



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

SECOND YEAR, FIRST TRIMESTER EXAMINATIONS (MAIN PAPER)

FOR

THE DEGREE BACHELOR OF SCIENCE IN PHYSIOTHERAPY (UPGRADING)

COURSE CODE: HPT 224

COURSE TITLE: SPORTS MEDICINE 11

DATE: THURSDAY 21<sup>ST</sup> APRIL 2022

TIME 8:00-11:00 AM

**INSTRUCTIONS TO CANDIDATES**

Answer all Questions

Sec A: Multiple Choice Questions (MCQ) 20 Marks

Sec B: Short Answer Questions (SAQ) (40 marks)

Sec C: Long Answer Questions (LAQ) (40 marks)

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.



## SECTION A: MULTIPLE CHOICE QUESTIONS. (20 MARKS)

- Which of the following definitions best describes the field of "sports medicine"?
  - Doctors who provide care to athletes
  - Different specialized areas related to performance and injury
  - Involves only the team physician and the athletic trainer
  - An association with a few professional organizations
- The primary purpose of a preseason health exam is to:
  - Identify whether an athlete is at risk before they participate
  - Determine body fat percentages for coaches
  - Reveal qualifying conditions
  - Satisfy insurance and liability issues
- What is an electrolyte disorder that a marathon runner may experience, caused by ingesting large quantities of water and sweating over several hours?
  - Heat exhaustion
  - Hyperthermia
  - Heat cramps
  - Hyponatremia
- Which one of the following injuries DOES NOT match with the associated sport?
  - Swimming, rotator cuff tendinopathy
  - High jump, patella tendinopathy
  - Javelin, medial knee pain
  - Diving, lumbar spine injuries
- What condition is it when there is an apophysitis at the insertion of the patellar tendon on the tibial tubercle?
  - Osgood Schlatter's disease
  - Patellar tendonitis
  - Sever's disease
  - Housemaid's knee
- When a sprinter runs the 100 meter dash, what structure within the muscles is primarily being used?
  - Muscle spindles
  - Golgi Tendon organs
  - Fast Twitch fibers
  - Slow Twitch fiber
- A bicep curl using a dumbbell is an example of a/an:
  - Isometric exercises
  - PNF exercise
  - Isokinetic exercise
  - Isotonic exercise
- Athletic training is
  - specialization in sports medicine
  - A major link between sports programs and the medical community
  - Concerned with the prevention and treatment of athletic injuries

## SECTION B

### SHORT ANSWER QUESTIONS (40 MARKS)

1. Analyse TWO different sports and compare the priorities given to prevention strategies in the athletes' physical preparation to prevent injuries. (8marks)
2. Examine and justify a range of rehabilitation procedures used for a range of specific injuries, eg hamstring tear, shoulder dislocation. (8 marks)
3. Evaluate the role taping plays in both the prevention and treatment of injury. (8 marks)
4. Describe any four (4) components of sport rehabilitation. (8 marks)
5. Each region of the hip and groin has the potential to produce pain. Describe the common causes of acute hip and groin pain. (8marks)

## SECTION C

### LONG ANSWER QUESTIONS. (40 MARKS)

1. Analyse the implications of medical conditions such as asthma, diabetes and epilepsy, for the ways young people engage in sport and how each is managed. (20 marks)
2. For an athlete to return to sport there are certain criteria to be followed. (20 marks)
  - a) Describe some of the indicators for 'return to play'. (8 marks)
  - b) Describe a range of skill and physical tests used to determine if an athlete is able to 'return to play' after injury. (6 marks)
  - c) Explain some of the ethical considerations faced by athletes and coaches in 'returning to play' after injury. (6 marks)

d) All of the above

9. A 22-year-old female presents to the clinic with a chief complaint of knee pain following a twisting injury while playing soccer 5 days ago. The patient's knee is swollen significantly and is unable to jump or run. What special test would be the MOST appropriate to diagnose the injury?

- a) Lachman's test
- b) Posterior drawer test
- c) Active Lachman's test
- d) External Rotation Recurvatum Test

10. What is another name for 'flat feet'?

- a) Pes planus
- b) Pes cavus
- c) Pes equine
- d) Hallux rigidus

11. Which of the following are important concerns when designing an effective rehabilitation program?

- a) Providing correct and immediate first aid
- b) Reducing pain
- c) Restoring full range of motion
- d) All of the above

12. The closed basket weave taping techniques is used to support which of the following

- a) Arch
- b) Ankle
- c) Shin
- d) Knee

13. To test for Achilles tendon tear, the therapist squeezes the calf muscle, the name of the test is?

- a) Obers test
- b) Homans test
- c) Thomson's test
- d) Simson's test

14. Factors that must be considered in order to prevent foot injuries include:

- a) Proper footwear
- b) Adapting to training surfaces
- c) Correcting biomechanical deficiencies
- d) All of the above

15. The empty can test is used to determine injury to what muscle?

- a) Supraspinatus
- b) Deltoid
- c) Infraspinatus
- d) Long head of biceps brachii

16. Muscle hypertrophy and increase in strength are dependent on five biochemical and physiological factors that are all stimulated by conditioning. Which one of the following is NOT one of them?

- a) Reduced glycogen and protein storage in muscle
- b) Increased vascularization
- c) Increased number of myofibrils
- d) Recruitment of neighboring motor units

17. When an elbow is dislocated, it is important to consider the possibility of what secondary injury?

- a) Fracture
- b) Tearing/pinching of the nerves
- c) Disruption of normal blood supply
- d) All of the above

18. 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

19. A 20-year-old male soccer player presents with a Grade II right lateral ankle sprain upon evaluation. What are the characteristics of a Grade II ankle sprain?

- a) Partial tear of the lateral ligament complex with mild joint instability, moderate intra-capsular swelling and tenderness, and some loss of ROM and joint function
- b) Complete rupture of the anterior talofibular ligament, calcaneofibular ligament, and capsule with mechanical joint instability; severe intra/extra-capsular swelling, ecchymosis, tenderness and inability to weight-bear.
- c) Stretch of the lateral ligament complex with no macroscopic tear or joint instability, little swelling or tenderness
- d) Partial tear of the syndesmosis, creating generalized swelling and tenderness throughout the ankle joint complex; inability to bear weight, severe ecchymosis, and mortise widening.

20. There are several different parameters that the therapist may manipulate to progress the athletes program to a level at which return to sports is possible. Which one of the following is not one of the parameters?

- a) Type of activity
- b) Duration of activity
- c) Intensity of activity
- d) Location of activity