



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCE  
DEPARTMENT OF REHABILITATION MEDICINE  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
END OF JAN-APRIL 2025 TRIMESTER EXAMINATIONS**

**UNIT CODE: PHT 311                      UNIT NAME: Clinical reasoning**

**DATE:                      6<sup>th</sup> August 2025**

**TIME:                      TWO HOURS**

**START: 6PM**

**STOP : 8PM**

**INSTRUCTIONS (Online examinations)**

1. This exam is marked out of 70 marks
2. This Examination comprises MCQs
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. 0705833434 and or the Head of Department on Tel 0720491032
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**Section A. Multiple choice questions. Answer all the questions**

1. A seasoned physiotherapist, dedicated to providing optimal patient care, encounters a complex case involving chronic low back pain. While the latest randomized controlled trial (RCT) strongly advocates for a specific novel intervention, the patient expresses a strong preference for a more traditional approach due to past positive experiences. Furthermore, the physiotherapist's extensive clinical experience suggests that, for this particular patient's psychosocial context, the traditional approach might yield better long-term adherence and outcomes, despite the RCT's findings. According to the Evidence-Based Practice (EBP) triad, what is the most ethically and clinically sound decision the physiotherapist should make?

A. Engage in a shared decision-making process with the patient, carefully weighing the strong RCT evidence against the patient's preferences and the physiotherapist's clinical expertise regarding the patient's unique context.

B. Combine the novel intervention with the traditional approach, integrating elements from both to create a hybrid treatment plan without fully committing to either.

C. Solely follow the patient's preference for the traditional approach, as patient autonomy is the paramount consideration in all clinical decisions.

D. Exclusively implement the novel intervention as supported by the strong evidence from the RCT, prioritizing empirical research above all else.

2. A 78-year-old female presents with acute onset, severe left knee pain following a minor fall. She has a history of well-managed osteoarthritis in both knees and takes an NSAID daily. On examination, you note significant effusion, tenderness over the medial joint line, and limited range of motion due to pain. Her strength around the knee appears globally diminished due to inhibition from pain, but no specific neurological deficits are identified. Which of the following potential biases or clinical reasoning pitfalls is MOST important to consider and actively mitigate in this scenario to ensure comprehensive and accurate assessment and management?

A. Anchoring bias

B. Availability heuristic

C. Premature closure

D. Confirmation bias

3. A physiotherapist is about to evaluate a new patient presenting with intermittent right shoulder pain. Before entering the examination room, they review the patient's intake form and briefly glance at their booking details. Beyond the objective findings gathered during the physical examination, which of the following factors are known to significantly influence a physiotherapist's clinical reasoning process during assessment and intervention planning, and which choice does not typically influence it?

A. Age

B. Patients health insurance

C. Primary occupation

D. Joint range of motion

4. Which of the following is *not* an example of a narrative reasoning social cue?

- A. The patient describing how a past injury and subsequent challenges led to their current functional limitations.
- B. The patient explaining their motivation for adherence to exercises by recounting a successful recovery story of a friend.
- C. The patient sharing their personal belief about how their body works based on their life experiences and health journey.
- D. The patient looking away briefly when the physiotherapist asks them to perform a painful movement.

5. During the subjective assessment, a comprehensive approach necessitates the consideration of four key contextual data points: social, environmental, co-morbid emotional, and cognitive factors. Which of the following scenarios best exemplifies a nuanced application of this principle, moving beyond superficial data collection to integrate these dimensions effectively into a patient's care plan?

- A. A clinician documents a patient's home layout and notes reported anxiety, but treats these as separate issues without exploring how they influence the patient's pain experience or recovery goals.
- B. A therapist consistently collects information on the patient's support system, living environment, mood, and understanding of their condition through a series of direct questions, primarily for record-keeping purposes.
- C. A practitioner engages the patient in a detailed conversation to understand how their family life, work demands, fears about re-injury, and beliefs about their body's capabilities all interact to shape their rehabilitation journey and perceived barriers.
- D. The therapist treatment plan prioritizes immediate pain relief and functional exercises, deferring any discussion about the patient's emotional state or home environment until much later in the rehabilitation process.

6. Which of the following sets of factors, when identified through careful contextual data collection, most comprehensively represents the patient's internal perspective that can influence their rehabilitation outcomes?

- A. Level of pain, range of motion limitations, muscle weakness, and joint swelling.
- B. Medical history, current medications, previous surgical interventions, and family history of disease.

- C. Low self-efficacy regarding recovery, job-related stressors, a negative outlook on their illness, and unrealistic expectations about treatment duration.
- D. Socioeconomic status, access to transportation, availability of family support, and proximity to the clinic.

7. During the subjective assessment, understanding a patient's cognitive level and learning style is crucial for effective clinical reasoning in physiotherapy. Which of the following best illustrates why a physiotherapist would actively seek this information?

- A. To ensure the patient can accurately recall their medical history and medication list for documentation purposes.
- B. To select the most appropriate communication strategies and teaching methods for home exercise programs and patient education.
- C. To determine the patient's eligibility for advanced treatment modalities and specialized rehabilitation equipment.
- D. To assess the patient's pain tolerance and emotional coping mechanisms during challenging exercises.

8. A 68-year-old female patient presents with chronic low back pain. During the subjective examination, she repeatedly interrupts, express frustration with complex explanations, and prefers to demonstrate her movements rather than describe them verbally to the physiotherapist. Based on this observation, which cognitive level and learning style are most likely predominant in this patient, and how might this influence your communication strategy?

- A. Focus on verbal instructions and detailed anatomical explanations.
- B. Use simple, direct language and incorporate hands-on demonstrations and practice.
- C. Employ practical demonstrations, allow for active participation, and use clear, concise language.
- D. Provide constant verbal cues and break down tasks into very small, repetitive steps.

9. Which of the following factors is NOT typically considered a "yellow flag" when assessing a patient in musculoskeletal clinical reasoning?

- A. Fear-avoidance beliefs
- B. Maladaptive coping strategies
- C. Low self-efficacy regarding recovery
- D. Age of 50 years and above

10. A 35-year-old male patient presents with persistent neck pain following a motor vehicle accident. Subjective examination reveals significant fear-avoidance beliefs, catastrophizing thoughts about his condition, and a strong conviction that movement will cause further damage, despite clinical findings not indicating serious pathology. Given these prominent "yellow flags," which of the following represents the most appropriate initial management strategy for the physiotherapist?

- A. Conduct a comprehensive biomechanical assessment to identify specific movement dysfunctions, and provide targeted exercises to correct these impairments.
- B. Prioritize referral to a pain specialist or psychologist for cognitive behavioral therapy, while maintaining a supportive but non-interventional physiotherapy role.
- C. Integrate pain neuroscience education to reframe their understanding of pain, gradually expose them to previously feared movements, and foster self-management strategies.
- D. Emphasize the importance of patient compliance with a strict, pre-defined exercise protocol, and closely monitor their adherence for optimal recovery.

11. A 60-year-old patient presents with vague lower back pain and reports the following: a history of previous skin cancer, 15 lbs of unexplained weight loss in the last 2 months, pain that is worst at night and cannot be alleviated by changing position, and no improvement after 4 weeks of chiropractic treatment. Based on this information, what is the most appropriate course of management for the physiotherapist?

- A. Continue with conservative physiotherapy treatment focusing on core strengthening and manual therapy, as low back pain is common in this age group.
- B. Refer the patient for a psychological evaluation to address potential somatization or pain amplification due to anxiety.
- C. Immediately refer the patient back to their primary care physician for urgent medical investigation to rule out serious pathology.
- D. Recommend a trial of complete bed rest and anti-inflammatory medication to reduce inflammation and pain before initiating any exercise program.

12. A 45-year-old office worker reports gradually increasing, diffuse neck and upper back pain over the past 6 months, with no specific initiating event. The pain is now consistently present throughout the day, worsens significantly with prolonged sitting at her computer, and causes stiffness in the mornings that eases within 30 minutes. She denies any 'red flag' symptoms (e.g., neurological deficits, unexplained weight loss, night sweats). Considering the information provided about mechanism of injury and its role in clinical reasoning, which of the following statements best reflects the physiotherapist's expected approach and prognosis?

- A. The insidious onset suggests low irritability, allowing for immediate high-intensity resistance training to quickly improve tissue tolerance and resolve symptoms within a few weeks.
- B. Due to the non-specific nature of the pain and the absence of a clear incident, the expected healing time will be rapid, and the examination should prioritize general mobility exercises to restore function.
- C. The clinical reasoning should be guided by a hypothesis of cumulative micro-traumatic stress, implying that the examination must thoroughly identify contributing

ergonomic and postural factors, and the expected management will involve gradual load progression and significant patient education on activity modification.

- D. Given the chronic nature of the pain, the primary focus should immediately shift to psychosocial yellow flags, with a referral for cognitive behavioral therapy being the most appropriate first-line intervention, as mechanical factors are likely negligible.

13. A 29-year-old mother of a 6-month-old wakes at 2:30 AM to nurse her crying baby. As she bends over to pick the baby up out of the crib, she feels a "click" in her lower back, followed immediately by muscle spasms and pain radiating into her left lower back and left buttock. Two weeks later, she presents to your clinic. Based on this precise incident, what is the most appropriate classification of the mechanism of injury?

- A. Insidious onset, indicative of a gradual degenerative process.
- B. Micro-traumatic, resulting from cumulative fatigue and repetitive minor stresses.
- C. Macro traumatic, single-event overload or sudden tissue failure.
- D. A combination of insidious and non-mechanical factors leading to acute exacerbation.

14. A 22-year-old volleyball player reports sudden, sharp anterior knee pain that occurs specifically when landing from a block, with the knee getting into a valgus position. The pain is localized deep behind the patella and is less apparent during isolated quadriceps contractions or straight-line running. Based on the understanding of forces influencing musculoskeletal conditions, which of the following statements best describes the primary force mechanism contributing to this player's symptoms and its immediate implication for the physiotherapist's clinical reasoning and examination approach?

- A. The underlying mechanism is best characterized as a combination of significant axial compression and rotational/transverse shear forces, leading to a hypothesis focused on patellofemoral joint pathology and demanding a comprehensive assessment of dynamic knee stability and movement patterns.
- B. The dominant force is likely compression, suggesting a hypothesis of direct articular cartilage damage and primarily requiring a static palpation and range of motion assessment.
- C. The primary force is tension, indicating a significant ligamentous injury at the medial aspect of the knee, necessitating immediate stress testing of the medial collateral ligament.
- D. The primary force is isolated shear, which typically causes meniscal tears, and thus the examination should predominantly involve specific provocative tests for meniscal lesions.

15. A patient describes experiencing consistent anterior shoulder pain primarily when they lift their arm above 90 degrees (e.g., reaching for an overhead cabinet) and during repetitive activities like throwing a ball for their dog. Given this specific presentation, which of the following is the most plausible patho-anatomic hypothesis the physiotherapist should initially consider?

- A. Acromioclavicular joint osteoarthritis
- B. Glenohumeral capsulitis
- C. Rotator cuff tendinopathy
- D. Cervical radiculopathy

16. A patient presents with left glenohumeral and scapula instability, accompanied by weakness in the left rotator cuff, lower trapezius, and serratus anterior. This has led to a limited ability to paint, consequently preventing full participation in their work as a building contractor. From the perspective of a comprehensive movement diagnosis, which option accurately identifies the key disorder, key impairment, key activity limitation, and key participation restriction in this patient?

- A. Key Disorder: Shoulder Impingement Syndrome; Key Impairment: Pain with overhead movement; Key Activity Limitation: Difficulty reaching; Key Participation Restriction: Inability to perform recreational sports.
- B. Key Disorder: Rotator Cuff Tear; Key Impairment: Muscle weakness; Key Activity Limitation: Inability to lift heavy objects; Key Participation Restriction: Financial strain due to lost work.
- C. Key Disorder: Cervical Radiculopathy; Key Impairment: Nerve compression; Key Activity Limitation: Restricted neck movement; Key Participation Restriction: Difficulty driving.
- D. Key Disorder: Impaired Shoulder Dynamic Stability; Key Impairment: Specific muscle weakness (rotator cuff, lower trapezius, serratus anterior); Key Activity Limitation: Limited ability to paint; Key Participation Restriction: Restricted work participation as a building contractor.

17. A patient presents with left anterior knee pain, notable for excessive knee hyperextension during the terminal stance phase of gait. This gait deviation is accompanied by severely limited ankle dorsiflexion. Consequently, the patient experiences a limited ability to walk without pain, which prevents full participation in their daily activities and fitness. From a movement diagnosis perspective, which option accurately identifies the key disorder, key impairment, key activity limitation, and key participation restriction for this patient?

- A. Key Disorder: Patellofemoral Pain Syndrome; Key Impairment: Quadriceps weakness; Key Activity Limitation: Stair climbing; Key Participation Restriction: Reduced walking endurance.
- B. Key Disorder: Anterior Knee Pain Syndrome; Key Impairment: Joint effusion; Key Activity Limitation: Knee bending; Key Participation Restriction: Pain with all lower limb movements.
- C. Key Disorder: Chronic Knee Instability; Key Impairment: Ligamentous laxity; Key Activity Limitation: Running; Key Participation Restriction: Inability to perform high-impact sports.
- D. Key Disorder: Impaired Gait Biomechanics (Knee Hyperextension); Key Impairment: Severely limited ankle dorsiflexion; Key Activity Limitation: Limited ability to walk without pain; Key Participation Restriction: Restricted participation in daily activities and fitness.

18. A patient presents with right-sided lower back pain diagnosed as a lumbar extension syndrome/overload, accompanied by regional mobility deficits at the hip, thoraco-lumbar spine, and ankle/foot. This condition is currently limiting their ability to walk comfortably, and significantly restricting their full participation in work at a Jumia warehouse. From the perspective of a comprehensive movement diagnosis, which option accurately identifies the

key disorder, key impairment, key activity limitation, and key participation restriction for this patient?

- A. Key Disorder: Lumbar Disc Herniation; Key Impairment: Nerve root compression; Key Activity Limitation: Inability to sit for long periods; Key Participation Restriction: Unable to drive.
- B. Key Disorder: Sciatica; Key Impairment: Muscle weakness; Key Activity Limitation: Pain with bending; Key Participation Restriction: Difficulty with household chores.
- C. Key Disorder: Lumbar Extension Syndrome/Overload; Key Impairment: Regional mobility deficits; Key Activity Limitation: Limited ability to walk comfortably; Key Participation Restriction: Significantly limited work participation at Jumia warehouse.
- D. Key Disorder: Spinal Stenosis; Key Impairment: Central canal narrowing; Key Activity Limitation: Reduced walking distance; Key Participation Restriction: Restricted recreational activities.

19. A collegiate male swimmer presents with right shoulder pain. The swimmer reports that he is able to swim all his strokes at normal speed, but state that it "hurts" later when they swim. Critically, the shoulder "aches for 2 hours after practice," and they "can't lay on the shoulder at night." Based on this clinical presentation, what is the most appropriate level of irritability for this patient's right shoulder pain?

- A. High Irritability
- B. Moderate Irritability
- C. Low Irritability
- D. Mild Irritability

20. A 35-year-old female recreational runner presents with mild right knee pain. She reports that the pain only becomes noticeable after running more than 5 kilometers and is localized to the front of the knee. Importantly, the pain typically subsides completely within 10-15 minutes of stopping the run and cooling down. She denies any pain with daily activities like walking or climbing stairs, and specifically state they have no night pain or morning stiffness. Based on this clinical presentation, which of the following is the most appropriate level of irritability for this patient's right knee pain?

- A. High Irritability
- B. Moderate Irritability
- C. Low Irritability
- D. Mild Irritability

21. A 55-year-old construction worker reports having managed intermittent, dull low back pain for the past 10 years, which he describes as his "usual" pain and manages it with occasional stretching. However, three days ago, while lifting a heavy beam, he felt a sudden, sharp "pop" in his lower back, followed immediately by intense, radiating pain down his right leg and significant muscle spasm, making it impossible for him to stand upright. He has not experienced this level of pain or these specific radiating symptoms before. Based on this progression of symptoms, which stage of the condition best characterizes his current presentation?

- A. Acute
- B. Sub-acute
- C. Chronic
- D. Acute on Chronic

22. A 30-year-old software developer sprained her right ankle exactly three weeks ago while playing recreational basketball. Immediately after the injury, she experienced severe pain, significant swelling, and bruising, making it impossible to bear weight. Over the past three weeks, the swelling has reduced considerably, and the bruising has almost resolved. She can now bear full weight and walk short distances, but still experiences a dull ache around the ankle, especially after being on her feet for more than 30 minutes, and mild stiffness in the mornings. Her pain is currently rated 3/10 (down from 8/10 initially). Based on this progression and current status, which stage of the condition best characterizes her presentation?

- A. Acute
- B. Sub-acute
- C. Chronic
- D. Acute on Chronic

23. Seven days ago, your 40-year-old patient decided to run a 40-meter dash to prove to his son that "he still has speed." Approximately 30 yards into the sprint, he felt a sharp pull in the lower third of the posterior thigh. He could barely walk the first few days, but his condition is better now, though still sore when he tries to stretch it out fully. Based on the mechanism of injury and the precise location of symptoms, which part of the hamstring muscle complex was most likely injured, considering its anatomical connections to nearby tendons and ligaments?

- A. The proximal hamstring origin at the ischial tuberosity, typically involving the semimembranosus tendon.
- B. The central belly of the rectus femoris muscle, superior to the patella.
- C. The distal myotendinous junction of the hamstrings (e.g., biceps femoris or semitendinosus), just superior to their attachments near the fibular head or medial tibial condyle.
- D. The popliteal ligament complex located within the knee joint capsule.

24. During an objective musculoskeletal examination, when a physiotherapist is specifically assessing the quality and efficiency of a patient's movement pattern, which of the following factors is NOT a direct observation or evaluation of movement quality itself?

- A. The kinematic sequencing and rhythm of body segments throughout the movement.
- B. The patient's subjective report of pain intensity experienced during the movement.
- C. The presence or absence of appropriate dissociation between different body regions during the task.
- D. The identification of observable compensatory movement strategies used to achieve the desired action.

25. A physiotherapist is performing an objective examination on a patient complaining of knee pain. The therapist observe that while the patient's passive knee flexion is full, the patients active knee flexion is noticeably limited, creating a distinct "gap." When the

therapist then applies passive overpressure to the end of the available passive range, they perceive a firm-elastic end-feel, and the patient reports their familiar pain coinciding precisely with the initial onset of tissue resistance. Based on the principles described, which of the following is the most appropriate interpretation of these combined findings regarding the patient's condition?

- A. The presence of a significant gap primarily indicates severe capsular tightness, and the pain occurring at the onset of resistance suggests a very low level of tissue irritability, allowing for aggressive stretching.
- B. The discrepancy between active and passive range points directly to a primary neurological motor control deficit, and the end-feel with pain at resistance signals a high level of tissue irritability, necessitating gentle, pain-free passive movements only.
- C. The clear gap confirms that factors such as muscle weakness, pain inhibition, or motor control deficits are preventing full active utilization of the available motion, and the end-feel finding with pain occurring at initial tissue resistance indicates a moderate level of tissue irritability, guiding a cautious, progressive loading strategy.
- D. The gap indicates the patient is consciously guarding against pain, while the firm-elastic end-feel signifies healthy, non-irritable soft tissue, suggesting that immediate maximal resistive exercises are warranted.

26. During an objective musculoskeletal assessment, a physiotherapist evaluates a patient's accessory joint mobility by applying passive accessory motion with appropriate overpressure to determine the end-feel and overall joint play. When documenting the findings, which of the following terms is **NOT** considered a standard classification or qualitative descriptor directly derived from the assessment of accessory joint mobility or its end-feel?

- A. Hypermobility
- B. Hypomobility
- C. Empty
- D. Dysfunctional

27. Which of the following best describes the primary clinical rationale for applying accessory movements during objective assessment?

- A. To identify and precisely reproduce the specific mechanical forces or stresses on joint structures that are hypothesized to be contributing to the patient's pain or symptoms.
- B. To quantify the exact osteokinematic range of motion available at the joint for baseline documentation.
- C. To evaluate the contractile strength and endurance of the deep stabilizing muscles around the joint.
- D. To determine the patient's pain threshold during passive movement without applying any joint play.

28. During an objective examination, a physiotherapist encounters two distinct presentations regarding muscle length: Patient A: Has significantly limited knee extension, primarily after 6 weeks in a knee brace with the joint immobilized in moderate flexion. Passive knee extension reveals a firm, restrictive end-feel. Patient B: Presents with acute, severe low back

pain after an awkward lift, exhibiting visibly rigid and tender lumbar paraspinal muscles that are extremely resistant to passive stretch, despite a history of good lumbar mobility.

Which of the following statements best explains the primary nature of the muscle length findings in Patient A and Patient B, respectively?

- A. Patient A's muscle demonstrates structural shortening resulting from prolonged immobilization, whereas Patient B's muscle exhibits hypertonicity primarily as a protective, neurologically mediated guarding response.
- B. Patient A's muscle is primarily hypertonic due to disuse, while Patient B's muscle is undergoing a healing inflammatory response leading to stiffness.
- C. Both Patient A's and Patient B's muscles are exhibiting adaptive structural shortening due to prolonged positions of comfort
- D. Patient A's muscle has undergone pathological lengthening of its tendon, while Patient B's muscle shows increased viscoelastic stiffness due to fluid accumulation.

29. Imagine a patient who, during gait analysis, consistently demonstrates a lack of transverse plane motion of the pelvis, accompanied by excessive frontal plane motion of the pelvis (pelvic drop), and a noticeable deficit in hip extension during the terminal stance phase. Based on these observed movement impairments, which group of muscles would a physiotherapist most likely expect to find tender to palpation due to adaptive shortening, overuse, or compensatory strain?

- A. Adductor magnus and gastrocnemius
- B. Hamstrings (biceps femoris, semitendinosus) and deep external rotators of the hip (e.g., piriformis)
- C. Iliopsoas, Rectus Femoris, and Gluteus Medius
- D. Quadriceps femoris

30. The mechanism of injury, (MOI) is important for the therapist to:

- A. Determine whether to treat or refer out.
- B. Determine the exact treatment to select for the patient.
- C. Determine the structure involved.
- D. Determine the severity of injury.

31. The NATURE of an injury describes:

- A. The acuity of the injury.
- B. The forces involved.
- C. The stage of injury.
- D. The source of the injury.

32. Which of the following is best described as a SHEAR injury:

- A. Osteoarthritis
- B. Tendonitis
- C. Glenohumeral instability
- D. Disc disorder

33. When should a therapist form the working hypothesis?

- A. Upon obtaining the patient history.
- B. After hearing the patient's complaints.
- C. After doing the exam.
- D. After a trial treatment.

34. The patho-anatomic hypothesis describes:

- A. The diagnosis.
- B. The tissue involved.
- C. The direction of treatment.
- D. The mechanism of injury

35. Key impairments relate to deficits in:

- A. Participation.
- B. Activity.
- C. Strength and mobility.
- D. Psychology.

36. The severity of a symptom refers to:

- A. Intensity of the symptoms.
- B. The ease of increasing symptoms.
- C. The extent of the injury.
- D. The likelihood of recovery.

37. The irritability of symptoms refers to:

- A. Intensity of the symptoms.
- B. The ease of increasing symptoms.
- C. The extent of the injury.
- D. The likelihood of recovery.

You have a patient who came to you for a recent ankle sprain (two days prior). He reports that he was playing football and turned his ankle inwards (inversion ankle sprain). Patient complained of pain and presented with pain level of 8/10, swelling, inability to bear weight on that foot. Walking NWB with crutches. Attempts to weight bear immediately intensified his pain. ROM minimal and quite painful. Ecchymosis over lateral ankle. Pain on palpation over lateral ankle, below lateral malleolus. Unable to do further exam due to pain and anxiety of patient.

38. Severity is:

- A. High
- B. Moderate
- C. Low

39. Irritability is:

- A. High
- B. Moderate
- C. Low

40. Stage of condition:
- A. Acute
  - B. Sub-acute
  - C. Chronic
41. The NATURE of the injury was:
- A. Tension
  - B. Compression
  - C. Shear
  - D. Combination
42. PIP consists of:
- A. Inversion sprain
  - B. Pain
  - C. Ankle instability
  - D. Decreased ROM
  - E. All of the above
43. NPIP consists of:
- A. Decreased ROM.
  - B. Swelling.
  - C. Inability to walk unassisted
  - D. Weakness
  - E. All of the above
44. Phase of Treatment:
- A. One
  - B. Two
  - C. Three
  - D. Four
45. The best strategy for PIP is:
- A. Pain control.
  - B. Gentle ROM.
  - C. Progressive weight bearing.
  - D. Massage for swelling.
46. The best strategy for NPIP identified so far:
- A. AROM 10 times each plane every hour.
  - B. Progressive weight bearing starting in sitting.
  - C. ICE (ice, compression, elevation)
  - D. Begin resisted exercises all planes of motion with elastic band.

After one week of treatment Pain is 4/10, AROM improved with dorsiflexion to 5 degrees, PF to 15 degrees, inversion 5 degrees, eversion to neutral. Pain less on palpation. Anterior drawer sign positive. Swelling decreased. Very weak in manual muscle testing all planes, due

to pain. Patient reports that he can bear some weight on the foot in a seated position without aggravating his pain but FWB does intensify pain but once pressure is off the pain subsides quickly. He is still on crutches, complains of pain and lack of mobility. He would like to become more active and return as soon as possible to sport.

47. The SEVERITY of the condition is:
- A. High
  - B. Moderate
  - C. Low
48. The IRRITABILITY of the condition is:
- A. High
  - B. Moderate
  - C. Low
49. The SLOPE is:
- A. Positive
  - B. Negative
  - C. Static
  - D. Oscillating
50. The HEALING PHASE is:
- A. Inflammatory
  - B. Reparative
  - C. Remodeling
  - D. Degenerative
51. You are treating a 27-year-old female runner who has just completed a 10-mile race (2 days ago). She mentions that she sprinted for the last 200 meters to see if she could beat her own personal best time, but she felt a “pop” in the back of her thigh with about 10 meters left to go. She shows you the back of her thigh and you notice significant bruising from the middle of her hamstring down to her knee. What phase of healing do you believe she is in?
- A. Inflammatory
  - B. Reparative
  - C. Remodeling
  - D. All the above are correct
52. What would be an appropriate intervention for the patient in (question 51) today, based on her stage of healing?
- A. Initiate closed chain eccentric strengthening to align muscle fibers as they heal
  - B. Start a walk/jog progression to get her back to training in the next week or two
  - C. Initiate anti-inflammatory measures like ice and compression

- D. Initiate prolonged stretching to R2 to help lengthen and re-align damaged muscle fibers
53. If a patient has a Grade 1 contractile lesion of the quadriceps tendon, when would it be appropriate to begin prolonged high intensity static prone knee flexion stretching?
- A. 3 days after injury (once the inflammatory phase begins)
  - B. 5 days after injury (as soon as the reparative phase begins)
  - C. Once the patient demonstrates a “green light” condition (usually in the early remodeling phase)
  - D. As soon as the patient can tolerate it, regardless of the stage of healing
54. Which of the following most accurately describes a STRATEGY?
- A. Patient will perform Quadruped AROM x 15 reps
  - B. Patient demonstrates restriction in lower lumbar flexion and left side bending
  - C. Patient demonstrates compression intolerance of R lower lumbar
  - D. Therapist will prescribe Mobility exercises
55. Which of the following is a primary advantage of clinical reasoning in physiotherapy?
- A. Increased reliance on standardized protocols
  - B. Improved patient outcomes through individualized treatment plans
  - C. Reduced need for patient history and physical examination
  - D. Decreased decision-making time
56. What is the primary goal of "problem identification" in critical thinking?
- A. Identifying the patient's chief complaint.
  - B. Determining the underlying cause of the patient's condition.
  - C. Assigning a diagnosis to the patient.
  - D. Developing a treatment plan.
57. Which of the following is NOT a core domain of clinical reasoning in physiotherapy?
- A. Diagnostic reasoning
  - B. Clinical reasoning concept
  - C. Evidence based history and examination
  - D. Problem identification and management
58. The model of clinical reasoning that emphasizes understanding the patient's story and experiences is:
- A. Procedural reasoning
  - B. Hypothetico-deductive reasoning
  - C. Narrative reasoning
  - D. Conditional reasoning
59. Which of the following is an example of a specific critical thinking competency in physiotherapy?
- A) The ability to evaluate evidence-based research.

- B) The skill of logical reasoning and problem-solving.
- C) The capacity to critically analyze a patient's subjective report.
- D) The knowledge of different philosophical theories.

60. Which of the following models of clinical reasoning primarily involves generating and testing hypotheses about a patient's condition?
- A. Narrative reasoning
  - B. Hypothetico-deductive reasoning
  - C. Procedural reasoning
  - D. Conditional reasoning
61. The process of involving the patient in decision-making about their care is known as:
- A. Informed consent
  - B. Shared decision-making
  - C. Patient education
  - D. Therapeutic alliance
62. Which of the following is NOT a key component of pattern recognition?
- A. Knowledge of common musculoskeletal conditions.
  - B. Ability to differentiate between similar conditions.
  - C. Use of standardized assessment tools.
  - D. Clinical experience and expertise.
63. Which of the following is NOT an advantage of a well-developed problem list in clinical reasoning?
- A. Facilitates clear communication among healthcare providers.
  - B. Helps prioritize interventions based on problem severity.
  - C. Increases the risk of overlooking important patient information.
  - D. Provides a framework for goal setting and outcome measurement.
64. Which of the following is primary a cause of diagnostic errors?
- A. A complex interplay of factors, including human error and system failures
  - B. Primarily due to negligence on the part of healthcare providers
  - C. Solely attributable to technological limitations
  - D. Ineffective communication between healthcare providers
65. The following steps in no specific order are used when making initial diagnosis using the hypothetico- deductive reasoning approach. Which one is NOT?
- A. Observation and Initial Hypothesis
  - B. Deduction and Prediction
  - C. Referral of the patient to other personnel
  - D. Testing the Hypothesis
66. A 52-year-old woman walks into a physiotherapy clinic complaining of sharp pain in her right knee, particularly when going down stairs. She reports no recent injuries but has a history of working as a mail carrier for 20 years. The physiotherapist observes the woman's gait and notices a slight limp favoring the right leg.

Based on pattern recognition, the physiotherapist develops several initial hypotheses about the woman's knee pain. Which of the following is LEAST likely on the physiotherapist's initial list of hypotheses?

- A. Patellofemoral Pain Syndrome
- B. Osteoarthritis of the knee
- C. Ligament sprain in the knee
- D. Plantar fasciitis.

67. Narrative model of clinical reasoning has several strategies. Which one of the following is NOT one of those strategies?

- A. Active listening
- B. Statistical reasoning
- C. Reflection
- D. Open-ended questions

68. A 32-year-old female accountant presents to physiotherapy complaining of right lower back pain for the past 6 weeks. The pain started gradually after a long day of sitting at her desk. It is a dull ache that worsens with prolonged sitting, bending forward, and lifting heavy objects. The pain improves slightly with walking and lying down. She denies any radiating pain, numbness, or weakness in her legs. She has no history of injuries or falls.

Which of the following is NOT found in the therapist's problem list

- A. Dull ache that gets worse with sitting and bending forward
- B. Right lower back pain
- C. Radiating pain, numbness or weakness in her legs
- D. Intervertebral disc herniation

69. A patient has a 20 year-year history of knee osteoarthritis and comes to your physiotherapy practice with complaints of a painful knee after participating in a 10Km charity walk in their community which was 3 days ago. How would you classify the stage of their condition?

- A. Acute
- B. Sub-Acute
- C. Acute on Chronic
- D. Chronic

70. A 38-year-old patient reports experiencing low back pain that radiates down the right leg, along with weakness when trying to lift their toes. Which of the following is the least possible hypothesis?

- A. Lumbar Herniated Disc
- B. Lumbar Spinal Stenosis
- C. Piriformis Syndrome:
- D. Sprained lumbar muscles

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