



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

**END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2025**

**UNIT CODE: PHT 326**

**UNIT NAME: SPORTS II in PT (Special exam)**

**DATE: 11<sup>th</sup> APRIL 2025**

**TIME: 11.15am-1.15pm**

**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.**
- 7. Upon finishing the exam paper, on submission, the message 'Your examination has been submitted' will appear.**

**TOTAL: \_\_\_\_\_/70**

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

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

**SECTION A. Multiple choice question. Answer all the questions (30 Marks)**

1. Which of the following explanations best defines Finkelstein's test. (1 mark)
  - a. Forearm in the neutral position with ulnar deviation reproduces symptoms.
  - b. Gripping the patient's metacarpal bone of the thumb and moving it in a circle and loading it with gentle axial forces
  - c. Palpating for a nodule within the flexor tendons of flexor digitorum superficialis
  - d. Thumb flexion into the palm with passive wrist ulnar deviation
2. During the intermediate phase of de quervains rehabilitation: (1 mark)
  - a. Resisted exercises with heavy hand grip strengtheners are recommended
  - b. Night orthotics are weaned off
  - c. Weaning of day time orthosis is commenced 6 hours on 6 hours off
  - d. None of the above
3. A basket ball player felt a loud pop in the achilles tendon while playing. Upon assessment, there was no discernible end point. What was the likely grade of achilles tendon injury. (1 mark)
  - a. Grade i
  - b. Grade B
  - c. Grade iii
  - d. Grade D
4. What is the likely special test the sports physiotherapist to the above-mentioned basketball player conducted on-field. (1 mark)
  - a. Anterior drawer test
  - b. Thompson test
  - c. Thomas test
  - d. Talar tilt
5. What was the likely mechanism of injury. (1 mark)
  - a. Forceful plantar flexion
  - b. Forceful dorsiflexion
  - c. Forceful dorsiflexion with eversion
  - d. None of the above
6. What precaution during rehabilitation of the above achilles patient should the physiotherapist observe before 12 weeks. (1 mark)
  - a. Avoid plantar flexion stretches

- b. Avoid dorsiflexion stretches
  - c. Avoid using braces with raised heel
  - d. Start mobilization after 12 weeks post OP
7. The therapist will have the following categories of tapes to use on the player's ankle except. (1 mark)
- a. Cast
  - b. Masking
  - c. Elastic
  - d. Non elastic
8. Which of the following statements is not representative of the criteria for return to full activity post achilles rupture repair. (1 mark)
- a. Ability to walk jog and run with occasional limps
  - b. Full AROM of the involved ankle as compared to the uninvolved side
  - c. 90% to 95% of the number of heel raises throughout the full ROM in a 30-second period as compared to the uninvolved side
  - d. Isokinetic strength of the ankle plantar flexors at 90% to 95% of the uninvolved side
9. Which of the following statements regarding hamstring strain is false. (1 mark)
- a. The eccentric nature of nordics predispose players to myotendinous junction strain
  - b. Hamstring muscle strains commonly result from sporting activities requiring rapid acceleration and deceleration
  - c. Training in the lengthened states allow the hamstring to achieve optimal strength at a longer operating length
  - d. None of the above
10. A Kenyan cyclist recovering from patellofemoral syndrome is preparing for his debut on tour de France. What are some of the factors his physical therapist will not check on to modify in order to prevent injury recurrence. (1 mark)
- a. Saddle height
  - b. Medial knee motion
  - c. Floating pedals vs pedals fixed to shoes
  - d. Material of the frame i.e., carbon
11. The following is true about internal shoulder impingement except. (1 mark)
- a. The posterior aspect of the humeral head abuts on the posterior superior glenoid

- b. During internal impingement, the labrum, supraspinatus and infraspinatus tendons are trapped between the glenoid and the humerus
  - c. Risk increases with anterior shoulder instability
  - d. Internal rotation and adduction constitute the mechanism of injury
12. A cricket player complains of pain with every arm cocking phase. If the therapist went ahead and conducted neers and kennedy Hawkins tests, what was the therapist's hypothesis. (1 mark)
- a. Peel back phenomenon
  - b. Shoulder impingement
  - c. Subscapularis strain
  - d. Thoracic outlet syndrome
13. Which statement is true about physical adaptations in throwers. (1 mark)
- a. Glenohumeral internal rotation deficit is commonly observed
  - b. Tight posterior capsule will be present
  - c. Tight anterior capsule
  - d. Gain in shoulder external rotation
14. The following statements about patellofemoral pain in sports are true except. (1 mark)
- a. Reducing hip adduction during hip flexion will reduce patellofemoral pain in runners
  - b. Excessive medial knee motion in cycling will lead to patella lateralization
  - c. Correcting foot placement in runners will not decrease chances of patellofemoral pain
  - d. Small angled wedges between the shoe and the pedal cleat will reduce excessive medial knee motion in cyclists
15. Select a statement that is false about CHO (carbohydrate) loading benefits. (1 mark)
- a. Replenishing glycogen stores
  - b. Improvement of performance and capacity
  - c. Provides substrate availability for adenosine triphosphate (ATP) production
  - d. Facilitate muscle protein synthesis
16. Athletes identified as salty sweaters may benefit from the addition of sodium to drinks or foods, or the provision of salty snacks for the following reasons except. (1 mark)
- a. Sodium plays an important role in promoting fluid retention
  - b. Salt losses have been linked to exercise-related muscle cramps
  - c. sports drink lack required amount of sodium of 40-60 mmol/l

- d. none of the above
17. which factor is not likely to contribute to micronutrient deficiencies. (1 mark)
- a. low calorie diet
  - b. low fat diet
  - c. lack of sunlight exposure
  - d. lack of allergies
18. which statement is untrue about demineralization of bone tissue and calcium supplementation:
- a. Demineralization is not observed in players with hypoparathyroidism
  - b. Calcium absorption begins to hit a plateau at ~500 mg
  - c. Attention is required for athletes utilizing sweating techniques to make weight e.g MMA fighters
  - d. Attention is required for athletes training/competing in hot environments
19. A client at a sports clinic is presenting with crepitus and dull knee pain anteriorly which increases with squatting, going up and down stairs. What is the likely cause of the symptoms. (1 mark)
- a. Fat pad syndrome
  - b. Patellofemoral pain
  - c. Knee osteoarthritis
  - d. De quervain syndrome
20. What is the most common testing method for detecting performance-enhancing drugs. (1 mark)
- a. Collection of blood samples
  - b. Swab of cheek tissues
  - c. Collection of urine samples
  - d. Collection of saliva samples
21. Which of the following issues does not fall under the paralympic classification schemes. (1 mark)
- a. Athletes with visual impairment
  - b. Athletes with intellectual impairment
  - c. Athletes with physical disability
  - d. Elderly athletes
22. A para-athlete with muscular dystrophy will be put under which category in the Paralympics. (1 mark)

- a. Physical disability
  - b. Les Autres
  - c. Muscular disability
  - d. None of the above
23. Which of the following ways will a therapist not use to test muscle performance in a paraplegic tennis player. (1 mark)
- a. Isokinetic muscle testing
  - b. Dynamometer
  - c. Manual muscle testing
  - d. No need for muscle testing in Paralympians
24. A therapist assessing a cyclist returning to participation in order to prevent iliotibial band friction syndrome from recurring. Which is an extrinsic factor he will assess. (1 mark)
- a. Bike position
  - b. Pedal set up
  - c. Saddle height
  - d. Poor cycling technique
25. A cricketer complaining of shoulder pain especially during the cocking phase had special tests conducted on him and the following were his results. Negative Hawkins test and positive relocation test. What is his likely diagnosis. (1 mark)
- a. Subacromial impingement
  - b. Posterior glenoid impingement
  - c. Subscapularis strain
  - d. Infraspinatus strain
26. Upon further assessment. Which is not a likely finding the therapist will make in the above-mentioned cricketer. (1 mark)
- a. Glenohumeral internal rotation deficit
  - b. Tight posterior shoulder capsule
  - c. Anterior instability
  - d. Increased external rotation strength and decreased internal rotation strength
27. During the advanced phase of de quervains rehabilitation: (1 mark)
- a. Resisted exercises with heavy hand grip strengtheners are recommended
  - b. Night orthotics are weaned off

- c. Weaning of day time orthosis is commenced 6 hours on 6 hours off
  - d. None of the above
28. A squash player is being assessed for lateral epicondylitis. Corzens test was found to be positive. An additional middle finger extension reproduced his symptoms. Which muscles are not involved in lateral epicondylitis. (1 mark)
- a. Extensor carpi radialis brevis
  - b. Extensor digitorum
  - c. Extensor carpi ulnaris
  - d. Pronator quadratus
29. Which of the following statements is false about carbohydrates. (1 mark)
- a. Glycogen depletion is a cause of fatigue in endurance players
  - b. Food with glycemic index between 45 and 55 fall under moderate GI category
  - c. Dietary intakes of 8–12 g/kg per day are required to maximize glycogen storage
  - d. None of the above
30. Which of the following statements regarding CHO pre-exercise is false. (1 mark)
- a. Feeding 3–4 hours before competition leads to elevations in muscle and liver glycogen
  - b. Intake of 1–4 g/kg body mass, 3–4 hours prior to exercise is the current guideline
  - c. When muscle glycogen level drops, liver glucose will be expected to maintain performance
  - d. 0.4 g/kg boluses be consumed every 3–4 hours before match

**SECTION B. Short structured questions. Answer all the question (20 Marks)**

1. State four classes of substances prohibited by WADA only in competition. (4 power)
2. State 5 substances and methods prohibited by WADA in and out of competition. (5 marks)
3. Define doping. (1 mark)
4. What two pathophysiological changes are likely to cause a trigger finger. (2 marks)
5. A golfer was diagnosed with an acromioclavicular shoulder injury. Which special tests would a physiotherapist do to confirm these findings. (2 marks)
6. What are 3 objectives of taping. (3 marks)
7. State three roles of a physical therapist in sports. (3 marks)

**SECTION C. Long Essay question. Attempt any of the 2 questions. (20 Marks)**

8. State and explain the phases of throwing. (10 marks)
9. A golfer having lateral epicondylitis is undergoing treatment for it. Outline the special tests to confirm the lateral epicondylitis and management steps from acute to return to play. (10 marks)
10. Name four energy systems, their respective durations, classification and energy sources. (10 marks)

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