



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF TERM EXAMINATIONS APRIL TO MAY 2026**

UNIT CODE: PHT 225

UNIT NAME: SOFT TISSUE MANIPULATION

DATE: 15th APRIL 2026

TIME: 2 HOURS START: 9:00am-STOP: 11:00am

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 8 including the cover.**
- 6. Read through the paper quickly before you start.**

Section A: Multiple choice questions. Answer all the questions. (30 Marks)

1. The primary aim of soft tissue manipulation is to:

- A. Increase joint ROM
- B. Reduce pain and improve tissue extensibility
- C. Strengthen muscles
- D. Improve aerobic capacity

2. A patient with chronic lateral epicondylalgia reports pain relief during STM but worsening symptoms the following day. Which interpretation BEST explains this response?

- A. Incorrect diagnosis
- B. Inadequate pressure applied
- C. Excessive tissue loading beyond tolerance
- D. Lack of patient compliance

3. During STM to the calf, a patient reports a “deep ache” that gradually eases and is followed by increased tissue pliability. This response MOST likely indicates:

- A. Neural irritation
- B. Excessive tissue trauma
- C. Appropriate therapeutic dosage
- D. Poor patient pain tolerance

4. A patient presents 72 hours post-grade I hamstring strain. Mild swelling persists but pain is improving. Which STM choice is MOST appropriate?

- A. Deep transverse friction across the injury
- B. Aggressive myofascial release
- C. Gentle longitudinal effleurage away from lesion
- D. Percussion to stimulate circulation

5. A 60-year-old patient with diabetes presents with adhesive capsulitis. Skin integrity is intact but sensation is reduced. What is the MOST critical STM consideration?

- A. Increase pressure to compensate for reduced sensation
- B. Use time-based dosing
- C. Rely on tissue response rather than pain feedback
- D. Avoid STM completely

6. Which factor MOST influences STM pressure selection?
- A. Therapist strength
 - B. Time available
 - C. Tissue response and patient feedback
 - D. Diagnosis alone
7. STM is LEAST effective when used alone for:
- A. Muscle tightness
 - B. Chronic pain
 - C. Functional rehabilitation
 - D. Temporary symptom relief
8. In clinical reasoning, STM is best justified when assessment shows:
- A. Soft tissue restriction
 - B. Neural tension only
 - C. Joint instability
 - D. Systemic illness
9. A runner presents with plantar heel pain. STM reduces pain temporarily but symptoms return during gait. What is the MOST logical next step?
- A. Increase STM frequency
 - B. Apply deeper pressure
 - C. Integrate STM with load modification and exercise
 - D. Discontinue STM
10. A patient exhibits pain only at end-range stretch, not on palpation. STM is MOST likely to be beneficial if the pain source is:
- A. Capsular restriction
 - B. Central sensitization
 - C. Myofascial stiffness limiting extensibility
 - D. Acute inflammation
11. What clinical finding BEST justifies the use of deep transverse friction?
- A. Diffuse muscle tightness
 - B. Chronic, localized tendon pain
 - C. Acute swelling
 - D. Global ROM restriction

12. A patient experiences dizziness during prolonged STM in prone. What is the MOST likely cause?

- A. Poor technique
- B. Vasovagal response
- C. Muscle fatigue
- D. Tissue ischemia

13. A patient with fibromyalgia reports symptom flare after STM. This MOST strongly suggests:

- A. Incorrect technique
- B. Central pain sensitization requiring modified input
- C. Therapist error
- D. Need for deeper pressure

14. Which STM principle MOST supports patient safety?

- A. Fixed protocol
- B. Pain-provocation
- C. Continuous feedback and observation
- D. Therapist experience alone

15. A 10-year-old boy who has cerebral palsy attends physiotherapy. His parents are considering a surgical procedure aimed at reducing spasticity. Both parents seem anxious. They ask the PT questions about the surgery and the level of function their son will have post-surgery. What should the PT do?

- A. Explain that answering these questions is not within the scope of physiotherapy practice, and refer them to the client's neurologist.
- B. Allow them to share their worries, and give them information about the procedure and the associated risks of the surgery
- C. Provide handouts about the surgical procedure and recovery, because written information will be better received by anxious parents.
- D. Listen empathetically, provide them with general information about the surgery, and discuss the potential outcomes of physiotherapy following this procedure.

16. Which one of the following is not a type of Swedish Massage technique?

- A. Effleurage
- B. Petrissage
- C. Friction
- D. Zen Shiatsu

17. A physiotherapist explains that myofascial release targets a continuous connective tissue network that surrounds muscles, nerves, and organs. This structure is best described as:

- A. Epimysium
- B. Tendon sheath
- C. Fascia
- D. Ligament

18. The primary therapeutic goal of myofascial release is to:

- A. Increase muscle hypertrophy
- B. Relieve fascial restrictions and normalize tissue tension
- C. Strengthen ligamentous structures
- D. Improve bone density

19. During treatment, a therapist applies slow, sustained pressure to dense thoracolumbar fascia. After several minutes, the tissue becomes more pliable and easier to mobilize.

Which connective tissue property best explains this change?

- A. Creep failure
- B. Thixotropy
- C. Neural facilitation
- D. Reciprocal inhibition

20. A patient is referred for STM but reports a recent unhealed tibial fracture confirmed on imaging.

What should the therapist do regarding myofascial release in this region?

- A. Proceed gently
- B. Use oscillatory technique only
- C. Avoid as STM is contraindicated
- D. Use vibration instead

21. Which of the following best describes myofascial release?

- A. Fast, superficial strokes
- B. Sustained pressure applied to fascial restrictions
- C. High-velocity thrust
- D. Passive joint oscillations

22. A 40-year-old recreational cyclist presents with right anterior knee pain. Palpation identifies tightness in quadriceps but pain is reproduced only when pressure is applied near the superior patellar border. What STM decision is MOST appropriate?

- A. Address quadriceps with regional emphasis near insertion
- B. Focus STM only on patellar tendon
- C. Treat entire quadriceps uniformly.
- D. Avoid STM and use joint mobilization only

The following vignette is associated with 23 and 24 questions:

A 28-year-old woman had a skiing accident two months ago. She experienced immediate discomfort in her neck and left arm. She thought this would subside over time, but her symptoms have worsened. She now attends physiotherapy.

23. The patient has left arm pain and weakness, and limited cervical range of motion (ROM). Which of the following interventions should the PT include to improve cervical ROM?

- A. Segmental joint mobilization.
- B. Gross passive stretching
- C. Cervical stabilization exercises.
- D. Intermittent mechanical traction.

24. One of the patient's hobbies is reading. She cannot read as much as she wants to know because it increases her pain. She tells the physiotherapist that not being able to read is what frustrates her most about her injury. Which of the following interventions is the BEST way for the physiotherapist to address this concern?

- A. Discuss optimal positioning of reading materials and encourage periodic neck exercises while reading.
- B. Substitute reading with other activities that involve less flexion and less stress to the neck.
- C. Recommend the use a soft cervical orthosis while reading.
- D. Refer the client back to her family physician for a reassessment.

25. A physiotherapist is working temporarily at a health clinic in a remote, Indigenous community. The physiotherapist overhears patients talking while they are waiting for their appointments. They are concerned that many members of their community are unable to attend the health clinic because the stairs are a barrier. What should the PT do?

- A. Advise a nurse to approach community leaders and ask for funding of a ramp or railing.
- B. Advocate with community leaders to provide access to the health clinic or an accessible alternative.
- C. Encourage the clients to raise funds for the equipment needed to increase accessibility to the health clinic.
- D. Ask a physiotherapy manager to discuss accessibility issues with community leaders upon returning to the city

26. Which of the following is a key principle of proper stump bandaging technique?

- A. Apply equal pressure proximally and distally
- B. Apply greater pressure proximally than distally
- C. Apply greater pressure distally than proximally
- D. Apply only cylindrical bandaging to avoid uneven pressure

27. During figure-of-eight bandaging for a below-knee amputation (BKA), the patella should NOT be covered when:

- A. There is oedema around the patella
- B. Benefits outweigh hindrances
- C. The patient is active and mobile
- D. The stump needs shaping

28. Trigger points are best described as:

- A. Ligament tears
- B. Bone deformities
- C. Joint restrictions
- D. Hyperirritable spots in taut muscle bands

29. Which of the following is not a contraindication to percussions

- A. Muscle belly
- B. Harmed soft tissue
- C. Over kidneys
- D. Over abdominal cavity

30. Which of the following is not an indication to STM

- A. To hasten tissue recovery
- B. To improve blood flow
- C. To reduction of swelling and pooling of fluids at the site of recent injury or trauma
- D. To increase the size of a scar tissue after a muscle injury

Section B: Short answer questions (SAQ). Answer all the questions (20 marks)

31. State 6 contraindications to Joint mobilization (6marks)

32. Differentiate between manipulation and mobilization (4 marks)

33. (a) What is a phantom pain (2marks)

(b). State 3 common contractures with below knee amputation (BKA) (3marks)

(c). State 5 reasons for stamp shaping in amputee (5marks)

Section C Long Essay Questions (LEQ). Answer all the questions. (20 Marks)

34. Describe at least three benefits of joint mobilization (12 marks)

35. Describe pain gate theory and explain its clinical application in STM (8marks)