

MOCK EXAM: MSS Final Week 1



Lectures: Micro (5,6), Anatomy 1-5, Pharma (1), Gout, Skin Histology, Histo Lab, Micro Lab

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1. **A 45-year-old man presents with difficulty extending his wrist after a humeral fracture. Which nerve is most likely damaged?**
 - A) Median nerve
 - B) Ulnar nerve
 - C) Radial nerve
 - D) Musculocutaneous nerve
 - E) Axillary nerve

2. **A young athlete presents with pain and swelling in the elbow after a fall. X-ray shows an avulsion fracture of the medial epicondyle. Which muscle is most likely affected?**
 - A) Flexor carpi ulnaris
 - B) Extensor carpi radialis
 - C) Pronator teres
 - D) Supinator
 - E) Brachioradialis

3. **Organize the structures below from most lateral to medial that run superficial to the extensor retinaculum: 1. Ulnar Nerve 2. Palmar cutaneous branch of the ulnar nerve 3. Ulnar vein 4. Palmaris Longus Tendon 5. Palmar cutaneous branch of median nerve**
 - A) 4 → 5 → 3 → 2 → 1
 - B) 5 → 3 → 4 → 1 → 2
 - C) 4 → 5 → 3 → 2 → 4
 - D) 2 → 1 → 5 → 3 → 4
 - E) 5 → 4 → 3 → 1 → 2

- 4. Which of the following statements about brachial plexus is most accurate:**
- A) It is formed by the posterior rami of spinal nerves C5–T1
 - B) The lateral cord gives rise to the ulnar nerve
 - C) The cords are named according to their position relative to the axillary vein
 - D) The posterior cord gives rise to the axillary and radial nerves
 - E) All anterior divisions of the trunks form the medial cord
- 5. Which of the following statements about the arterial anastomosis around the scapula is most accurate?**
- A) It occurs solely between branches of the axillary artery
 - B) It ensures blood supply to the upper limb only during exercise
 - C) It involves the suprascapular, dorsal scapular, and circumflex scapular arteries
 - D) It is located entirely anterior to the scapula
 - E) It becomes functionally insignificant if the axillary artery is compressed
- 6. Which structure is located medially to the first part of the axillary artery:**
- A) Lateral Cord
 - B) Medial Cord
 - C) Long thoracic nerve
 - D) Cephalic Vein
 - E) Axillary Vein
- 7. Which of the following statements about the clavipectoral fascia is most accurate?**
- A) It encloses both pectoralis major and minor muscles
 - B) It is pierced by the thoracoacromial artery, cephalic vein, and lateral thoracic nerve
 - C) It extends from the clavicle and splits to enclose the subclavius and pectoralis minor muscles
 - D) It forms the anterior wall of the axilla with the pectoralis major
 - E) It fuses with the axillary vein before becoming the suspensory ligament of the axilla
- 8. A construction worker sustains a deep laceration to the palm, resulting in an inability to oppose the thumb. Which nerve is likely damaged?**
- A) Ulnar nerve
 - B) Radial nerve
 - C) Median nerve
 - D) Axillary nerve
 - E) Musculocutaneous nerve

9. The axillary artery is divided into three parts by which muscle?

- A) Teres major
- B) Pectoralis major
- C) Pectoralis minor
- D) Subclavius
- E) Latissimus dorsi

10. A boxer presents with numbness on of some of his fingers after striking his elbow. Which nerve is most likely compressed?

- A) Ulnar nerve
- B) Median nerve
- C) Radial nerve
- D) Musculocutaneous nerve
- E) Axillary nerve

11. A patient reports pain and swelling at the posterior elbow after lifting heavy objects. Examination shows a mass at the olecranon process, which of the following muscles is likely involved?

- A) Triceps brachii
- B) Brachialis
- C) Biceps brachii
- D) Supinator
- E) Anconeus

12. All the following muscles raise the medial border of scapula EXCEPT:

- A) Levator scapulae
- B) Rhomboid minor
- C) Rhomboid major
- D) Upper fibers of Serratus anterior
- E) Upper fibers of Trapezius

13. Multiple muscles pass beneath the extensor retinaculum, which of the following muscles *don't*:

- A) Extensor pollicis brevis
- B) Extensor digitorum
- C) Extensor indicis
- D) Abductor pollicis brevis
- E) Extensor carpi ulnaris

14. Which nerve gives sensation to the dorsal medial 1.5 fingers?

- A) Superficial radial nerve
- B) Dorsal cutaneous branch of ulnar nerve
- C) Posterior interosseous nerve
- D) Palmar cutaneous branch of median nerve
- E) Superficial branch of ulnar nerve

15. Which of the following muscles is supplied by the radial nerve before it divides into superficial and deep branches?

- A) Brachioradialis
- B) Extensor digitorum
- C) Supinator
- D) Extensor pollicis brevis
- E) Abductor pollicis longus

16. After a motorcycle accident, a patient has weakness in arm abduction and external rotation. Which muscle is most likely involved?

- A) Infraspinatus
- B) Supraspinatus
- C) Teres minor
- D) Subscapularis
- E) Deltoid

17. Which muscle is innervated by both the median and ulnar nerves?

- A) Flexor carpi radialis
- B) Flexor pollicis longus
- C) Flexor digitorum profundus
- D) Flexor digitorum superficialis
- E) Pronator teres

18. A patient reports numbness on the lateral side of the *forearm* after a stab wound to the upper arm. Which of the following nerves was damaged?

- A) Musculocutaneous nerve
- B) Radial nerve
- C) Ulnar nerve
- D) Median nerve
- E) Axillary nerve

19. Which of the following muscles is pierced by the musculocutaneous nerve?

- A) Biceps brachii
- B) Brachialis
- C) Coracobrachialis
- D) Triceps brachii
- E) Pronator teres

20. Which of the following statements about the supinator muscle is TRUE?

- A) It is innervated by the superficial branch of the radial nerve and inserts into the olecranon
- B) It originates from the medial epicondyle and supinates the humerus
- C) It flexes the forearm and is located in the anterior compartment
- D) It inserts into the medial border of the radius and is pierced by the ulnar nerve
- E) It lies in the posterior compartment of the forearm and is a deep muscle

21. Which of the following statements regarding muscle insertions is TRUE?

- A) Biceps brachii inserts into the olecranon of the ulna
- B) Triceps brachii inserts into the radial tuberosity
- C) Brachialis inserts into the coronoid process of the ulna
- D) Pronator teres inserts into the olecranon
- E) Supinator inserts into the shaft of the ulna

22. Which of the following statements about the biceps brachii muscle is FALSE?

- A) It has two heads: a long head from the supraglenoid tubercle and a short head from the coracoid process
- B) It inserts onto the radial tuberosity and via the bicipital aponeurosis into the forearm fascia
- C) It is innervated by the musculocutaneous nerve
- D) It extends the forearm at the elbow and stabilizes the shoulder joint
- E) It assists in supination of the forearm when the elbow is flexed

23. The deltoid muscle inserts into the:

- A) Greater tuberosity of the humerus
- B) Middle of lateral surface of shaft of humerus
- C) Lesser tuberosity of humerus
- D) Coracoid process
- E) Acromion process

24. Which muscle originates from the supraglenoid tubercle of the scapula?

- A) Triceps brachii (long head)
- B) Biceps brachii (long head)
- C) Coracobrachialis
- D) Brachialis
- E) Triceps brachii (lateral head)

25. In the third part of the axillary artery, which of the following structures lies most lateral?

- A) Ulnar nerve
- B) Coracobrachialis
- C) Axillary vein
- D) Lateral cutaneous nerve of arm
- E) Medial root of median nerve

26. A construction worker sustains a penetrating injury to the axilla and has a loss of shoulder abduction. Which nerve is most likely injured?

- A) Axillary nerve
- B) Radial nerve
- C) Musculocutaneous nerve
- D) Median nerve
- E) Ulnar nerve

27. Which structure forms the floor of the cubital fossa laterally?

- A) Pronator teres
- B) Supinator
- C) Brachialis
- D) Biceps tendon
- E) Flexor carpi radialis

28. In the distal forearm, the ulnar nerve is found:

- A) Behind the flexor retinaculum
- B) Lateral to the pisiform bone
- C) In the carpal tunnel
- D) Deep to the extensor retinaculum
- E) Between extensor tendons

29. The triangular space at the scapular region transmits:

- A) Axillary nerve and posterior circumflex humeral artery
- B) Radial nerve and profunda brachii artery
- C) Circumflex scapular artery
- D) Suprascapular nerve
- E) Thoracodorsal artery

30. All of the following are branches of the ulnar nerve EXCEPT:

- A) Palmar cutaneous branch
- B) Dorsal cutaneous branch
- C) Deep branch of ulnar nerve
- D) Superficial branch of ulnar nerve
- E) Anterior interosseous nerve

31. Which of the following features best distinguishes Janeway lesions from Osler nodes?

- A) Janeway lesions are painful while Osler nodes are painless
- B) Janeway lesions are immunologic while Osler nodes are septic
- C) Janeway lesions are caused by immune complex deposition
- D) Janeway lesions are painless vascular lesions from septic emboli
- E) Osler nodes occur only in prosthetic valve infections

32. Which of the following statements accurately describes Neisseria gonorrhoeae laboratory identification?

- A) Gram-positive cocci, oxidase-positive, grows on blood agar at 37°C in aerobic conditions
- B) Gram-negative diplococci, oxidase-positive, grows on Thayer-Martin agar at 35–37°C in 5–10% CO₂
- C) Gram-negative rods, catalase-positive, grows on Sabouraud dextrose agar at 25°C
- D) Gram-negative diplococci, oxidase-negative, grows on MacConkey agar
- E) Gram-positive diplococci, oxidase-negative, grows on chocolate agar in anaerobic conditions

33. A diabetic patient presents with spreading cellulitis with blue-green pus. What is the most likely pathogen?

- A) Staphylococcus aureus
- B) Pseudomonas aeruginosa
- C) Streptococcus pyogenes
- D) Klebsiella pneumoniae
- E) Clostridium perfringens

34. Which stain is most useful to examine fungal elements microscopically?

- A) Ziehl-Neelsen
- B) Gram stain
- C) Crystal violet
- D) Lactophenol cotton blue
- E) India ink

35. In distinguishing ecthyma from impetigo, which of the following is most accurate?

- A) Impetigo is deeper and causes scarring
- B) Ecthyma presents with vesicles and heals quickly
- C) Ecthyma affects only the epidermis
- D) Impetigo causes dermal ulceration
- E) Ecthyma involves deeper dermis and heals with scarring

36. Which of the following statements about bullous impetigo is true?

- A) It requires surgical debridement due to ulceration
- B) It is primarily fungal in origin
- C) It heals without deep ulcers or scarring
- D) It is usually caused by HSV-1
- E) It presents with greenish exudate

37. Which combination is most characteristic of Streptococcus pyogenes in lab identification?

- A) Catalase-positive, mannitol-fermenting, beta-hemolytic
- B) Catalase-negative, optochin-sensitive, alpha-hemolytic
- C) Catalase-negative, bacitracin-sensitive, beta-hemolytic
- D) Catalase-negative, bile esculin-positive, gamma-hemolytic
- E) Coagulase-positive, beta-hemolytic

38. A patient being treated for gout develops severe gastrointestinal upset. Which drug is most likely responsible?

- A) Colchicine
- B) Allopurinol
- C) Probenecid
- D) Febuxostat
- E) Prednisone

39. Which drug lowers uric acid by increasing its renal excretion?

- A) Probenecid
- B) Allopurinol
- C) Colchicine
- D) Febuxostat
- E) Naproxen

40. A patient with was prescribed a drug that inhibits xanthine oxidase, which adverse effect should be monitored?

- A) Rash
- B) Hypertension
- C) Hypokalemia
- D) Hypercalcemia
- E) Bradycardia

41. Which of the following drugs is an FDA-approved uricase enzyme used in treatment-resistant gout?

- A) Anakinra
- B) Febuxostat
- C) Probenecid
- D) Pegloticase
- E) Canakinumab

42. All of the following are true about febuxostat EXCEPT:

- A) It is a xanthine oxidase inhibitor
- B) It is chemically distinct from allopurinol
- C) It is less effective than allopurinol
- D) It was recently approved by the FDA
- E) It reduces serum uric acid below 6.0 mg/dL in many patients

43. Which drug would be most appropriate for a patient with recurrent gout, normal renal function, and a history of uric acid kidney stones?

- A) Probenecid
- B) Allopurinol
- C) Naproxen
- D) Colchicine
- E) Pegloticase

44. All of the following are contraindications to uricosuric therapy EXCEPT

- A) Existing renal disease
- B) Elderly age
- C) History of nephrolithiasis
- D) Elevated urine uric acid level
- E) Mild hyperuricemia due to chemotherapy

45. Which of the following is the MAO of how minoxidil promotes hair growth?

- A) Inhibits dihydrotestosterone production
- B) Blocks ornithine decarboxylase
- C) Opens potassium channels, increasing blood flow to follicles
- D) Kills hair follicle bacteria
- E) Stimulates androgen receptors

46. All the following are true regarding bacitracin EXCEPT:

- A) It is effective against streptococci and pneumococci
- B) It causes systemic toxicity when used topically
- C) It is often combined with polymyxin B and neomycin
- D) It is poorly absorbed through the skin
- E) It may cause allergic contact dermatitis

47. A 45-year-old man presents with hair loss and is prescribed minoxidil. What is the primary mechanism of action?

- A) Potassium channel opener
- B) DHT synthesis inhibition
- C) 5-alpha reductase inhibition
- D) Calcium channel blockade
- E) Alpha-adrenergic blockade

48. Which of the following statements about fusidic acid is correct?

- A) It inhibits bacterial DNA synthesis
- B) It is primarily antifungal
- C) It is active against staphylococci and streptococci
- D) It causes significant nephrotoxicity
- E) It is never used in eye drops

49. All of the following are true about polymyxin B sulfate EXCEPT:

- A) It is active against *E. coli* and *Klebsiella*
- B) It is effective against gram-positive bacteria
- C) It should not exceed 200 mg/day on open wounds
- D) It may cause nephrotoxicity if overused
- E) It rarely causes allergic contact dermatitis

50. Which of the following drugs acts by inhibiting 5-alpha reductase?

- A) Minoxidil
- B) Fusidic acid
- C) Finasteride
- D) Eflornithine
- E) Gentamicin

51. Which of the following is NOT a cause of acne vulgaris?

- A) Increased sebum production
- B) Hair follicle blockage
- C) Fungal infection
- D) Bacterial overgrowth
- E) Inflammation

52. Gentamicin differs from neomycin in which of the following way?

- A) Gentamicin has less risk of systemic toxicity
- B) Neomycin is more effective against staphylococci
- C) Gentamicin is more effective against *Pseudomonas aeruginosa*
- D) Neomycin is more selective for gram-positive bacteria
- E) Gentamicin causes less allergic contact dermatitis

53. Which of the following statements about the epidermis is INCORRECT?

- A) It is derived from ectoderm
- B) It is keratinized stratified squamous epithelium
- C) It is vascular and nourished by blood vessels
- D) It provides a waterproof barrier
- E) It contains four main cell types

54. All of the following statements about the stratum spinosum are true EXCEPT:

- A) It consists of multiple layers of keratinocytes joined by desmosomes
- B) It is the site where keratinocytes begin synthesizing keratin filaments
- C) It contains keratohyalin granules that cross-link tonofibrils
- D) It lies directly above the stratum basale
- E) It contributes to the formation of the stratum germinativum

55. All of the following statements about the hair follicle are true EXCEPT:

- A) The outer root sheath is continuous with the epidermis but does not contribute to hair formation
- B) The inner root sheath disintegrates at the level of the sebaceous gland
- C) The hair matrix contains melanocytes responsible for hair color
- D) The dermal papilla is located at the superficial end of the follicle near the skin surface
- E) The basement membrane surrounds the outer root sheath and is encased by connective tissue

56. Where is the Meissner corpuscle primarily located?

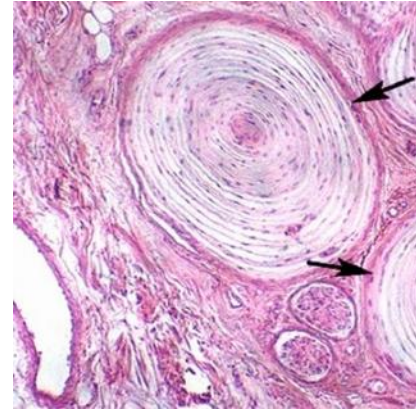
- A) Deep in the reticular dermis and hypodermis
- B) Along hair shafts in the epidermis
- C) Within the stratum basale of the epidermis
- D) In the dermal papillae, especially of fingertips and palms
- E) Around sebaceous glands at the dermal-epidermal junction

57. Which of the following statements regarding the hair growth cycle is TRUE?

- A) Hair grows continuously and synchronously across all body regions
- B) The resting phase is known as the anagen phase
- C) Hair matrix activity ceases during the catagen phase
- D) The telogen phase is the most active growth period
- E) Hair shedding occurs exclusively during the anagen phase

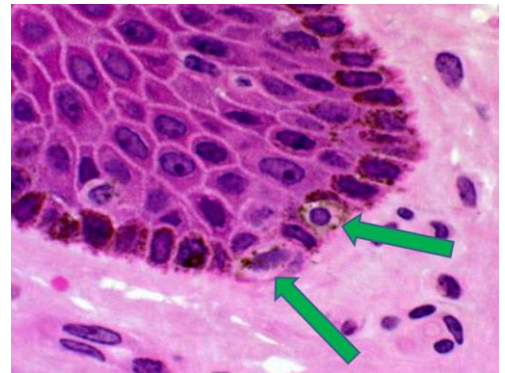
58. Which of the following statements about the structure pointed out is CORRECT?

- A) They respond to pressure and vibration
- B) They are most numerous in the papillary dermis
- C) They are responsible for light touch and fine texture
- D) They are unencapsulated nerve endings
- E) They are abundant in the stratum basale



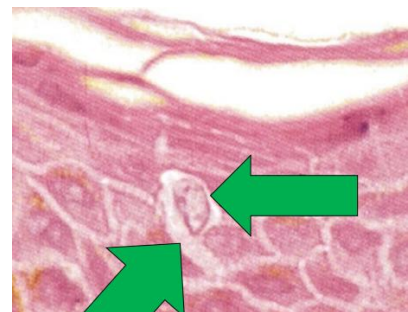
59. Which of the following describes the primary function of the following structure in the epidermis?

- A) They phagocytose apoptotic keratinocytes during desquamation
- B) They form tight junctions with Merkel cells to mediate touch
- C) They synthesize melanin and transfer it to keratinocytes
- D) They produce keratohyalin granules that waterproof the skin
- E) They trigger inflammation in response to bacterial invasion



60. The following structure is primarily located in which layer of the epidermis?

- A) Stratum corneum
- B) Stratum granulosum
- C) Dermal papilla
- D) Stratum basale
- E) Stratum spinosum



Answer Key

1	C	31	D
2	A	32	B
3	A	33	B
4	D	34	D
5	C	35	E
6	E	36	C
7	C	37	C
8	C	38	A
9	C	39	A
10	A	40	A
11	A	41	D
12	D	42	C
13	D	43	B
14	B	44	E
15	A	45	C
16	C	46	B
17	C	47	A
18	A	48	C
19	C	49	B
20	E	50	C
21	C	51	C
22	D	52	C
23	B	53	C
24	B	54	C
25	B	55	D
26	A	56	D
27	B	57	C
28	B	58	A
29	C	59	C
30	E	60	E

Notes:

- Micro questions are all from the activities just to test yourself on
- Tried to make an even mix of all levels of questions, if you have any advice (font, color , numbering , etc...) for upcoming weeks would love to hear it Goodluckk !