BOWEN UNIVERSITY
COLLEGE OF HEALTH SCIENCES
BACHELOR OF PHYSIOTHERAPY PROGRAMME
SECOND SEMESTER EXAMINATION – 2020/2021 SESSION
COURSE CODE/TITLE: PST 521– Sports Physiotherapy
DATE: Monday- 5th September, 2022 TIME: 3 HOURS

MATRICULATION NUMBER: …….

GENERAL INSTRUCTION: Answer Both Parts - I and II

PART I:

SECTION A: MULTIPLE CHOICE QUESTIONS (1-14)

Instruction: Attempt all questions. Each question carries 1 mark

1. The sports physiotherapist works with the following set of individuals except …….
(a) professional athletes (b) amateur athletes (c) recreational athletes (d) none of the above

2. The most important role of a sports physiotherapist is ……. (a) injury prevention (b) enhancement of athlete's performance (c) assessment and management of sports injuries (d) diagnosis of sports injury

3. The following qualify as sport-related injury except …….. (a) fracture of the tibia during a mixed martial arts fight (b) orbital fracture during a boxing bout (c) depression following a car race accident (d) stress fracture when an undergraduate is brisk walking on the tarred road

4. Which of the following is untrue? (a) a physiotherapist must tell the athlete the implications of an injury (b) a physiotherapist must tell the coach the consequence of an athlete's injury (c) a physiotherapist can tell a recreational athlete to play despite an injury (d) a physiotherapist telling an athlete that they cannot play in a key event is unprofessional

5. Which of the following is incorrect about rest in sports? (a) asking an athlete to rest can kill the athlete (b) asking an athlete to rest is usually a last resort (c) asking an athlete to rest is determined by several factors (d) none of the above

6. A popular athlete decides to climb on stacked crates as a participant in an ongoing social media challenge. He falls on his right side as he ascends the 10^{th} step of stacked crates. Which of the following is/are possible during this recreational sporting activity? (a) head injury (b) death (c) humeral fracture (d) all of the above
7. After thorough physical examination of an athlete by a sports physiotherapist, the athlete can least likely be (a) fully discharged to resume play (b) referred to a sports physician (c) referred to a sports psychologist (d) declared unskilled to play

8. The most popular sports injury is (a) knee injury (b) ankle injury (c) head injury in boxing (d) head injury in rugby

9. During a mixed martial arts fight, the defending champion wrestles the challenging athlete and pulls his upper limb in order to make the challenger tap-out. This caused a rupture of the biceps tendon as the challenger resisted the pull and an audible snap sound was heard. The injury sustained is called a (a) sprain (b) strain (c) bruise (d) tear

10. The following are true of health related fitness except (a) primarily targeted at disease prevention (b) involves the components of fitness detailing rehabilitation from disease (c) entails maintenance of athlete's physiological function for daily activities (d) entails enhancement of function of biological systems for sports performance

11. The following are true of flexibility of athletes except …… (a) naturally, a 34 year old elite athlete is less flexible than a 24 year old amateur in the same sport (b) it defines the ability of joints to move through full range of motion (c) strong ligaments will reduce flexibility (d) it is the ability to move without restriction

12. Which of the following is correct about body composition? (a) women generally have less body fat than men (b) excess body fat is a risk factor for disease for an athlete (c) an individual with excessive body fat cannot be a successful athlete (d) fat composition is similar for all athletes in the same sports

13. When conflict of interest arises, the sports physiotherapist must remain loyal to (a) the athlete, because they are the main client of the therapist (b) the coach, since they know the ability of the athletes very well (c) the team, because they are the ones paying the therapist (d) none of the above

14. A legend of the boxing sport has been offered a €150 million fight with the current title holder in the featherweight division. You as the physiotherapist employed by the boxing commission ordered routine imaging of the boxing legend's shoulders as part of the required tests. Radiographic investigation signified left subacromial and right rotator cuff impingement. Your role in this scenario enables you to do the following except (a) inform the athlete about the nature of the injuries (b) inform the athlete and commission of the extent of the injuries (c) inform the athlete and commission of the consequences of injury (d) inform the athlete and commission and commence immediate rehabilitation

SECTION B- CLINICAL REASONING IN SPORTS PHYSIOTHERAPY (15-25)

Instruction: Attempt all questions in this section. Each question carries 2 marks

15. A 28-year-old professional female basketball player presents to your clinic with left knee pain. She was standing on an airplane waiting to get off when she was accidentally pushed by the athlete next to her. This caused her to fall into the adjacent seat. Her left foot was planted on the floor at the time of the fall, and her knee sustained a twisting type injury. You performed a full examination of the knee and found it swollen and tender along the joint line. If Apley grind test was positive, what is the diagnosis?
    a) patella fracture if there is instability b) meniscal tear c) ligament tear d) tendon rupture

16. A former American-football player is being discharged from rehabilitation after a right-sided below-knee amputation. What is the most important immediate adaptive equipment for the home you will prescribe as the lead of the rehab team?
    a) crutches b) wheelchair c) a rolling walker with seat d) a reacher/grabber

17. A 36-year-old Mixed Martial Artist was hit with a left high kick to the right side of the head and neck region during a world title fight. He fell on the canvass and passed out with his eyes open and arms outstretched. What is the most likely status at point of occurrence?
    a) injury to the brain b) injury to the neck c) injury to the middle, inner and outer ear d) momentary injury to the heart

18. A 16-year-old female tennis player presents with elbow pain that has increased over the past seven days. Physical examination reveals tenderness distal to the lateral epicondyle, and pain increases with wrist extension against resistance. She also has increased pain with resisted supination. Her neurological exam is unremarkable. Which of the following is the next appropriate management option for this patient?
    a) plain radiographs b) MRI c) rest and NSAIDs d) corticosteroid injection

19. A 19-year-old college cross country runner presents to the sports clinic with complaints of right lateral ankle pain and swelling. She reports no past medical history and denies prior injury to her right ankle. She states that 2 hours before arriving at the clinic, she was on a training run when stepped on an uneven surface resulting in an inversion mechanism of injury at her right ankle. The physical examination reveals lateral ankle swelling pain in the area of the tibiofibular ligament when the mid-calf is compressed and released. The client also experiences pain with external rotation of the dorsiflexed foot. The anterior drawer test is negative. What ligament is most commonly sprained with this presentation?
    a) posterior talofibular ligament b) anterior talofibular ligament c) calcaneofibular ligament d) subtalar ligament

20. A 16-year-old football player complains of pain and frequent ‘giving way’ of his right knee for 6 months. He reports occasional swelling of the knee as well. Physical examination reveals no joint line tenderness or swelling. Both anterior and posterior drawer tests are positive, but McMurray's test is negative. He states that the symptoms started following an injury of his knee while playing a tournament match; however, he does not remember the mechanism of injury. Which of the following is the most likely mechanism of the knee injury in this patient?
    a) anteroposterior force on the flexed knee b) medial force on the extended knee c) lateral force on the extended knee d) posterior force on the extended knee

21. Football injuries are known to follow various possible mechanisms of occurrence. Which of the following is not an expected injury in football?
    a) injury to the spine b) injury to the shoulder c) injury to the head d) injury to the eye

22. As an avid and keen observer of sports injury and its management, which of the following is least possible?

a) Fracture of the tibia during a kick in Mixed Martial Arts by the kicker b) Extrusion of an eye by a poke on a basketball player c) A tear on the Hamstrings of a footballer without being hit by an opponent d) Massive head swelling by a blow on a boxer

23. A 35-year-old female recreational soccer player presents to the office of a sports physiotherapist with a 72-hour history of left lateral ankle pain, swelling, and ecchymosis. She reports she has a remote history of a left ankle sprain while playing college soccer. She has been able to walk on her ankle but has been unable to return to playing soccer at this time. She reports no treatment since her injury. On examination, she has a moderate amount of lateral ankle swelling and ecchymosis, negative anterior drawer test, negative squeeze test, negative external rotation stress test, and no pain upon palpation of her proximal fibula. Evaluation with musculoskeletal ultrasound at bedside reveals a talofibular ligament (ATFL) sprain. What is the most appropriate next step in the management of her injury?
    a) Warm compress and elevation b) Immobilization c) Crutches to allow ambulation without weight-bearing on the injured ankle d) Early weight bearing with support of an ankle-foot orthosis

24. A 16-year-old male football player is going to shoot a goal and notices a sharp pain in his knee when shooting a goal. Upon presenting to the hospital it is noticed that he has anteromedial joint tenderness. The patient does not demonstrate any laxity of the knee joint upon physical exam testing. However, McMurray sign is positive. What type of imaging is the best in this case? a) X-ray b) MRI c) Ultrasound d) CT scan

25. A 17-year-old football player presents with complaints of a 3-day history of progressive right knee pain. He states that he was running when he felt a pop in his knee following a sudden change of direction. He continued to play the rest of the game. The next day, his knee began to swell. He admits to diffuse knee swelling and pain over the medial joint line as well as occasional popping and clicking through the knee with running and climbing up stairs. On physical assessment, the patient has a positive McMurray and Apley compression test. Lachman, anterior and posterior drawer, and valgus and varus stress tests are negative. What is the most likely diagnosis?
    a) Anterior cruciate ligament tear b) Patellar subluxation c) Patellar tendonitis d) Meniscal tear

SECTION C: FILL IN THE GAPS (26-33)

Instruction: Fill the gaps in the following statements with the correct answers.

26. Balance is ……. …… (2 Marks).

27. The ability of body organs and system to deliver oxygen efficiently over an extended period of time is: …… (1 Mark).

28. The ability of a muscle to exert a force to overcome a resistance is termed: ..…… …… (1 Mark).

29. Increase in muscle size is acquired by: …… …… … ……..……..(1 Mark).

30. Endurance is acquired by …… (1 Mark).

31. A football player out-running the defense to receive a pass would require greater …… than the defender of the opposing team (1 Mark).

32. A high jumper using a pole vault utilises…… …… fitness components (2 marks).

33. A sprinter who starts as late as 0.5seconds after the gun has been fired to start the 100 metre race has poor …….(1 Mark).

SECTION D: TRUE OR FALSE (34-40)

Instruction: Answer ***TRUE*** OR ***FALSE*** to each of the following**.** Each question carries 1 mark.

34. The loss of flexibility can be delayed but cannot be denied as life goes on: ……

35. The body of a 10 year old recreational basketball player is more flexible than that of a 20 year old professional basketball player: …….

36. An athlete with high endurance must equally have a high level of flexibility: …….

37. Dynamic muscular endurance is the ability to sustain a contraction: ……

38. Both aerobic and anaerobic exercises improve endurance: ……

39. Plank exercise is an example of static muscular endurance exercise: …….

40. Doing sit-ups repeatedly until an athlete is tired and assessing the number of sit-ups an athlete can do for 60 seconds, both measure dynamic endurance: ……

SECTION E: ESSAY (1-4)

Instruction: Attempt all questions in this section in the ANSWER BOOKLET

1. Highlight four factors to consider when choosing a fitness test as a sports physiotherapist. (**4 marks**)

2. "An anterior cruciate ligament rupture of the knee can be treated with physiotherapy, with or without surgery, depending on the patient and other factors". From your understanding of sports physiotherapy, write four possible interpretations of the quoted statement. (**4 Marks**)

3. Mention two differences between sport and exercise. (**4 Marks**)

4. You have been employed as a fresh graduate after internship and NYSC as the physiotherapist in charge of Shooting Stars team of Oyo state. The management needs you to perform a complete physical assessment of a new player signed into the team. Enumerate how you would test to determine the health-related and skill-related fitness and status of the new athlete. (**22 marks**)

PART II

INSTRUCTION: ANSWER ALL QUESTIONS IN THIS PART IN A SEPARATE ANSWER BOOKLET

1. During a football match, one of your players sustained an ankle sprain injury

   a. Discuss briefly the protocol you will utilize to assess the player injury on the pitch. **(5 marks)**

   b. What is the significance of observing the mechanism of the injury as the Physiotherapist covering the event? **(4 marks)**

   c. Discuss briefly two skill tests you will prescribe to the player before deciding his return back to the game. **(3 marks)**

2. a) What are the guidelines you will follow for off-pitch management of sport injuries? **(5 marks)**

   b) Discuss briefly a protocol you will utilize in the management of athlete who suffered cardiac arrest during a sport event. **(5 marks)**

   c) Highlight 4 red flags, if observed during an athlete assessment, will necessitate sign posting them to other sport health professionals **(2 marks)**

3. a. Explain briefly 3 intrinsic and 3 extrinsic causes of injuries among athletes **(6 marks)**

   b. List 3 sport injuries in each of the following sports; swimming, sprinting, weight lifting, and tennis **(6 marks)**

4 a. Why should attainment of physical fitness be promoted among sport men? **(5 marks)**

b. Discuss briefly 2 health-related and 2-skill related physical fitness components **(4 marks)**

5. Highlight 5 sport rules and explain briefly how good knowledge of them can help in sport injuries preventions. **(5 marks)**