



**AMREF INTERNATIONAL UNIVERSITY**  
**SCHOOL OF MEDICAL SCIENCES**  
**DEPARTMENT OF REHABILITATIVE MEDICINE**  
**BACHELOR OF SCIENCE IN PHYSIOTHERAPY**

**END OF TRIMESTER EXAMINATIONS MAY TO AUGUST 2023**

**UNIT CODE: PHT 311**  
**UNIT NAME: CLINICAL REASONING**

**DATE: 18<sup>TH</sup> AUGUST 2023**

**TIME: 6PM-8PM**

**INSTRUCTIONS**

1. All students will have two (2) hours to complete the examination
2. This is an **online exam**, Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is 11 including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.

**All the Best!!**

**TOTAL: \_\_\_\_\_/50**

**PERCENT: \_\_\_\_\_/100%**

**POINTS EARNED TOWARDS FINAL GRADE \_\_\_\_\_/70**

## FINAL EXAM CLINICAL REASONING

1. 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.
2. 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.
3. Which is best described as a SHEAR injury:
  - A. Osteoarthritis
  - B. Tendonitis
  - C. Glenohumeral instability
  - D. Disc disorder
4. 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.
5. The patho-anatomical hypothesis is impairment based.
  - A) True
  - B) False
6. The patho-anatomic hypothesis describes:
  - A. The diagnosis.
  - B. The tissue involved.
  - C. The direction of treatment.
  - D. The mechanism of injury.
7. Key impairments relate to deficits in:
  - A. Participation.
  - B. Activity.

- C. Strength and mobility.
  - D. Psychology.
8. 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.
9. 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.
10. A pain that increases with activity and lingers post activity is likely mechanical in nature.
- A) True
  - B) False

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.

11. Severity is:
- A. High
  - B. Moderate
  - C. Low
12. Irritability is:
- A. High
  - B. Moderate
  - C. Low
13. Stage of condition:
- A. Acute
  - B. Sub-acute
  - C. Chronic

14. The NATURE of the injury was:

- A. Tension
- B. Compression
- C. Shear
- D. Combination

15. PIP consists of:

- A. Inversion sprain
- B. Pain
- C. Ankle instability
- D. Decreased ROM
- E. All of the above

16. NPIP consists of:

- A. Decreased ROM.
- B. Swelling.
- C. Inability to walk unassisted
- D. Weakness
- E. All of the above

17. Phase of Treatment:

- A. One
- B. Two
- C. Three
- D. Four

18. The best strategy for PIP is:

- A. Pain control.
- B. Gentle ROM.
- C. Progressive weight bearing.
- D. Massage for swelling.

19. 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.

20. The SEVERITY of the condition is:

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

21. The IRRITABILITY of the condition is:

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

22. The SLOPE is:

- A. Positive
- B. Negative
- C. Static
- D. Oscillating

23. The HEALING PHASE is:

- A. Inflammatory
- B. Reparative
- C. Remodeling
- D. Degenerative

Our goal is to increase ROM and increase weight bearing tolerance. To achieve this goal we choose a strategy of gentle manual therapy to improve posterior glide of the talus and standing mini squats to increase weightbearing tolerance and improve ROM. We ask for three sets of ten mini-squats

24. A good pre-test would be:

- A. MMT
- B. Walking tolerance test
- C. Goniometric measurements
- D. Berg balance testing

25. Following the mini-squats patient reports increased pain and we do not see a change in ROM or strength. We should:

- A. Stop treatment and go back to rest.
- B. Continue present program: no pain, no gain

- C. Change our goal, patient not ready for increased ROM.
  - D. Change our tactics.
26. You are treating a 27 y/o 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
27. What would be an appropriate intervention for this patient 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
28. 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
29. 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
30. Which of the following most accurately describes a TACTIC?
- 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

31. In what instance should you consider changing your PT hypothesis?
- A. When a tactic is ineffective (despite correct technique and dose)
  - B. When many tactics are ineffective (despite correct technique and dose)
  - C. When a strategy is ineffective (despite correct technique and dose)
  - D. When many strategies are ineffective (despite correct technique and dose)
32. A patient falls from a ladder and breaks her leg. How would you classify her mechanism of injury?
- A. Mechanical
  - B. Non-Mechanical
33. A patient falls from a ladder and breaks her leg. How would you classify her mechanism of injury?
- A. Macrotraumatic
  - B. Microtraumatic
  - C. Combination
  - D. Insidious
34. A patient describes generalized pain in their entire body, generalized fatigue and a fear of doing basic movements. How would you classify the nature of their condition?
- A. Compression
  - B. Tension
  - C. Shear
  - D. Central
35. A patient describes hand pain on the hemiplegic side after a stroke. How would you classify the nature of their condition?
- A. Central
  - B. Neuro
  - C. Shear
  - D. Tension
36. A Patient has torn their MCL during a sporting event. How would you classify their patho-anatomic hypothesis?
- A. Contractile
  - B. Intra-articular
  - C. Compression
  - D. Non-Contractile

37. Which of the following describes a HIGH irritability condition?
- A. Pain with PROM prior to R1
  - B. Pain with PROM at R1
  - C. Pain with PROM after R1
38. Which of the following describes a LOW irritability condition?
- A. Chemically mediated symptoms
  - B. Mechanically mediated symptoms
  - C. Pain lingering for 1 minute after PROM
  - D. Limited ROM due to fear of pain
39. Which Phase of Treatment requires maximal tissue protection?
- A. Phase 1
  - B. Phase 2
  - C. Phase 3
  - D. Phase 4
40. A patient has a 20-year history of knee osteoarthritis and comes to you after hurting their knee last week on a long walk. How would you classify the stage of their condition?
- A. Acute
  - B. Subacute
  - C. Acute on Chronic
  - D. Chronic
41. Which of the following is considered a patient reported outcome measure?
- A. Timed Up and Go Test
  - B. 6 minute walk test
  - C. Visual Analog Pain Rating
  - D. Berg Balance Test
42. What period of time does a short-term prognosis usually cover?
- A. A day
  - B. A week
  - C. A month
  - D. 3 months



43. Which of the following would be considered a patient identified problem?
- A. Impaired accessory mobility of the glenohumeral joint
  - B. Inability to pick up their child without pain
  - C. Asymmetrical multifidus muscle activation
  - D. Infraspinatus trigger points
44. Which of the following would be considered a co-morbidity?
- A. Diabetes
  - B. Stressful job
  - C. Poor sleep habits
  - D. Smoking
45. A patient describes an insidious onset of abdominal pain at night with fever and recent unexplained weight loss. Based on the mechanism of injury, what should you do next?
- A. Treat the patient
  - B. Refer the patient
46. A patient dislocated their shoulder when reaching into the backseat of their car from the driver's seat. What do you believe is the nature of their condition?
- A. Compression
  - B. Tension
  - C. Shear
  - D. Central
47. A patient describes nerve pain along the L5 distribution whenever they sit for more than 10 minutes. How would you classify their pathoanatomic hypothesis?
- A. Contractile
  - B. Intra-articular
  - C. Non-Contractile
  - D. Central
48. Which of the following is considered an activity limitation?
- A. Rotator cuff weakness
  - B. Heel pain
  - C. Poor proprioception
  - D. Pain with reaching overhead

49. Which of the following is considered a participation restriction?

- A. Inability to care for their young child
- B. Pain with sitting
- C. Shoulder blade winging
- D. Core muscle weakness

50. A patient describes a 30-year history of rheumatoid arthritis with hand pain and visual deformity. How would you classify the healing phase of their finger joints?

- A. Inflammatory
- B. Reparative
- C. Remodeling
- D. Degenerative

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