



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATIVE MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF TRIMESTER EXAMINATIONS SEPTEMBER - DECEMBER 2022

PHT 116: GENERAL ANATOMY AND EMBRYOLOGY

DATE: 28th November 2022

Duration: 2 hours

Time : 9:00 am – 11:00am

INSTRUCTIONS

1. All students will have two (2) hours to complete the examination
2. 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 5 including the cover.
6. Read through the paper quickly before you start.
7. Upon finishing the exam paper, make sure you have written your student number before you submit.
8. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

Section A (40 Multiple choice questions (40 marks))

1. Tensor fasciae latae is supplied by :
 - a) anterior division of femoral nerve
 - b) superior gluteal nerve
 - c) nerve to vastus lateralis
 - d) inferior gluteal nerve
 - e) lateral femoral cutaneous nerve

2. The surface markings of the sciatic nerve are from:
 - a) the ischial tuberosity to the adductor tubercle of the medial femoral condyle
 - b) the posterior superior iliac spine to the apex of the popliteal fossa
 - c) the midpoint of a line between the ischial tuberosity and the greater trochanter to the adductor tubercle of the medial femoral condyle
 - d) the ischial tuberosity to the apex of the popliteal fossa
 - e) the midpoint of a line between ischial tuberosity and greater trochanter to apex of the popliteal fossa

3. 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

4. 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

5. 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

6. With respect to the posterior compartment of the thigh:
 - a) blood supply is mainly from the femoral artery
 - b) the sciatic nerve lies lateral to the long head of biceps

- c) the long head of biceps is supplied by the common peroneal nerve
 - d) the hamstrings form the apex of the popliteal fossa
 - e) semimembranosus arises in common with the long head of biceps
7. Which is the odd one out?
- a. a) sciatic nerve
 - b. b) nerve to obturator internus
 - c. c) superior gluteal nerve
 - d. d) pudendal nerve
 - e. e) posterior femoral cutaneous nerve
8. Regarding the hamstring compartment:
- a) the cutaneous nerve supply is from the posterior circumflex femoral nerve
 - b) ischial fibres of adductor magnus degenerate to form the tibial collateral ligament
 - c) semitendinosus lies deep to semimembranosus
 - d) the oblique popliteal ligament is an expansion of biceps femoris
 - e) the long head of biceps arises from the lateral facet of the ischial tuberosity
9. 14) Regarding the popliteal vessels:
- a) the tibial nerve lies between the popliteal artery and vein
 - b) the sural arteries supply soleus
 - c) the middle genicular artery supplies the cruciate ligaments
 - d) lymph nodes lie alongside the popliteal artery
 - e) the popliteal artery enters the fossa on the lateral side of the femur
10. The following are branches of the femoral artery except:
- a) superficial circumflex iliac artery
 - b) superficial epigastric artery
 - c) superficial external pudendal artery
 - d) deep external pudendal artery
 - e) middle genicular arte
11. With regard to the pectoral girdle:
- a) contains three joints, the sternoclavicular, the acromioclavicular and the glenohumeral
 - b) serratus anterior, the rhomboids and subclavius attach the scapula to the axial skeleton
 - c) pectoralis major and deltoid are the only muscular attachments between the clavicle and the upper limb
 - d) teres major provides attachment between the axial skeleton and the girdle
12. Choose the odd muscle out as regards insertion/origin:
- a) supraspinatus
 - b) subscapularis
 - c) biceps
 - d) teres minor
 - e) deltoid

13. Which muscle does not insert in or next to the intertubercular groove of the upper humerus?

- a) pectoralis major
- b) pectoralis minor
- c) latissimus dorsi
- d) teres major

14. Identify the incorrect innervation:

- a) subclavius – own nerve from the brachial plexus
- b) serratus anterior – long thoracic nerve
- c) clavicular head of pectoralis major – medial pectoral nerve
- d) latissimus dorsi – dorsal scapular nerve
- e) trapezius – accessory nerve

15. Which muscle does not extend from the posterior surface of the scapula to the greater tubercle of the humerus?

- a) teres major
- b) infraspinatus
- c) supraspinatus
- d) teres minor

16. With regard to action, which muscle is the odd one out?

- a) teres minor
- b) deltoid
- c) teres major
- d) subscapularis

17. Which statement is INCORRECT?

- a) the muscles of the rotator cuff are deemed to be such because all their tendons fuse with the lateral part of the shoulder capsule and are attached to the humerus near the joint
- b) the capsule of the shoulder joint is attached at the line of the anatomical head except inferiorly where it extends to the level of the surgical neck
- c) the subacromial bursa lies between the tendon of supraspinatus and the coraco-acromial ligament and communicates with the shoulder joint
- d) the long tendon of biceps lies intracapsular and is sheathed by synovial membrane that allows it to slide with movement

18. Stabilising factors of the shoulder joint include all but:

- a) a tight capsule
- b) tendons that fuse with the capsule
- c) glenohumeral and coracohumeral ligaments
- d) labrum
- e) splinting of the humeral head between the tendons of biceps and triceps

19. Regarding the brachial plexus, which is INCORRECT?

- a) it is derived from the anterior rami of C5-T1 after they have given off segmental supply to the prevertebral and scalene muscles
- b) the roots give off three branches including the long thoracic nerve to latissimus dorsi
- c) the trunks give off one branch
- d) the cords are divided into anterior and posterior divisions that supply the flexor and extensor compartments respectively and give off 13 branches
- e) the lateral cord supplies part of the median nerve

20. Regarding the brachial plexus:

- a) the lateral cord contains fibres from C5, 6, 7 & 8
- b) the posterior cord has fibres from C5, 6, 7, 8 & T1
- c) the medial cord has fibres from C8 and T1
- d) the suprascapular nerve arises from C5
- e) the ulnar nerve is a continuation of the medial cord

Section B (Structured short answer questions (10 marks))

- 21. Outline the shoulder muscles and their functions (5 marks)
- 22. Outline the forearm muscles and their functions (5 marks)

Section C (Structured long answer questions (20 marks))

- 23. The intrinsic muscles of the hand are divided into 3 groups. Outline them and their functions (12 marks)
- 24. Describe the Major Functional aspects of the shoulder girdle (8 Marks)