



**UNIVERSITI KUALA LUMPUR
ROYAL COLLEGE OF MEDICINE PERAK**

**FINAL EXAMINATION
JULY 2025 SEMESTER**

COURSE CODE : RFD33302
COURSE NAME : PHYSIOTHERAPY IN SPORT INJURY
PROGRAMME NAME : DIPLOMA IN PHYSIOTHERAPY
DATE : 17 SEPTEMBER 2025
TIME : 2.00 PM – 4.00 PM
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read **CAREFULLY** the instructions given in the question paper.
 2. This question paper has information printed on both sides of the paper.
 3. This question paper consists of **TWO (2)** sections; Section A and Section B.
 4. Answer **ALL** questions in Section A and **THREE (3)** questions in Section B.
 5. Please mark/write your answers on the OMR answer script and answer booklet provided.
 6. Answer all questions in English language **ONLY**.
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THERE ARE 8 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A: MULTIPLE CHOICE QUESTIONS (Total: 20 marks)**INSTRUCTION: Answer ALL questions.****Please use the OMR sheet provided.**

1. Identify the primary function of ligaments in the body.
 - A. To provide joint stability.
 - B. To produce red blood cells.
 - C. To store energy as glycogen.
 - D. To transmit forces from muscle to bone.

2. Find the primary energy system used during brief intense effort.
 - A. Glycolytic system.
 - B. Protein breakdown.
 - C. Aerobic metabolism.
 - D. Phosphagen system.

3. Select the role of the aerobic system after intense exercise.
 - A. Increasing lactic acid production.
 - B. Increasing lactic acid production.
 - C. Replenishing phosphocreatine stores.
 - D. Rapid ATP production for immediate use.

4. Identify the main cause of running-related stress fractures.
 - A. High-impact collisions.
 - B. Cold weather exposure.
 - C. Excessive protein intake.
 - D. Repetitive weight-bearing overload.

5. Find the tendon commonly injured in Jersey Finger.
 - A. Palmar aponeurosis.
 - B. Flexor digitorum profundus tendon.
 - C. Flexor digitorum superficialis tendon.
 - D. Extensor digitorum communis tendon.

6. Identify the primary symptom of olecranon bursitis.
- A. Weak grip strength.
 - B. Numbness in the forearm.
 - C. Pain with shoulder abduction.
 - D. Swelling at the posterior elbow.
7. Select the reason for pain in Finkelstein test for De Quervain's.
- A. Impinge radial artery.
 - B. Stretch wrist extensor muscle.
 - C. Compresses the median nerve in the carpal tunnel.
 - D. Stretches the inflamed abductor pollicis longus tendons.
8. Identify the role of valgus stress test in ulna collateral ligament injury.
- A. To assess wrist instability.
 - B. To compress the radial head.
 - C. To stretch the triceps tendon.
 - D. To place excessive tension on the medial elbow.
9. Select the benefit of scapular stabilization for shoulder impingement injury in rehabilitation.
- A. To increase deltoid strength.
 - B. To prevent shoulder dislocation.
 - C. To restore normal scapulohumeral rhythm.
 - D. To reduce stress of labrum during glenohumeral joint movement.
10. Find the main structure preventing tibia's anterior translation.
- A. Patella tendon.
 - B. Knee joint capsule.
 - C. Quadriceps muscle.
 - D. Anterior cruciate ligament (ACL).

11. Identify the injured structures in O'Donoghue's triad injury.
- A. ITB, ACL, and quadriceps.
 - B. PCL, MCL, and patellar tendon.
 - C. ACL, LCL, and lateral meniscus.
 - D. ACL, MCL, and medial meniscus.
12. Find the special test to confirm Achilles tendon rupture.
- A. Thomas test.
 - B. McMurray test.
 - C. Thompson test.
 - D. Valgus stress test.
13. Why closed-kinetic chain (CKC) exercises are preferred in early ACL rehabilitation?
- A. To prevent joint laxity.
 - B. To reduce anterior shear forces.
 - C. To inhibit the hamstrings overwork.
 - D. To isolate the quadriceps muscle contraction.
14. How does Q-angle relate to patellofemoral problems?
- A. It assesses ankle stability.
 - B. It reflects patellar alignment.
 - C. It measures hamstring flexibility.
 - D. It determines meniscus integrity.
15. Select the asthma condition caused by aerobic activity.
- A. Exercise-induced anemia.
 - B. Exercise-induced hypertension.
 - C. Exercise-induced hypoglycemia.
 - D. Exercise-induced bronchoconstriction.
16. Identify the purpose of resistance training in the elderly.
- A. To prevent obesity.
 - B. To prevent asthma attacks.
 - C. To normalise blood glucose.
 - D. To reduce muscle mass decline.

17. Find the sport with the highest incidence of severe head, neck, and spinal injuries.
- A. Rugby.
 - B. Tennis.
 - C. Cycling.
 - D. Swimming.
18. Identify the main reason for using deltoid lift taping method.
- A. To support the deltoid muscle.
 - B. To increase shoulder flexibility.
 - C. To reduce the deltoid muscle activity.
 - D. To prevent excessive shoulder internal rotation.
19. Identify the principle that explains loss of fitness after inactivity.
- A. Overload.
 - B. Specificity.
 - C. Progression.
 - D. Reversibility.
20. Select the role of reciprocal inhibition in stretching.
- A. Prevents all muscle contractions.
 - B. Increases heart rate during stretching.
 - C. Contracts both agonist and antagonist muscles.
 - D. Relaxes antagonist muscle during agonist contraction.

SECTION B: MODIFIED ESSAY QUESTIONS (Total: 60 marks)

**INSTRUCTION: This section consists of FOUR (4) questions.
Answer THREE (3) questions in the answer booklet provided.**

Question 1

- (a) State **TWO (2)** primary systems for anaerobic energy production. (2 marks)
- (b) List **THREE (3)** categories of carbohydrates. (3 marks)
- (c) Why tendons heal slower than muscles after injury? (4 marks)
- (d) Differentiate **TWO (2)** intrinsic and extrinsic risk factors for running injuries. (4 marks)
- (e) "A 22-year-old male baseball pitcher reports medial elbow pain, worse during late cocking and acceleration of throwing. He has a history of repetitive valgus stress. Examination shows tenderness along the medial joint line, perceived instability with overhead throwing, reduced throwing performance, and a positive valgus stress test."

With reference to the above case, answer all the following questions.

- i. Determine the possible diagnosis. (1 mark)
- ii. State **THREE (3)** physiotherapy short term goals and interventions for him. (6 marks)

Question 2

- (a) List **TWO (2)** types of lipids involved in energy production. (2 marks)
- (b) State **THREE (3)** phases of soft tissue healing. (3 marks)
- (c) How does VO_2 max reflects cardiovascular fitness for athlete? (4 marks)
- (d) Why does the medial meniscus more prone to injury sports activities? (4 marks)
- (e) "A 25-year-old rugby player reports sudden posterior thigh pain while sprinting during a match. He describes a popping sensation at the time of injury and had difficulty in walking due to pain. On examination, there is tenderness over the mid-belly of the hamstring, with visible swelling and bruising, and he struggles with reduce knee flexion strength against resistance."

With reference to the above case, answer all the following questions.

- i. Determine the possible diagnosis. (1 mark)
- ii. Provide **THREE (3)** physiotherapy interventions for the strengthening phase for him. (6 marks)

Question 3

- (a) State **FOUR (4)** recommended steps for asthmatic patients to safely perform exercise. (4 marks)
- (b) Explain the components involved in the female athlete triad condition. (5 marks)
- (c) Why does massage should be avoided immediately after an injury? (5 marks)
- (d) Describe the closed basket weave technique for lateral ankle sprain. (6 marks)

Question 4

- (a) List **TWO (2)** risks that physiotherapists should consider for elderly participation in sports activities. (2 marks)
- (b) Outline **TWO (2)** classifications of mallet finger. (4 marks)
- (c) Describe about Hockey player's syndrome. (4 marks)
- (d) List **FOUR (4)** neuromuscular fitness tests. (4 marks)
- (e) Describe dynamic and static stretching. (6 marks)

END OF EXAMINATION PAPER