



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY**

END OF TRIMESTER EXAMINATIONS JANUARY TO APRIL 2025

UNIT CODE: PHT 123

UNIT NAME: Anatomy of the upper and lower limbs (Special Exam 4th Year)

DATE: 7th April 2025

TIME: 9AM-11AM

INSTRUCTIONS

1. All students will have two (2) hours to complete the examination
2. This is a **physical exam**, Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is **7** including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, give the paper to the invigilator.

All the Best!!

TOTAL: _____/70

PERCENT: _____/100%

POINTS EARNED TOWARDS FINAL GRADE _____/70

Section A - 40 Multiple choice questions (40 marks)

1. Which structure near the surgical neck of humerus is at risk when the shoulder is dislocated?
 - a. Median nerve
 - b. Brachial artery
 - c. Axillary nerve
 - d. Radial artery
2. The proximal attachment of the long head of the biceps brachii muscles is predominately to which soft tissue structure?
 - a. Achromioclavicular ligament
 - b. Anterior glenohumeral ligament
 - c. Glenoid labrum
 - d. Coracoclavicular ligament
3. Which rotator cuff muscle is essential for the initiation of abduction?
 - a. Subscapularis muscle
 - b. Supraspinators muscle
 - c. Infraspinatous muscle
 - d. Teres minor muscle
4. The posterior cord of the brachial plexus is mostly directly formed from what more proximal parts of the plexus?
 - a. Upper and middle anterior divisions
 - b. Lower anterior division
 - c. Upper trunk alone
 - d. All posterior divisions
5. When the shoulder is fully extended, which movement is the pectoralis major most likely to powerfully produce?
 - a. Abduction
 - b. Adduction
 - c. Internal rotation
6. What is attached to the ulna tuberosity and hence can flex the elbow irrespective of forearm rotation?
 - a. Biceps brachii M
 - b. Brachialis M
 - c. Brachioradialis M
7. Which nerve passes through the supinator muscle and is at risk of impingement there?
 - a. Median nerve
 - b. Radial nerve
 - c. Ulnar nerve
 - d. Musculocutaneous nerve
8. The median nerve contribution to flexor digitorum profundus flexes which fingers?
 - a. Index and middle finger
 - b. All of them

- c. Thumb
 - d. Ring and little finger
9. The spine of the scapular is continues laterall as:
- a. Coracoid process
 - b. Angle of the scapular
 - c. Infraglenoid process
 - d. Suptaglenoid tubercle
10. Muscle attached to the coracoid process of the scapular:
- a. Biceps
 - b. Triceps
 - c. Pectoralis major
 - d. Deltoid
11. Vein which pierces clavipectoral fascia:
- a. Basilic
 - b. Lateral pectoral
 - c. Internal thoracic
 - d. Axillary
 - e. cephalic
12. The axillary vein:
- a. Is lateral the axillary artery
 - b. Is devoid of valves
 - c. Lies anterior to pectoralis major
 - d. Is directly continuous with brachiocephalic vein
13. Branch of axillary artery:
- a. Suprascapular
 - b. Transverse cervicle
 - c. Lateral thoracic
 - d. Nutrient artery to humerus
 - e. Internal thoracic
14. The humerus may be rotated laterally by the:
- a. Subscaplaris
 - b. Supraspinatus
 - c. Deltoid
 - d. Non of the above
15. Muscle pair responsible for abducting the humerus to a right angle:
- a. Deltoid and subscapularis
 - b. Deltoid and supraspinatus
 - c. Supraspinatus and subscapularis
16. The major muscles of the posterior forearm are all innervated by this major nerve:
- a. Ulna
 - b. Median
 - c. Radial
 - d. Musculocuteneous nerve

17. The most medial structure passing under the inferior extensor retinaculum of the foot is:
- deep peroneal nerve
 - tibialis anterior
 - extensor hallucis longus
 - anterior tibial artery
 - peroneus brevis
18. Regarding the pectoralis major muscle, which of the following is the TRUE statement :
- posterior branch of lateral femoral cutaneous nerve
 - infrapatella branch of saphenous nerve
 - medial femoral cutaneous nerve
 - anterior branch of lateral femoral cutaneous nerve
 - intermediate femoral cutaneous nerve
19. The deltoid muscle can perform all the following action around the shoulder ,except :
- Initiate Abduction
 - Flexion
 - Medial rotation
 - Lateral rotation
20. Muscles in the floor of the femoral triangle include all EXCEPT:
- adductor magnus
 - pectineus
 - psoas
 - ilacus
 - adductor longus
21. With respect to the posterior compartment of the thigh:
- blood supply is mainly from the femoral artery
 - the sciatic nerve lies lateral to the long head of biceps
 - the long head of biceps is supplied by the common peroneal nerve
 - the hamstrings form the apex of the popliteal fossa
 - semimembranosus arises in common with the long head of biceps
22. In the medial compartment of the thigh:
- adductor magnus consists of adductor and hamstring muscle masses
 - the contents are separated from the posterior compartment by the posterior intermuscular septum
 - adductor longus is the most superficial muscle of the medial side of the thigh
 - the anterior division of the obturator nerve passes through obturator externus
 - the posterior division of the obturator nerve is the prime motor supply
23. The adductor canal is not:
- roofed by fascia containing the subsartorial plexus
 - occupied by the sciatic nerve
 - also known as Hunter's canal
 - occupied by the femoral artery
 - a gutter shaped groove between vastus medialis and the front of the adductor muscles

24. which of the following is not a branch of the femoral nerve;
- medial femoral cutaneous nerve
 - saphenous nerve
 - nerve to vastus medialis
 - lateral femoral cutaneous nerve
 - nerve to Sartorius
25. The profunda femoris artery does not:
- normally supply all the thigh muscles
 - arise from the lateral side of the femoral artery, 3-4cm distal to the inguinal ligament
 - give off the deep external pudendal artery
 - lie behind the profunda vein
 - lie directly anterior to adductor brevis and magnus
26. Which of the following is not found within the femoral sheath?
- femoral artery
 - femoral canal
 - femoral hernia
 - femoral nerve
 - lymph node of Cloquet
27. The iliotibial tract:
- lies lateral to tensor fascia latae
 - inserts onto the head of the fibula
 - is the origin of 60% of gluteus maximus
 - is a weak flexor of the knee via tensor fascia latae
 - is attached superiorly to the iliac crest
28. Which of the following is CORRECT regarding lymphatic drainage of the lower limb?
- the superficial inguinal node group consists of about 15 nodes
 - the lateral nodes of the proximal superficial group receive lymph from the buttock, flank and back below the waist
 - the medial nodes of proximal superficial group receive lymph from testes, glans penis, lower anal canal and perineum
 - the distal nodes of the superficial group receive all the superficial lymphatics of the lower limb
 - the superficial inguinal nodes drain mainly to the internal iliac nodes
29. Medial rotation of the humerus is produced by which muscle?
- Teres minor
 - Teres major
 - Both A and B
 - Neither A nor B
30. Regarding flexor digitorum longus:
- its four tendons divide under the flexor retinaculum
 - it arises from the tibia and interosseous membrane only

- c. the medial two tendons receive a strong slip from the tendon of flexor hallucis longus
 - d. the tendons have no flexor sheaths
 - e. it inserts into the bases of the middle phalanges
31. Regarding nerve supply of the lower limb:
- a. superficial peroneal nerve supplies the muscles in the anterior compartment of the leg
 - b. the cruciate ligaments are supplied by the tibial nerve
 - c. the obturator nerve supplies obturator internus muscle
 - d. the sciatic nerve does not make contact with bone
 - e. the tibial part of the sciatic nerve is the sole supply to muscles in the hamstring compartment
32. Which vessel is NOT involved in the trochanteric anastomosis?
- a. superior gluteal artery
 - b. obturator artery
 - c. lateral circumflex femoral artery
 - d. medial circumflex femoral artery
 - e. inferior gluteal artery
33. Gluteus maximus:
- a. forms the gluteal fold
 - b. has four bursae beneath it
 - c. has blood supply solely from the inferior gluteal artery
 - d. is the chief control of hip flexion
 - e. has 50% of fibres inserting into the gluteal tuberosity
34. Regarding the femoral artery:
- a. adductor magnus lies between it and the profunda femoris artery
 - b. the profunda femoris vein lies behind the profunda femoris artery
 - c. profunda femoris artery arises from its posterior surface
 - d. the lateral circumflex femoral artery separates the superficial and deep branches of the femoral nerve
 - e. the femoral vein is always on its medial side
35. The 'screw-home' movement in extension of the knee joint begins with tightening of the:
- a. anterior cruciate ligament
 - b. oblique popliteal ligament
 - c. medial collateral ligament
 - d. lateral collateral ligament
 - e. posterior cruciate ligament
36. Tibialis anterior:
- a. is supplied by the tibial nerve
 - b. inserts into the second metatarsal bone
 - c. is pierced by the posterior tibial artery
 - d. tendon perforates the superior extensor retinaculum

- e. does not arise from the interosseous membrane
37. The great saphenous vein:
- a. joins the femoral vein above the inguinal ligament
 - b. begins as the upward continuation of the lateral marginal vein of the foot
 - c. enters the femoral vein on its anteromedial side
 - d. travels with the saphenous nerve along its course
 - e. runs behind the medial malleolus
38. The muscle which can both flex the hip and extend the knee is:
- a. sartorius
 - b. rectus femoris
 - c. semimembranosus
 - d. biceps femoris
 - e. vastus lateralis
39. Which muscle is able to produce flexion at the knee joint more efficiently if the hip joint is in flexion at the same time?
- a. semimembranosus
 - b. rectus femoris
 - c. hamstring part of adductor magnus
 - d. sartorius
 - e. short head of biceps femoris
40. The following muscles connect upper limb to the thoracic wall EXCEPT:
- a. Serratus anterior,
 - b. Subclavius.
 - c. Pectoralis major
 - d. Pectoralis minor
 - e. Teres major.

Section B (Structured - short answer questions (20))

1. Explain the wrist Joint (10 Marks)
2. Explain the ankle (10 Marks)

Section C (Structured - long answer question (20 marks))

1. Discuss the functioning of the Shoulder girdle (20 Marks)