AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCE
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF MAY-AUG 2025 TRIMESTER EXAMINATIONS

UNIT CODE: PHT 326 **UNIT NAME: Sports physio II**

DATE: **11 August 2025**
TIME: **TWO HOURS**
START: 6pm **STOP : 8pm**

INSTRUCTIONS (Online examinations)

1. This exam is marked out of 70 marks
2. This Examination comprises 1 Section
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

Multiple choice question. Answer all the questions

1. In sport, which of the "clinical symptoms" of autonomic dysreflexia be misappropriated or misunderstood as beneficial to performance?
    a. Bradycardia
    b. Hypertension
    c. Sweating
    d. Dyspnea
    e. All of the above.
    f. None of the above

2. Burnham's study, "Intentional induction of autonomic dysreflexia among quadriplegic athletes for performance enhancement" presented in class, the purposeful use of autonomic dysreflexia enhanced the athletes' performance.
    a. True
    b. False

3. Burnham's study "Acute median nerve dysfunction from wheelchair propulsion: the development of a model and study of the effect of hand protection" demonstrated that the use of padded gloved could significantly reduce the incidence and severity of median nerve trauma when wheeling.
    a. True
    b. False

4. When comparing the use of upper extremity cycling to lower extremity cycling, the peak systolic blood pressure with a maximal workload will be _____ when using the upper extremities versus the lower extremities.
    a. Higher
    b. Lower
    c. Similar

5. When considering issues of exercise training with individuals living with a spinal cord injury, issues of thermoregulation are only of importance for those with cervical spine level injury.
    a. True
    b. False

6. Which of the following typical upper extremity is considered a poor choice and puts the wheelchair user's shoulder at risk for injury?
    a. Press ups or Dips
    b. Rowing
    c. Resisted wheelchair pushing
    d. Pectoralis flies – horizontal should flexion

7. Which of the following cognitive symptoms displayed post-concussion are indicative of a more serious injury?
    a. Heightened distractibility
    b. Inability to carry out a sequence of goal-directed movements
    c. Inability to maintain a coherent stream of thought
    d. Post-traumatic amnesia

e. Retrograde amnesia

8. Which of the following are not typical cognitive post-concussion symptoms?
    a. Vacant stare (befuddled facial expression)
    b. Delayed verbal and motor response (slower to answer questions or follow instructions)
    c. Inability to focus attention (easily distracted)
    d. Disorientation (walking in wrong direction, unaware of time, place, date)
    e. All of the above

9. Which of the following is not considered a post-concussion red flag and the care giver/parent must be made aware of these prior to the athlete going home?
    a. Insatiable appetite
    b. Neck pain
    c. Poor awakening
    d. Slurred speech

10. The "3-Strike" program for return to activity, allows for the athlete to have slight/mild symptoms prior to attempting the maximum of 30 minutes of light activity.
    a. True
    b. False

11. The "Stepwise" return to play program requires the athlete to be completely asymptomatic prior to even a return to light exercise.
    a. True
    b. False

12. What is the most common muscle to be involved in external shoulder impingement?
    a. Infraspinatus
    b. Subscapulari
    c. Supraspinatus
    d. Tires Major

13. Why do we get so many shoulder injuries with overhead motions?
    a. Glenoid is directed more lateral versus cranial
    b. Acromion and coracoid provide little surface area and thus limited stability
    c. Scapula move more in medial/lateral rotation versus cranio-caudal directions
    d. All of the above

14. You are the team physiotherapist for a local rugby club. During one of the team's matches, one of the loose forwards sustains a left elbow injury after his opponent ripped the ball from his hands during a maul. The player experienced a sudden, sharp pain. Some swelling is visible on the anterior elbow and there is a noticeable bulge in his upper arm. The player has limited elbow flexion and reduced forearm rotation. When performing the biceps squeeze test, you note an absence of supination of the forearm. What would your MOST LIKELY diagnosis be in this scenario?
    a. Medial epicondylalgia
    b. Total distal biceps rupture
    c. Ulnar collateral ligament insufficiency

15. A female boxer throws a hook punch with her lead arm/hand. Considering the kinetic chain, how much force will she be generating from her lower legs?
    a. 10%
    b. 20%
    c. 50%
    d. 75%

16. Which of the following conditions need to be considered in the differential diagnosis of anterior elbow pain?
    a. Triceps tendinopathy
    b. Biceps tear
    c. Olecranon bursitis
    d. All of the above

17. An overhead athlete with complains to the therapist of shoulder tightness and a feeling that the shoulder does not loosen up with activity. After a thorough evaluation the physical therapist diagnose the patient with internal shoulder impingement. What early management treatment regime should be followed?
    a. Strengthening of the posterior capsule and weak muscles
    b. Ice and NSAIDs as adjuncts to therapy
    c. Improving muscle imbalance around the shoulder complex
    d. Rest from overhead activities
    e. Closed kinetic chain exercises
    f. All of the above

18. What clinical findings will you see with a patient with SICK scapula?
    a. Scapular malposition, a prominent inferior medial border, coracoid pain, scapular dyskinesia
    b. Scapular pain, a prominent inferior medial border, coracoid position, scapular dyskinesia
    c. Scapular pain, a prominent inferior lateral border, coracoid position, scapular dyskinesia
    d. All of the above

19. When evaluating an athlete with posterior shoulder pain which of the following might be true for internal impingement presentation?
    a. Neuromuscular imbalance
    b. Rotator cuff weakness
    c. Increased laxity
    d. Anterior instability
    e. All of the above

20. Which of the following may be the cause of internal shoulder impingement?
    a. Scapular dyskinesis
    b. Excessive humeral translation
    c. Shape of the acromion process

21. Which the following have been found to be a major predictor for a poor outcome for people presenting with shoulder pain?

a. Mild trauma or overuse before onset of pain
b. People with arthritis
c. Acute onset with no previous episode
d. High level of pain intensity on the first consultation

22. An individual is most likely to experience shoulder pain in which of the following periods of their life?
    a. Older Person 65+
    b. Mid Life 45 - 64
    c. Adults 20 - 44
    d. Adolescents 13 – 19
    e. Children 0 - 12

23. What is considered the most common upper extremity fracture in sports?
    a. Acromion
    b. Clavicular
    c. Humeral neck
    d. Radial head
    e. Scaphoid

24. What direction is most common for a shoulder dislocation?
    a. Anterior
    b. Anterolateral
    c. Posterior
    d. Posterolateral

25. Ruptures of the biceps tendon occur primarily in teens and young adults.
    a. True
    b. False

26. The blood supply to the scaphoid is limited and it arrives via the distal pole.
    a. True
    b. False

27. The typical mechanism of injury of an AC joint separation is fall onto an outstretched arm or a blow to the anterior aspect of the shoulder.
    a. True
    b. False

28. Tendinopathies about the elbow account for most of the pathologic condition in patients presenting with elbow pain and most commonly at the lateral epicondyle
    a. True
    b. False

29. Injuries to the rotator cuff is one of the most common upper extremity injuries found in the general and recreational active populations, accounting for over 60% of reported shoulder pain/dysfunction in those over the age of 80.
    a. True
    b. False

30. Most athletic shoulder injuries are the result of either microtrauma or microtrauma. Which of the following is an example of the most common form of microtrauma resulting in an athletic should injury?
    a. Acute internal forces applied onto the shoulder complex.
    b. Acute external force applied onto the shoulder complex.
    c. Repetitive overhead activities, like a tennis serve
    d. Repetitive throwing actions, like baseball or cricket

31. In racket sports there has been limited if any association between the weight of the racket and the incidence of lateral elbow tendinopathies, whereas actual overuse and poor technique have very high association with chronic elbow dysfunction.
    a. True
    b. False

32. A kyphotic posture and associated scapular protraction is a strong predisposing factor for shoulder impingement syndrome.
    a. True
    b. False

34. Based on the Physical Stress Theory, stress to a biological tissue that is ABOVE the maintenance level of stress leads to:
    a. Atrophy
    b. Death
    c. Hypertrophy
    d. Injury

35. Your patient is a tennis player and presents to Physiotherapist with lateral epicondylitis (tendinitis of the wrist extensors). How would you describe the physical stress that has been applied to these tendons?
    a. Stress was lower than the maintenance level
    b. Stress was higher than the maintenance level
    c. Stress was significantly higher than the maintenance level
    d. Stress was at the maintenance level

36. A grade II tendon injury presents with:
    a. Pain during activity that impairs performance and resolves between bouts of activity
    b. Minimal pain during activity that doesn't impair performance
    c. Pain that impairs performance and doesn't resolve between bouts of activity
    d. Pain after activity that resolves between bouts of activity

37. How long do athletes with moderate COVID-19 infection need to wait before starting a graded Return to Play (RTP) program?
    a. 14 days from their (+) test
    b. 14 days from their (+) test and 10 days after symptom resolution
    c. 3-6 months
    d. None of the above

38. You are working with a volleyball player who had a moderate COVID-19 infection. You are on week 2 of the return to play program and the athlete develops new-onset increased shortness of breath and fatigue while completing jumping drills during practice. What action would you take?
    a. Ask the athlete to rest for 15 minutes then return to practice.
    b. Tell the athlete to take the day off and return to practice tomorrow.
    c. After practice is over, refer the athlete to be evaluate by the team physician
    d. Tell the athlete to discontinue all physical activity and immediately be evaluated by the team physician.

39. Which of the following athletes DO need a physician's evaluation and clearance before starting a graded Return to Play program after COVID-19 infection?
    a. 12-year-old rugby player with mild infection
    b. 23-year-old basketball player with mild infection
    c. 27-year-old runner with moderate infection
    d. 67-year-old soccer player with mild infection

40. Which of the following issues does NOT increased the risk of injury in adolescent athletes?
    a. Changing neuromuscular control/Proprioception
    b. Early specialization in a single sport
    c. Immature bony development
    d. Rapidly increasing body size

41. Which body part is most commonly fractured in baseball players?
    a. Ankle
    b. Hand
    c. Hip
    d. Shoulder

42. In baseball, which of the following are important components in post-competition recovery?
    a. Nutritional interventions
    b. Technique practice
    c. Agility training
    d. None of the above

43. Youth athletes benefit most from rapid, progressive strengthening programs.
    a. True
    b. False

44. Baseball players are at high risk for which of the following elbow injuries?
    a. Lateral collateral ligament rupture
    b. Ulnar collateral ligament rupture
    c. Olecranon fracture
    d. Medial epicondylitis

45. ACL tears are most commonly a non-contact injury.
    a. True
    b. False

46. Surgical reconstruction of a torn ACL will:
    a. Ensure full return to sport
    b. Improve stability of the knee
    c. Prevent osteoarthritis in the future
    d. Prevent ACL tear in the contralateral knee

47. Which of the following are benefits of plyometric exercise training for athletes that perform cutting and pivoting in sport?
    a. Improve strength and power
    b. Improve force absorption in the sagittal place
    c. Improve coordination of the neuromuscular system
    d. All of the above

48. In order to return to sport after an ACL tear/repair, quadriceps strength should be at least ___ of the non-operative limb.
    a. >70%
    b. >80%
    c. >90%
    d. 100%

49. Which of the following female sports has the highest risk of bone stress injuries?
    a. Long distance running (cross country running)
    b. Synchronized swimming
    c. Tennis
    d. Water polo

50. Which of the following risk factors can lead to a bone stress injury in long distance (cross country) runners?
    a. Inadequate calcium intake
    b. Increased running distance
    c. Female gender
    d. Inadequate caloric intake
    e. All of the above

51. Which of the following symptoms are most common in patients with acetabular labral tear?
    a. Pain and limited hip extension
    b. Catching, locking, clicking sensations
    c. Limited hip external rotation
    d. All of the above

52. Your patient is a 24-year old male who plays football (soccer). He reports deep hip pain with kicking with his Right leg. He reports the following symptoms during practice.

    -R hip pain with deep squats
    -(+) FADIR/ hip scour for (R) pain in the flexion/adduction quadrant of the hip, worsened with addition of internal rotation. No ROM difference from her (L) side.
    -(R) hip flexor muscle weakness
    - (+) log roll test (R) for increased hip IR on the involved side, with reproduction of her familiar hip and low back pain.

What do you think is the condition most likely causing this patient's presentation?

a. femoral acetabular impingement syndrome
b. slipped femoral capital epiphysis
c. lumbar radiculopathy
d. acetabular labral tear
e. both b and e.

53. In general, **when assessing physical performance**, a given test should not require any **sport specific technical competence** on the part of the athlete.
    a. True
    b. False

54. To ensure _____ , physical performance test procedures should be strictly standardized in terms of administration, organization and environmental conditions.
    a. Accuracy
    b. Honesty
    c. Reliability
    d. Specificity
    e. Validity

55. Physical performance tests that do not have associated normative data are of limited value.
    a. True
    b. False

56. Athletic trainers must work under and/or in collaboration with a Physician in the care and treatment of athletes.
    a. True
    b. False

57. Athletic trainers, uniquely, have the training and expertise in the fitting, care, and maintenance of protective sporting equipment.
    a. True
    b. False

58. The practice of Athletic Therapy is limited to the professional, collegiate and high school sports settings.
    a. True
    b. False

59. When considering the efficiency and effectiveness of wheeling, efficiency is an objective measurable concept whereas effectiveness has a subjective component.
    a. True
    b. False

60. Because wheeling is functionally non-weight bearing and the individual can coast between pushes, wheeling is significantly more efficient than ambulation.
    a. True
    b. False

61. Using a timed distance measure (e.g., time it takes to wheel 20m) is an example of a simple way to determining wheeling effectiveness?
    a. True
    b. False

62. When determining the size of the front caster, it is the smaller sized casters that will perform best in rough and uneven surfaces.
    a. True
    b. False

63. Wheeling is intuitive, the user will adopt the most efficient wheeling technique for a given activity?
    a. True
    b. False

64. When creating a strengthening program for an athlete in wheelchair sports,
    a. Prioritize posture and function
    b. Develop body weight control before adding external loads
    c. Use multi-joint exercises and promote health and sport specific movement patterns
    d. All of the above

65. Given the paucity of wheelchair sport training literature, we can comfortably use the evidence provided in the able-bodied literature to develop and implement training programs for athletes participating in wheelchair sport.
    a. True
    b. False