



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCE  
DEPARTMENT OF REHABILITATION MEDICINE  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
END OF MAY-AUGUST 2024 TRIMESTER EXAMINATIONS**

**UNIT CODE: PHT 312                      UNIT NAME: SPORTS PHYSIOTHERAPY (SPECIAL  
EXAM) FRESH ENTRY**

**DATE:                      FRIDAY / 9TH/ AUGUST  
TIME:                      TWO HOURS  
START:                      11:15AM                      STOP : 1:15PM**

**INSTRUCTIONS (physical exams)**

- 1. Do not write on this question paper**  
(Marks and questions distribution as per program curriculum.)

**INSTRUCTIONS (Online examinations)**

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
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
11. For adverse incidences please write an email to: [amiu.examinations@amref.ac.ke](mailto:amiu.examinations@amref.ac.ke)

## SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ) 30 MARKS

1. A 25-year-old swimmer trips and falls onto her left arm on a wet swimming floor. Two weeks later, she visits the A&E because she is unable to rotate her shoulder either internally or externally or raise her arm overhead. She denies experiencing any pain or weakness in her shoulders before the fall. Which initial treatment option is the best?
  - A. Physical therapy
  - B. Rotator cuff repair
  - C. Superior capsular reconstruction
  - D. Total shoulder arthroplasty
2. What kind of ligamentous knee damage is linked to the development of post-traumatic osteoarthritic overuse?
  - A. Commodity score less than 5
  - B. Increased body mass index
  - C. Male gender
  - D. Age older than 50 years
3. Which one of the following is NOT one of five biochemical and physiological factors that are all stimulated by physical conditioning?
  - A. Reduced glycogen and protein storage in muscle
  - B. Increased vascularization
  - C. Increased number of myofibrils
  - D. Recruitment of neighboring motor units
4. Which of the following statements about the closed chain exercise is untrue?
  - A. The distal extremity is free to move in space
  - B. They are more functional than open chain exercises
  - C. The extremity is in constant contact with an immobile surface
  - D. Compound movements involve more than one muscle group simultaneously
  - E. The joint incurs a comprehensive force
5. A 15-year-old has a head collision while playing football while playing football. He had no loss of consciousness but has persistent headaches for 2 weeks. The patient is now back to school and has no headaches. What is the best next step?
  - A. Return to full soccer activity
  - B. Start light aerobic activity
  - C. Obtain baseline neuropsychological testing
  - D. MRI scan of the brain

6. What is Jumpers Knee?
  - A. Patellar tendonitis
  - B. Quadriceps tendinitis
  - C. Osgood Schlatter
  - D. Quadriceps tendinopathy
  
7. Which one of the following is NOT an overuse injury?
  - A. Chondropathy
  - B. Periosteal contusion
  - C. Synovitis
  - D. Focal tissue thickening.
  
8. Following a latissimus dorsi transfer for chronic irreparable tears of the rotator cuff, which of the following factors has NOT been associated with a poor clinical outcome?
  - A. Male gender
  - B. Poor pre-operative shoulder function
  - C. Generalized muscle weakness
  - D. Absence of electrical activity at follow – up
  - E. Previous failed rotator cuff repair
  
9. The most common symptoms of a stomach cramp are:
  - A. Aching and throbbing of the stomach
  - B. Breathing capacity is reduced and a headache
  - C. A sudden, sharp and severe pain to the abdomen
  - D. All of the above
  
10. A hockey player had a puck hit his foot. Radiographs taken immediately after the game were negative. He still has persistent pain 5 days after the injury and difficulty weight bearing. What is the best next step?
  - A. Repeat radiographs
  - B. Full clearance to return to play
  - C. Bone scan
  - D. MRI scan
  
11. Iliotibial band tightness is best tested by which of the following tests?
  - A. Duncan – Ely test
  - B. Flexion, abduction and external rotation of the affected side
  - C. Standing adduction

- D. Standing abduction
  - E. With the patient lying on the side and affected side up, the affected side is abducted and extended at the hip and then progressively brought into adduction
12. The Lachman's Test is used to evaluate stability of which of the following?
- A. Medial collateral ligament
  - B. Anterior cruciate ligament
  - C. Medial meniscus
  - D. Patellar femoral joint
13. What is DOMS?
- A. Delayed offset muscle soreness
  - B. Delayed onset muscle strength
  - C. Dependent onset muscle soreness
  - D. Delayed onset muscle soreness
14. A competitive skier makes a turn to the right around a slope. The left ski turns in the snow causing external rotation of the left ski and boot. Which of the following ligaments is most likely to be the injured structure?
- A. Calcaneotibular ligament
  - B. Anterior inferior tibiofibular ligament
  - C. Deltoid ligament
  - D. Calcaneofibular ligament
15. Varus deformity is measured as the distance between:
- A. The two medial malleoli
  - B. The Knees (intercondylar distance)
  - C. The feet
  - D. The fingers
16. The anterior drawer test with the ankle in 20 degrees of plantarflexion most effectively test for the laxity
- A. Calcaneo-fibular ligament
  - B. Anterior talofibular ligament
  - C. Anterior inferior tibio-femoral ligament
  - D. Deltoid ligament

17. Which type of hip pain may indicate a problem in the joint itself?
- A. Pain while resting
  - B. Pain that increases with weight-bearing when you stand or walk
  - C. Pain when moving the leg or pelvis while in a resting position (such as lying on back and lifting leg)
  - D. All of the above
18. A common elbow pathology often caused by repetitive wrist extension activities is which of the following?
- A. Medial epicondylitis
  - B. Lateral epicondylitis
  - C. Tendonitis of biceps tendon
  - D. Volkmann's ischemic contracture
19. Optimum nutrition may NOT help to?
- A. Maximize energy stores
  - B. Maintain adequate hydration
  - C. Optimizing post competition food intake
  - D. Achieving ideal body weight
20. "HARM" is a protocol used in sports. What does A stand for?
- A. Achievement
  - B. Assessment
  - C. Alcohol
  - D. Active exercises
21. During a physical therapy evaluation, a patient with a sprain of the deltoid ligament of the ankle reported pain with palpation of the affected area and with ankle motion that stresses the ligament. To determine any change in the patient's pain level during subsequent treatment you should palpate which of the following areas?
- A. Anterior to the lateral malleolus while the patient's ankle is passively plantar flexed
  - B. Inferior to the medial malleolus while the patient's ankle is passively plantar everted
  - C. Over the sinus tarsi while the patient's is passively inverted
  - D. Deep to the Achilles tendon while the patient's ankle is passively dorsiflexed

22. A felling of a “pop”, crack sound o knee injury points to which possible injury?
- A. Lateral menisci
  - B. Medial menisci
  - C. Anterior cruciate ligament
  - D. Posterior cruciate ligament
23. A 15-year-old male ice hockey is hit in the chest by a puck and immediately falls to the ground unconscious. What has been shown to predict survival in the treatment of this condition?
- A. Use of chest protectors
  - B. Time to initiation of chest compressions
  - C. Lower velocity of the puck at impact
  - D. Time to defibrillation
24. One of the following is a principle of sports injury management?
- A. Minimize the extend of healing.
  - B. Reduce associated pain and inflammation.
  - C. promote healing of damaged tissue
  - D. All the above.
25. What is Patellar tracking?
- A. Movement of patella on the femur
  - B. Erosion of patellar cartilage
  - C. Auto rotation
  - D. Acute dislocation of patella
26. Valgus’ Test is used to evaluate stability of which of the following?
- A. Medial collateral ligament
  - B. Anterior cruciate ligament
  - C. Medial meniscus
  - D. Patellar femoral join
27. Which statement describes the relationship between exercise and low back pain?
- A. Any program of exercise would be beneficial.
  - B. Avoid exercises that strengthen the abdominal area.
  - C. Exercise can play a key role in its prevention.
  - D. Practice overextending the back and neck.

28. What is an electrolyte disorder that a marathon runner may experience, caused by ingesting large quantities of water and sweating over several hours?
- A. Heat exhaustion
  - B. Hyperthermia
  - C. Heat cramps
  - D. Hyponatremia
29. Which one of the following is an intrinsic predisposing factor to overuse injuries?
- A. In appropriate shoes.
  - B. In adequate nutrition
  - C. Lack of flexibility.
  - D. Raining errors
30. Groin pain can be as result of a referred pain. The most common source of pain is?
- A. Lower lumbar spine
  - B. Sacroiliac pain
  - C. Gluteus minimums
  - D. Thoracic spine

**SECTION B: SHORT ANSWER QUESTIONS (20 MARKS)**  
**ANSWER ALL QUESTIONS.**

1. Discuss the strategies you would use to prevent sports injuries in a swimming team (5 Marks)
2. What are the appropriate steps taken for the first aid care for loss of consciousness in playground? (5 Marks)
3. Explain the ideal biomechanics with running (5 Marks)
4. Explain the goals of sports medicine (5 Marks)

**SECTION B: LONG ANSWER QUESTIONS (20 MARKS)**  
**ANSWER ANY TWO QUESTIONS**

1. Discuss the ergogenic nutritional aids (10 Marks)
2. Describe the basic principles that direct the palpation component of an injury assessment (10 Marks)
3. Outline the sports injuries that can be sustained at the muscles (10 Marks)

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