



**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 (Main Exam)

DATE: 11th 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. For an athlete living with disability, sports prescription is not determined by. (1 mark)
 - a. medical condition
 - b. personal preference
 - c. availability of training facilities
 - d. salary
2. A tennis player at a tournament consuming CHO on field expects it to augment his performance via the following mechanisms except. (1 mark)
 - a. Muscle glycogen sparing
 - b. Liver glycogen sparing
 - c. Maintenance of plasma glucose
 - d. Leucine preservation
3. A Kenyan athlete running the Amsterdam marathon was banned from sports participation for testing positive for anabolic agents. What is the effect of anabolic agents on performance. (1 mark)
 - a. They reverse the catabolic effects of glucocorticosteroids
 - b. They fail to induce protein synthesis in skeletal muscle cell
 - c. They increase oxygen carrying capacity
 - d. All of the above
4. Which performance-enhancing drug acts like testosterone, increasing muscle mass in those who use it. (1 mark)
 - a. Masking agents
 - b. Diuretics
 - c. Anabolic steroids
 - d. Strychnine
5. Blood doping with erythropoietin improves an athlete's performance by what process? (1 mark)
 - a. Thinning the blood
 - b. Making blood circulate much faster
 - c. Cooling the blood

- d. Increasing the number of red blood cells in the body
6. why would a therapist travelling with Paralympians with spinal cord injury carry a supply of urine dipsticks.
- a. For neurogenic bladder, resulting in poor storage and voiding function
 - b. to measure urine osmolarity
 - c. all of the above
 - d. none of the above
7. what other aspects of the above-mentioned Paralympian with spinal cord injury should the therapist be aware of. (1 mark)
- a. No need for TUE for patients with disability
 - b. Increased suspicion of fractures upon collision due osteopenic changes
 - c. Collisions are common due to visual impairment
 - d. Shorter prosthetic limbs to avoid side to side discrepancy
8. which of the following statements is not a component of the Ottawa ankle rule. (1 mark)
- a. Tenderness in the base of first metatarsal
 - b. Tender navicular
 - c. Tender medial malleolus
 - d. Tender lateral malleolus
9. A patient with a positive windlass test is likely to be having issues with. (1 mark)
- a. De quervains tenosynovitis
 - b. Medial epicondylitis
 - c. Lateral epicondylitis
 - d. None of the above
10. Which is an ideal adjunct of physiotherapy for the above-mentioned patient. (1 mark)
- a. Semi flexible orthoses
 - b. Plyometric wrist snap
 - c. Carpometacarpal joint immobilization
 - d. Ulnohumeral joint mobilizations
11. Tissue remodelling following an injury has been said to continue long after the acute phase. Which protocol caters for the athletes' needs beyond the acute phase. (1 mark)
- a. RICE

- b. POLICE
 - c. PEACE & LOVE
 - d. All of the above
12. What does the letter O in the abbreviation “POLICE” protocol stand for. (1 mark)
- a. Optimism
 - b. Optimal load
 - c. Orthotics
 - d. None of the above
13. 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
14. De’Aaron fox, an NBA player has recently suffered a third-degree ankle sprain during practice. Which is not a characteristic of a third-degree ankle sprain. (1 mark)
- a. Audible pop may have been heard during the incident
 - b. Significant joint play with no discernible end point
 - c. Significant functional deficit
 - d. Significant joint play with discernible end point
15. During the above-mentioned player’s return to play phase, what preventive measures would his therapist not take given the increased risk of injury between six- and twelve-months post injury. (1 mark)
- a. Taping and bracing
 - b. Neuromuscular training
 - c. Continue strength training
 - d. Limit inversion-eversion exercises
16. If during the initial on-field assessment of De’Aaron, the ankle was fixated in an inverted position. Which ligaments were affected. (1 mark)
- a. Tibionavicular

- b. Tibiocalcaneal
 - c. Tibitalar
 - d. Calcaneofibular ligament
17. Ankle inversion is a function of which joint. (1 mark)
- a. Talocrural
 - b. Subtalar joint
 - c. Syndesmosis joint
 - d. Proximal tibiofibular
18. A rugby sevens player receiving a pass from his team mate ended up forcing his distal interphalangeal joint to flex from the extended position it was positioned in. What is the likely injury that ensued from this mechanism. (1 mark)
- a. Trigger finger
 - b. Mallet finger
 - c. TFCC injury
 - d. Carpal tunnel syndrome
19. A physiotherapist was seen performing a special test on a patient where Pain was reproduced by resisted wrist extension with elbow extended and forearm pronated. What is the name of the special test performed. (1 mark)
- a. Neers test
 - b. Thompsons test
 - c. Empty can test
 - d. Corzen's test
20. While managing the above-mentioned patient, which of the following statements does not represent the criteria to consider before the patient is let to join the return to activity phase. (1 mark)
- a. Tolerance of resistive exercises
 - b. strength equal to the contralateral extremity
 - c. Functional ROM
 - d. Can perform plyometrics of the lower limbs
21. If the above-mentioned player is a lawn tennis player, which of the following is not a consideration for return to play. (1 mark)

- a. Grip size assessment
 - b. Weight of the roquette
 - c. Player's grip strength
 - d. None of the above
22. A soccer player after sustaining an inversion foot injury, the therapists noted that the player made two steps in an antalgic fashion and was unable to proceed walking. Upon palpation, the lateral malleolus was tender. Which is the most appropriate measure the therapist ought to have taken. (1 mark)
- a. Ice and rest
 - b. Apply a rigid tape then reassess the player's ability to walk and play
 - c. Give anti-inflammatories
 - d. Send the player for X ray
23. If for whichever reason, the therapist decided to tape the ankle of the above-mentioned player. What technique would he ideally start with. (1 mark)
- a. Figure of reverse 6
 - b. Stirrup
 - c. Anchor
 - d. Heel lock
24. During acute injury management, which management approach has been observed to have better outcomes. (1 mark)
- a. Use of anti-inflammatories
 - b. Mid-range isometric exercises
 - c. Agility exercises
 - d. Plyometric exercises
25. Which of the following is a phase of throwing in cricket. (1 mark)
- a. Striding
 - b. Mid stance
 - c. Swing phase
 - d. Scissors motion
26. A weekend warrior at a local gym is using a static bicycle is on his 6th minute of cycling under 60 vo2 max. Which energy source is he on. (1 mark)

- a. ATP in muscle
 - b. ATP-PC
 - c. Anaerobic glycolysis
 - d. Oxidative phosphorylation
27. Which of these is not a prohibited performance-enhancing substance. (1 mark)
- a. Creatine
 - b. Ephedrine
 - c. Anabolic steroids
 - d. Cannabinoids
28. Which group of drugs need a TUE. (1 mark)
- a. Antibiotics
 - b. antidepressants
 - c. antidiarrheals
 - d. amphetamines
29. A Paralympian with T4 complete spinal cord injury started feeling a sudden severe headache and upon measurement, his blood pressure was 179/92. This was later attributed to a kinked catheter. What is the name of the phenomenon described. (1 mark)
- a. Neurogenic bladder
 - b. Autonomic dysreflexia
 - c. Hypertension
 - d. Cystocele prolapse
30. Cocaine is a prohibited substance within which category of the prohibited list. (1 mark)
- a. Beta blockers
 - b. Masking agents
 - c. Stimulants

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

31. An athlete weighing 75kg would require how much daily protein proportion. (2 marks)
32. Outline the joints of the ankle, the bones that form the joints and their respective movements (5 marks)
33. Define the peel back phenomenon seen in throwers. (1 mark)

34. Give an illustration of energy systems during exercise. (5 marks)
35. Outline the notable differences between PRICE and PEACE & LOVE protocols. (4 marks)
36. Outline the components of the OTTAWA ankle rule. (3 marks)

SECTION C Long structured questions. Answer any two questions (20 Marks)

37. A. A soccer player has just incurred a third degree achilles tendon injury. Which special test did his therapist perform and what was the outcome. (2 marks)
B. What risk factors predisposed this soccer player to an achilles injury. (4 marks)
C. What criteria must be met for full return to play. (4 mark)
38. What are some of the issues Paralympians with spinal cord issues are predisposed to and why. (10 marks)
39. A. State four minerals' athletes may be deficient in and their physiological role. (8 marks)
B. What are the two classifications of unsaturated fats. (2 marks)