbar stabilization exercises

38. A 16 year-old female is referred to physical therapy with complaints of her right shoulder popping when she styles her hair and reaches back to put on the passenger side seat belt. She states the feeling in her shoulder is like something is "giving way". On observation, the physiotherapist notes significant scapular winging. When the patient is asked to perform a functional screen, she refuses to place her hands behind her head due to fear that this will cause her shoulder to pop out of place. Which of the following special tests would assist in ruling in the MOST probable diagnosis?

- a. Sulcus sign and apprehension test
- b. Anterior slide test and Neers test
- c. Hawkins and Kennedy test and Bicep load test
- d. Full and empty can

39. A 90 year-old male patient presents to physiotherapy with the complaint of loss of shoulder function. He reports he has begun sleeping in his recliner due to pain at night when he rolls onto the affected side. On raising his arm, the physical therapist notes significant upper trapezius substitution. The patient is only able to ACTIVELY elevate the arm 90 degrees scaption with the substitution. He reports pain between 60 and 90 degrees. The physiotherapist also notes he drops the arm suddenly when he attempts to lower it. Passive ROM is full and painless. Based on the above findings, what is the MOST probable diagnosis?

- a. Rotator cuff tear
- b. Frozen shoulder
- c. Acromioclavicular (AC) joint separation
- d. Labral tear

40. A 52 year-old female with a long history of rheumatoid arthritis complains of intermittent, severe cervical and occipital area pain and associated headaches. She also reports occasional shooting pains into both of her arms as well as intermittent weakness in both of her ankles –

often to the point where she is unable to fully lift up her toes when walking causing her to stumble. During the physical examination it is noted that she has 45 degrees of active cervical rotation to the left and right and 20 degrees of active cervical flexion. Her motion is limited by apprehension to move further. What would be the MOST appropriate intervention for this patient based on these findings?

- a. Cervical active mobility exercises
- b. Cervical spinal manipulation
- c. Intermittent mechanical cervical traction
- d. Referral for additional diagnostic imaging

41. A 55-year-old male patient presents with left neck and shoulder pain. He has been experiencing this pain for 6 months following a fall on his shoulder. He states it has been getting worse; especially after doing a lot of yard work, but subsides with rest. When the pain is severe, it radiates down his arm just distal to the elbow. He also states he has difficulty looking up or looking over his shoulder left while driving due to pain radiating down his arm. The patient states his neck and shoulder feel better when he sleeps with his left forearm above his head. Which of the following condition is most consistent with this patient's presentation?

- a. Cervical facet syndrome
- b. Thoracic outlet syndrome
- c. Cervical radiculopathy
- d. Rotator cuff tear

42. A 56-year-old executive has been receiving physical therapy for his mid back pain for the past three weeks. Today, during his last scheduled visit, he mentions that he has been experiencing pain in his posterior thorax and jaw with subsequent pain radiating down his left arm. He notes that his pain occurs at rest and often wakes him between the hours of 2 am and 5 am. He states that he feels his symptoms are related to his heart, secondary to the stress of his current job situation. You are unable to recreate his symptoms with your examination. This patient's symptoms are MOST consistent with which of the following diagnoses?

- a. Atypical angina
- b. Cervical radiculopathy
- c. Herniated Disc
- d. Frozen shoulder

43. While providing sports coverage at an athletic event, a physiotherapist is asked to examine an athlete with a knee injury. Based on the mechanism of injury, the therapist suspects rupture of the anterior cruciate ligament (ACL). Which special test would be used to assess the ACL?

- a. McMurray's test
- b. Scour test
- c. Lachman's test
- d. Posterior sag test

44. A patient presents with an acute sprain of the right ankle. According to the patient, this has occurred fairly frequently over the past 5 years. What clinical test should the therapist use to examine the integrity of the anterior talofibular ligament?

- a. Anterior drawer test
- b. Morton's test
- c. Windlass test
- d. Thompson test

45. A patient with recent trauma presents with restricted movement of the right hand. There is decreased motion at the third right MCP joint. To differentiate as to whether this is joint restriction or some other type of tightness (not joint), which examination procedure should be employed?

- a. Finkelstein's test
- b. Bunnel-Littler test
- c. Phalans test
- d. Froment's sign

46. A female patient complains of right lumbosacral pain after giving natural childbirth to her first child 2 months ago. Pain has subsided somewhat, but remains high enough that she has to sit after walking more than 2 blocks. Pain is noted in the right lumbosacral region, buttock, and groin and is aggravated with weight bearing on the right. Active flexion, extension, and side bending reproduce the patient's symptoms. Hamstrings are slightly tight on the right, but no neutral tension is noted. Neurological findings (reflexes, sensation, and motor) are unremarkable. SI provocation tests are positive. What is the MOST likely diagnosis for this patient?

- a. Lumbar disc protrusion at L5/S1
- b. Sacroiliac pain
- c. Quadratus lumborum strain
- d. Piriformis syndrome

47. A patient complains of waking up several times at night from severe "pins and needles" in the right hand. On awakening, the hands feels numb for half an hour and fine hand movements

are impaired. The therapist's examination reveals sensory loss and paresthesias in the thumb, index, middle, and lateral half of the ring finger, and reduced grip and pinch strength. Some thenar atrophy is present. Based on these examination findings, what is the MOST appropriate diagnosis?

- a. Radial nerve palsy
- b. Ulnar nerve entrapment
- c. Thoracic outlet syndrome
- d. Carpal tunnel syndrome

48. A patient presents with insidious onset of pain in the jaw that is referred to the head and neck regions. As best as the patient can recall, it may be related to biting into something hard. Cervical range of motion (ROM) is limited in flexion by 20 degrees, cervical lateral flexion limited to the left by 10 degrees. Mandibular depression is 10mm with deviation to the left, protrusion is 4 mm, and lateral deviation is 15 mm to the right and 6mm to the left. What is the MOST likely diagnosis given this patient's symptoms?

- a. Weak lateral pterygoids on the right
- b. Weak lateral pterygoids on the left
- c. Capsule-ligaments pattern of temporomandibular joint (TMJ) on the left
- d. Cervical spine capsular restrictions on the left

49. An elderly patient with persistent balance difficulty and a history of recent falls (two in the past 3 months) is referred for physical therapy examination and evaluation. During the initial session, it is crucial to examine which of the following?

- a. Level of dyspnea during functional transfers
- b. Cardiovascular endurance during a 6 minute walking test
- c. Sensory losses and sensory organization of balance
- d. Spinal musculoskeletal changes secondary to degenerative joint

50. A physiotherapist is examining a patient with pain in the anterior lower leg with long distance running. The pain initially began 3 months ago and progressively worsened to the point the patient can no longer run without severe pain at an 8 on a 1-10 scale. With rest over the last two weeks, the pain subsided to a 4 on a 1-10 scale. However, once the patient attempted running, the severe pain returned. Which of the following diagnoses is associated with this presentation?

- a. Plantar fasciitis
- b. Ankle sprain

- c. Medial tibial stress syndrome
- d. 5th metatarsal stress fracture.

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