



KENYATTA UNIVERSITY

SUPPLEMENTARY/SPECIAL EXAMINATIONS 2021/2022

EXAMINATION FOR THE DEGREE OF BACHELOR OF PHARMACY (BPharm Level I)

HMA 120 HUMAN ANATOMY II

AUGUST 2022

TIME: 3 HOURS

INSTRUCTIONS

- This examination consists of **THREE** sections; A, B and C
- Answer **ALL** questions in the answer booklet provided (**SECTION A,B and C in a separate BOOKLET**)

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1. The muscle “triceps surae” is formed by:
 - a. Popliteus and soleus
 - b. Soleus and gastrocnemius
 - c. Plantaris and gastrocnemius
 - d. Flexor digitorum longus and flexor hallucis longus
 - e. Plantaris
 2. Which muscle is regarded as the ‘peripheral heart’?
 - a. Soleus
 - b. Gastrocnemius
 - c. Tibialis posterior
 - d. Flexor digitorum longus
 - e. Plantaris
 3. The **MOST** deeply placed muscle in the posterior compartment of the leg is:
 - a. Flexor digitorum longus
 - b. Flexor hallucis longus
 - c. Tibialis posterior
 - d. Soleus
 - e. Plantaris

4. Injury of the tibial nerve can cause loss of:
 - a. Inversion of the foot
 - b. Eversion of the foot
 - c. Plantar flexion of the foot
 - d. Dorsiflexion of the foot
 - e. Foot drop
5. Which of the following arteries is the continuation of the Anterior Tibial artery in the foot?
 - a. Dorsalis Pedis Artery
 - b. Medial Plantar artery
 - c. Peroneal Artery
 - d. None of the above
6. Which of the following is a function of the Peroneal Retinaculum?
 - a. Prevent bowstringing of the tendons of the anterior compartment of leg
 - b. Support and protect the tendons and arteries
 - c. Stabilize the ankle joint
 - d. None of the above
7. All of the following muscles are part of the Hamstrings except?
 - a. Biceps Femoris
 - b. Adductor Magnus
 - c. Adductor Longus
 - d. Semimembranosus
8. All of the following structures support the arches of the foot except?
 - a. Achilles tendon
 - b. Tibialis Posterior
 - c. Tibialis Anterior
 - d. Long Plantar ligament
9. Which of the following muscles is innervated by the Obturator Nerve?
 - a. Semitendinosus
 - b. Biceps femoris
 - c. Sartorius
 - d. Gracilis

10. What is the nerve supply to the Pectineus muscle?
- a. Deep Peroneal nerve
 - b. Femoral nerve
 - c. Tibial nerve
 - d. Obturator nerve and Femoral Nerve
11. Which of the following muscles is not attached to the greater trochanter?
- a. Gluteus medius
 - b. Tensor Fascia lata
 - c. Obturator internus
 - d. Obturator externus
12. What is the main action of the Calf Muscles?
- a. Extension of Knee Joint
 - b. Plantar flexion of the foot
 - c. Flexion of knee joint
 - d. Dorsiflexion of the foot
13. Largest and most important branch of the posterior tibial artery is:
- a. Circumflex fibular artery
 - b. Peroneal artery
 - c. Medial plantar artery
 - d. Lateral plantar artery
 - e. Articular artery
14. All OF THE FOLLOWING are muscles of first layer of sole except:
- a. Abductor hallucis
 - b. Flexor hallucis brevis
 - c. Abductor digiti minimi
 - d. Flexor digitorum brevis
 - e. Adductor digiti minimi
15. Which one of the following doesn't contribute to arches of the foot?
- a. Muscles
 - b. Plantar ligament
 - c. The age of the individual
 - d. Talus bone
 - e. Nerves

16. The following muscles form the posterior axial-appendicular
- Trapezius
 - Rhomboideus major
 - Latissimus dorsi
 - Pectoralis major
 - Supraspinatus
17. Which of the following structures arises directly from the roots of the brachial plexus
- Thoracodorsal nerve
 - Nerve to subclavius
 - Dorsal scapula nerve
 - Suprascapular nerve
 - Axillary nerve
18. Damage to the upper trunk of brachial plexus results in
- Inability to flex the forearm
 - Claw hand
 - Wrist drop
 - Elbow palsy (Erb-Duchenne paralysis)
 - Carpal tunnel syndrome
19. Muscles of pectoral region include all except:
- Pectoralis major
 - Latissimus dorsi
 - Pectoralis minor
 - Subclavius
 - Serratus anterior
20. The narrowest wall of the axilla is the:
- Anterior
 - Medial
 - Lateral
 - Posterior
 - Apex

SECTION B: PART 2 SHORT ANSWER QUESTION (5 MARKS EACH)

1. Describe the gross anatomy of the ankle joint
2. State Four ligaments that stabilize the Hip Joint.
3. In knee joint injuries, describe the structures that are injured in the Unhappy triad
4. Describe the muscles of anterior compartment of the leg

SECTION B: PART 1: PECTORAL REGION AND ARM MULTIPLE CHOICE

QUESTIONS (20 MARKS)

1. The jugular notch lies on the same level with which of the following vertebrae?
 - a. The fourth cervical
 - b. The third thoracic
 - c. The first lumbar
 - d. The second thoracic
 - e. The sixth thoracic
2. The costal notch of the seventh rib articulates with which of the following structure?
 - a. The jugular notch
 - b. The sternal angle
 - c. The xiphisternal junction
 - d. the xiphoid process
 - e. the manubrium
3. Which of the following statements is true concerning the breast
 - a. Mammary glands are in the subcutaneous tissue overlying the pectoralis major
 - b. Mammary glands in males contain numerous small ducts whereas in women the ducts are numerous and large.
 - c. The nipple in the female breast can be used as an anatomical landmark in all age groups.
 - d. The suspensory ligaments of Cooper attach the breast to the epidermis thus prevents the breast from sagging.
 - e. The nipples just like the areola have lots of sebaceous glands that provide lubrication to the surrounding area
4. The nerve that lies in the groove behind the medial epicondyle of humerus is:
 - a. Median
 - b. Ulnar
 - c. Radial
 - d. Musculocutaneous
 - e. Axillary

5. Which of the following muscles is innervated by both musculocutaneous and radial nerve?
- Biceps brachii
 - Coracobrachialis
 - Brachialis
 - Brachioradialis
 - Pronator teres
6. Select the **FALSE** statement about the coracobrachialis:
- It arises from tip of coracoid process of scapula
 - It has more morphological than functional significance
 - The ligament of Struthers represents its third head
 - It is pierced by ulnar nerve
 - Flexes the forearm at elbow joint
7. The following is a branch of profunda brachii artery :
- Profunda brachii artery
 - Main humeral nutrient artery
 - Radial collateral artery
 - Superior ulnar collateral artery
 - Inferior ulnar collateral
8. Correct statement about Biceps brachii muscle
- It normally has one heads
 - Its long head arises from infraglenoid tubercle of scapula
 - It is capable of affecting movements at glenohumeral, elbow and superior radio-ulnar joints
 - It is supplied by ulnar nerve
 - Long head arise from coracoid process
9. The group of spinal segments supplying cutaneous innervation to upper limb is:
- C5 to T1
 - C4 to C8
 - C3 to T3
 - C4 to T2
 - C5 to T2

10. The spinal segment providing dermatomal supply to the little finger is:
- C4
 - T4
 - C8
 - C6
 - C7
11. All of the following structures are present in the deltopectoral groove except:
- Cephalic vein
 - Deltopectoral lymph node
 - Basilic vein
 - Deltoid branch of thoraco-acromial artery
 - Deltopectoral lymphatic vessels
12. The lymph vessels from thumb drain into which group of axillary lymph nodes:
- Anterior
 - Posterior
 - Central
 - Lateral
 - Apical
13. Musculotendinous cuff is formed by all the muscles except:
- Supraspinatus
 - Teres major
 - Infraspinatus
 - Teres minor
 - Pectoral major
14. Anatomically the shoulder joint is most commonly dislocated:
- Superiorly
 - Inferiorly
 - Anteriorly
 - Posteriorly
 - Laterally

15. The synovial bursa which commonly communicates with the cavity of the shoulder joint is:
- a. Subscapular
 - b. Infraspinatus
 - c. Subacromial
 - d. Psoas
 - e. Humeral
16. Which of the following nerves is commonly injured in inferior dislocation of shoulder joint?
- a. Radial nerve
 - b. Ulnar nerve
 - c. Thoraco-dorsal nerve
 - d. Axillary nerve
 - e. Lateral pectoral nerve
17. Shoulder movements occur at:
- a. Glenohumeral joint only
 - b. Sternoclavicular joint only
 - c. Acromioclavicular joint only
 - d. Scapulothoracic joint only
 - e. All of the above joints
18. Which of the following structures prevent superior dislocation of head of humerus?
- a. Coracoclavicular ligament
 - b. Coracohumeral ligament
 - c. Coracoacromial arch
 - d. Transverse humeral ligament
 - e. Sternoclavicular ligament
19. Chief articulation of shoulder is:
- a. Sternoclavicular joint
 - b. Acromioclavicular joint
 - c. Glenohumeral joint
 - d. Scapulothoracic joint
 - e. Elbow joint

20. The term shoulder separation is used for:
- a. Dislocation of shoulder joint
 - b. Dislocation of acromioclavicular joint
 - c. Dislocation of sternoclavicular joint
 - d. Dislocation of elbow joint
 - e. Fracture humeral head

Clinical Condition

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|---------------------------|--------------------------------------|
| 1. Volkmann's Contracture | A. Median Nerve |
| 2. Erb Duchene Palsy | B. Brachial Artery |
| 3. Wrist Drop | C. Ulnar Nerve |
| 4. Ape like hand | D. Surgical neck of Humerus |
| 5. Deltoid muscle palsy | E. Radial Nerve |
| | F. Superior Trunk of Brachial Plexus |

21. Describe the mechanism of Locking of the knee joint (5 marks)
22. . Name five branches of the Lumbosacral plexus (5 marks)
23. State the nerves that supply each of the following muscles: (5 marks)
- i. Pectoralis minor
 - ii. Pectoralis major
 - iii. Flexor Pollicis Longus
 - iv. Anconeus
 - v. Coracobrachialis