

**MSS**  
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**ANATOMY**

Q1: All the followings are branches of external carotid artery EXCEPT:

- A) Posterior auricular artery
- B) Superficial temporal artery
- C) Facial artery
- D) Supraorbital artery
- E) Maxillary artery

Ans:D

Q2: The cutaneous nerve supply of the face, choose the WRONG statement:

- A) The infraorbital nerve is a continuation of the maxillary nerve
- B) Motor branches of trigeminal nerve emerge from the parotid gland
- C) The supratrochlear and supraorbital nerves supply forehead and scalp
- D) Auriculotemporal nerve is a branch of mandibular nerve

Ana:B

Q3: Scalp, choose the CORRECT statement:

- A) Its wounds do not bleed easily

- B) The large blood vessels of the scalp run in the subaponeurotic loose areolar tissue
- C) Its skin and superficial fascia move on the aponeurosis
- D) Its veins communicate directly with the cavernous sinus
- E) Its wounds do not gape if superficial to aponeurosis

Ans: E

Q4: A 20-year-old man is brought to the emergency department 1 hour after he was involved in a motorcycle collision. He was not wearing a helmet. Physical examination shows clear fluid dripping from the nose. X-rays show a fracture of the cribriform plate of the ethmoid bone. This patient is at greatest risk for impairment of which of the following senses

- A) Hearing
- B) Taste from the anterior two thirds of the tongue
- C) Balance
- D) Olfaction
- E) Vision.

Ans: D

Q5: Which of the following statements concerning a patient with a large swelling restricted to the area over the occipital bone is CORRECT? (Anatomy)

- A) The edge of the swelling is limited by the attachment of the periosteum to the sutural ligaments
- B) The hematoma was located just beneath the epicranial aponeurosis and was superficial to the periosteum of the occipital bone
- C) The hematoma, although large, did not extend forward to the orbital margins and did not extend laterally as far as the temporal lines
- D) The hematoma is restricted to one skull bone and is situated beneath the periosteum
- E) The swelling did not occupy the subcutaneous tissue of the scalp

Ans: A

Q6: Cutaneous innervation the auricle is derived from:

- A) Auriculotemporal nerve
- B) Great auricular nerve
- C) Lesser occipital nerve
- D) All of the mentioned

Ans: D

Q7: Which of the followings does NOT travel through the jugular foramen?

- A) Internal jugular vein
- B) Accessory nerve
- C) Glossopharyngeal nerve
- D) Vagus nerve
- E) Hypoglossal nerve

ANS:E

Q8: A patient has a fracture in the middle cranial fossa. You suspect damage to the nerve passing through foramen ovale. You would test the motor function of this nerve by:

- A) Touching the face around the jawline with a cotton swab and ask the patient whether he felt it
- B) Asking the patient to rotate his head to one side against resistance
- C) Asking the patient to clench his teeth together and feel the bulk of the muscles supplied by Mandibular nerve
- D) Asking the patient to close his eyes tightly and open them by applying gentle pressure
- E) Asking the patient to speak loudly

ANS:C

Q9: Which of the following is content of infratemporal fossae ?

- A) greater wing of sphenoid
- B) lesser wing of sphenoid
- C) palatine
- D) occipital bone

ANS:A

Q10: The correct path of vestibulocochlear nerve is:

- A) Hypoglossal canal > neck
- B) Internal acoustic meatus > Inner Ear
- C) Foramen rotunda > Pterygopalatine fossa
- D) Internal acoustic meatus > stylomastoid foramen

Answer: B

Q11: A 45-year-old woman is suffering from numbness over the tip of her nose. Which of the following nerves is most likely to be damaged?

- A) Ophthalmic division of the trigeminal nerve
- B) Maxillary division of the trigeminal nerve
- C) Mandibular division of the trigeminal nerve
- D) Facial nerve
- E) Auriculotemporal nerve

ANS: A

Q12: A 14-year-old boy hits his head on the asphalt road after falling off his skateboard. His radiograph reveals damage to the sella turcica. This is probably due to fracture of which of the following bones?

- (A) Frontal bone

- (B) Ethmoid bone
- (C) Temporal bone
- (D) Basioccipital bone
- (E) Sphenoid bone

ANS: E

Q13: During a game, a 26-year-old baseball player is hit in the head by a baseball, which fractures the optic canal. Which of the following pairs of structures is most likely to be damaged?

- A) Optic nerve and ophthalmic vein
- B) Ophthalmic vein and ophthalmic nerve
- C) Ophthalmic artery and optic nerve
- D) Ophthalmic nerve and optic nerve
- E) Ophthalmic artery and ophthalmic vein

ANS: C

Q14: During a gang fight, a 17-year-old boy is punched, and his nasal septum is broken. Which of the following

structures would be damaged?

- (A) Septal cartilage and nasal bone
- (B) Inferior concha and vomer
- (C) Vomer and perpendicular plate of ethmoid
- (D) Septal cartilage and middle concha
- (E) Cribriform plate and frontal bone

ANS: C

Q15: A 59-year-old woman with pain at the side of her skull comes to the emergency department. An emergent head CT scan shows a large lesion in the internal auditory meatus. This condition may progress and damage

which of the following pairs of structures?

- (A) Vagus and glossopharyngeal nerves
- (B) Internal carotid and vertebral arteries
- (C) Internal jugular vein and trigeminal nerve
- (D) Facial and vestibulocochlear nerves
- (E) Hypoglossal and accessory nerves

ANS: D

Q16: What structure passes through the foramen spinosum?

- A-Accessory nerve
- B-Facial nerve
- C-Middle meningeal artery
- D-Ophthalmic artery
- E-Trochlear nerve

ANS:C

Q17: A branch from cervical plexus:

- A- lesser occipital nerve
- B- third occipital nerve
- C- greater occipital nerve
- D- supraorbital nerve
- E- ANS: A

Q18: One of the following is not part of the sphenoid bone:

- A. crista galli
- B. Lesser wing
- C. Anterior clinoid processes
- D. Greater wing

Answer: A

Q19: Choose the mismatched pair of the following:

- A. Olfactory nerve – cribriform plate
- B. Mandibular nerve – foramen spinosum
- C. Maxillary nerve – foramen rotundum
- D. Internal carotid artery – carotid canal
- E. Ophthalmic artery – optic canal

Answer: B

Q20: Which of the following is false about scalp?

- a. Injuries in the 2nd layer cause profuse bleeding
- b. 2nd layer is called the dangerous layer of the scalp
- c. Skin, subcutaneous tissue and aponeurosis move as a single layer
- d. Gaps form when there's a cut in aponeurosis

ANS: B

Q21: Which of the following is not a branch of the facial nerve?

- a. The temporal branch
- b. The cervical branch
- c. The mandibular branch
- d. The maxillary branch

ANS: D

Q22: Superior orbital fissure is found between:

- a. Body of the sphenoid and the lesser wing
- b. The lesser and greater wings of sphenoid
- c. Petrous part of the temporal bone and occipital bone

d. Anterior and posterior clinoid processes

ANS: B

Q23: -'Raccoon eyes' are characteristic for haemorrhage in which layer of the scalp?

- a. 1st layer
- b. 2nd layer
- c. 3rd layer
- d. 4th layer

ANS:D

Q24: Which of the following structures is not found in the mandible?

- a. Mental spines
- b. Crista galli
- c. Mylohyoid groove
- d. Lingula

ANS:B

Q25: 42-The nerve that supplies the skin over the back of the skull is a branch of:

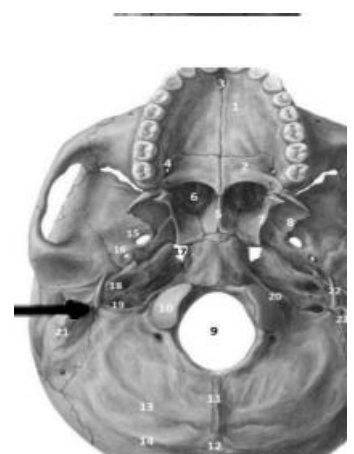
- a. Posterior ramus of the 2nd cervical nerve
- b. Cervical plexus
- c. Mandibular nerve
- d. Facial nerve

ANS: A

PRATICAL QUESTIONS:

Q1: What is the nerve that passes from This foramen:

A.5th cranial nerve





B. 6th cranial nerve

C. 7th cranial nerve

D. 8th cranial nerve

ANS:C

Which of the following is mismatch with number :

A. 5 – coronoid presses

B. 14 – oblique line

C. 9-Madibular foramen

D. 11- mental foramen

Answer: B

Q3: The symbol A in the picture is referred

to:

A. Sagittal suture

B. coronal suture

C. Bergma

D. lambda

Answer: B

Q4: Identify the following structure:

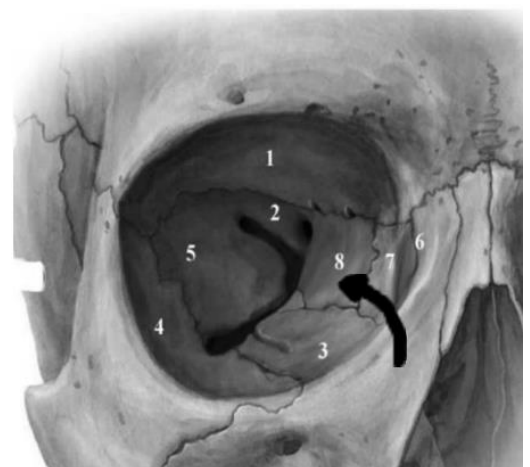
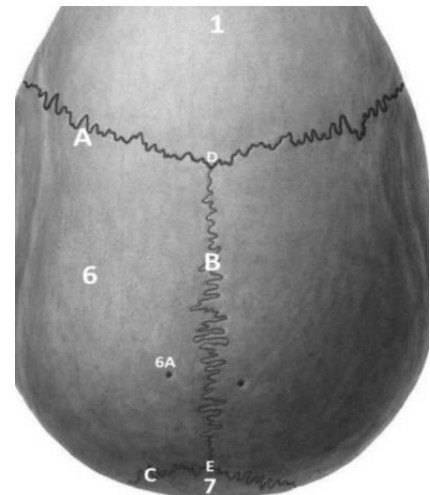
A. Ethmoid bone

B. Frontal bone

C. Maxilla

D. Sphenoid bone

Answer: D



# PHYSIOLOGY

Q1: The sequence of events above in the correct order according to their appearance is: The followings are events during excitation contraction coupling:

1. generation of end-plate potentials
2. activation of chemical gated  $\text{Na}^+$
3. activation of voltage gated  $\text{Na}^+$  channels.
4. release of  $\text{Ca}^{++}$  from sarcoplasmic reticulum

A) 2,1,3 and 4

B) 3,1,4 and 2

C) 1,2,3 and 4

D) 3,2,1, and 4

E) 2,1,4 and 3

ANS: A

Q2: The absolute refractory period of an action potential: (Physiology)

A) a. is during the after hyperpolarization wave.

B) b. refers to the membrane potential at resting state.

C) c. coincides with the firing stage of an action potential.

D) d. coincides (at the same time) with the lowest activity of  $\text{K}^+$  channels.

E) e. is mostly when  $\text{Na}^+$  channels are closed and not capable for opening.

ANS: C

Q3: Which of the following events does NOT occur at all in skeletal muscle during excitation-contraction coupling:

A) activation of voltage gated  $\text{K}^+$  channels at the sarcolemma.

B) depolarization of the sarcoplasmic reticulum.

C) activation of voltage gated  $\text{Na}^+$  channels at the sarcolemma.

D) action potential at T tubules.

E) binding of  $\text{Ca}^{++}$  to troponin C.

ANS:B

Q4: Decreased generation of motor end plate potentials can be a result of all the following conditions EXCEPT:

A) depletion of chemical gated  $\text{Na}^+$  channels at the motor end plate.

B) decreased generation of action potential by motor neurons.

C) inhibition of chemical gate  $\text{Na}^+$  channels at motor end plate.

D) blocking of acetyl-choline esterase at motor end plate.

E) inhibition of nicotinic receptors at motor end plate.

ANS:D

Q5: - During contraction of the muscle, which one of the following is true :

A. A band length changes

B. H zone length decreases

C. Shortening of actin filaments

D. The distance between two z lines stays the same

E. I band shortens

ANS :B

Q6: 24- Which one of the following actions precedes the activation of Dihydropyridine receptors :

A. Binding of Ca to troponin C

B. Exposure of the myosin binding sites on the actin

C. Release of Ca

D. Transmission of an action potential through T-tubules

E. Sliding of actin filaments toward the midline

ANS : D

Q7: The relative refractory period of an action potential :

- a. precedes the absolute refractory period of an action potential .
- b. refers to the membrane potential at resting state .
- c. is mostly when  $\text{Na}^+$  channels are closed and not capable for opening .
- d. coincides (at the same time) with the lowest activity of  $\text{K}^+$  channels .
- e. coincides with the firing stage of an action potential .

ANS:C

Q8: Which of the following pairs of events are NOT related to each other in skeletal muscle contractile mechanisms :

- a. c-AMP and detachment of myosine heads .
- b. T tubules and transmission of action potentials .
- c. rigor mortis and decreased ATP in sarcoplasm .
- d. exocytosis and increased Ach concentration in cleft

ANA:A

Q9: Of the followings, choose the LAST event that appears during stimulation contraction coupling :

- a. release of  $\text{Ca}^{++}$  from sarcoplasmic reticulum .
- b. action potential at sarcolemma .
- c. generation of endplate potentials .
- d. activation of troponin C .
- e. conduction of action potentials along T tubules .

ANS:D

Q10: Which of the following does not occur in skeletal muscle

contraction?

- a. Phosphorylation of troponin
- b. Generation of end-plate potentials
- c. Splitting of ATP into ADP and Pi
- d. Interaction between thin filaments and cross bridges

ANS:A

## HISTOLOGY

Q1: Merkel cells and melanocytes are located in:

- a. Stratum corneum
- b. Stratum granulosum
- c. Stratum spinosum
- d. Stratum basale

ANS:D

Q2: -Mismatched pair:

- a. Stratum spinosum / Langerhans cells are abundant
- b. Stratum Lucidum / not found in all skin types
- c. Stratum corneum / Dead cells
- d. Stratum granulosum / non-membranous bound lamellar granules

ANS:D

Q3: Which of the following statements is wrong regarding thick skin?

- a. It is found in palms and soles
- b. Its epidermis consists of five layers
- c. Its dermis is thicker than the dermis of thin skin

d. It has no hair or sebaceous glands

ANS: C

Q4: Identify the structure indicated by the white arrow:

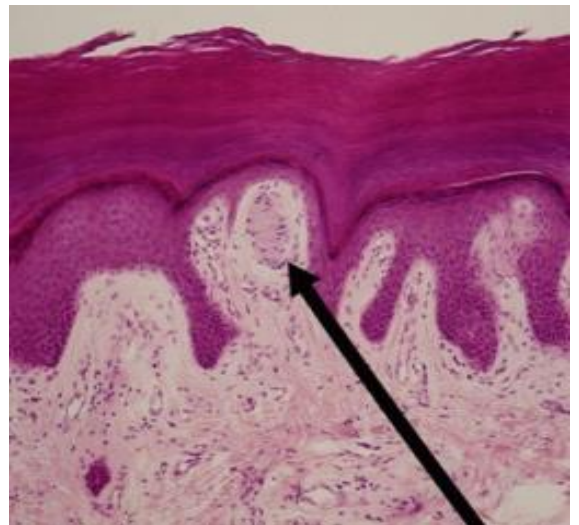
- a. Sebaceous gland
- b. Sweat gland
- c. Arrector pili
- d. Pacinian corpuscle



ANS:A

Q5: Identify this structure

- a. Pacinain corpuscles
- b. Meissners corpuscles
- c. Ruffini endings
- d. Merkel's disc



ANS: B

Q6: Which type of encapsulated nerve ending is located in dermal papillae?

- a. Free nerve endings
- b. Ruffini corpuscle
- C. Merkel's disc
- d. Meissner's corpuscle
- e. Pacinian corpuscle

ANS: D

Q7: -Integumentary system, choose the WRONG match:

- a. Arrector pili: supplied by sympathetic fibers
- b. Inner root sheath: continuous with epidermis
- c. Stratum germinativum: stratum basale along with the deepest part of stratum spinosum
- d. Merkel cell: found in stratum basale
- e. Stratum granulosum: contains two types of granules

ANS: B

Q8: Wrong about outer root sheath:

- A. Is continuous with the epidermis.
- B. Surrounded by a glassy basement membrane.
- C. Disintegrates at the level of the sebaceous gland.

Answer: C

Q9: Which cell is a mechanoreceptor:

- A. Langerhans cell
- B. Keratinocyte
- C. Melanocyte
- D. Merkel cell

Answer: D

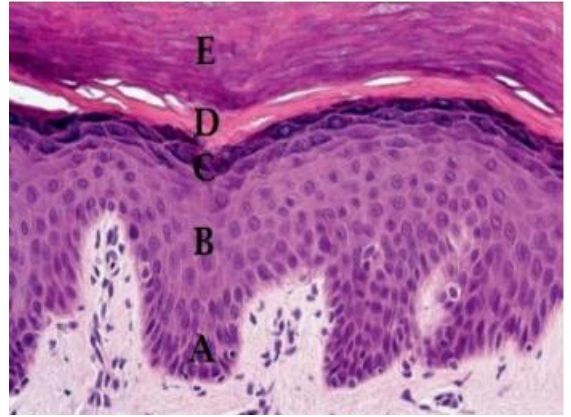
Q10: Which of the following responds to continuous pressure

- A. Free nerve endings
- B. Ruffini's corpuscles
- C. Pacinian corpuscles
- D. Krause's end bulbs
- E. Meissner's corpuscle

Answer: C

Q11: Which of the following is false regarding this histology section:

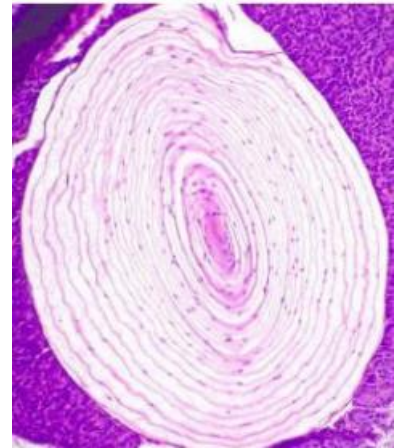
- a. It is taken from the palms and soles of the feet
- b. No hair or sebaceous glands
- c. This section is taken from the eyelid
- d. Thick skin with prominent stratum corneum



ANS:C

Q12: The following section represents:

- a. Meissner corpuscle
- b. Pacinian Corpuscle
- c. Ruffini Corpuscle
- d. Merkel disc





# MICROBIOLOGY

Q1: The infection caused by *Staphylococcus aureus* that involves invasion and destruction of skin tissue and is not toxin-mediated is:

- A) Toxic shock syndrome (TSS)
- B) Scalded skin syndrome (SSS)
- C) Folliculitis
- D) Scarlet fever
- Answer: C) Folliculitis

Q2: Sebaceous glands secrete sebum that is rich in which substances to combat microorganism growth?

- A) Fatty acids and lactic acid
- B) Sodium chloride and potassium
- C) Hydrochloric acid and enzymes
- D) Water and minerals
- Answer: A) Fatty acids and lactic acid

Q3: The sweat produced by sweat glands contains lysozyme and high levels of sodium chloride. What is the primary function of these components?

- A) To provide moisture and hydration
- B) To break down bacterial cell walls and inhibit bacterial growth
- C) To increase skin temperature
- D) To facilitate the absorption of skin products
- Answer: B) To break down bacterial cell walls and inhibit bacterial growth

Q4: *Staphylococcus aureus* can cause a variety of skin infections. Which of the following is not caused by *Staphylococcus aureus*?

- A) Erysipelas

- B) Bullous impetigo
- C) Folliculitis
- D) Scalded skin syndrome (SSS)
- Answer: A) Erysipelas

Q5: Which of the following microorganisms is the most prevalent on human skin?

- A) Propionibacterium acnes
- B) Staphylococcus epidermidis
- C) Malassezia
- D) Corynebacterium
- Answer: B) Staphylococcus epidermidis

Q6: 2 Which of the following conditions is caused by the Human Papillomavirus (HPV)?

- A) Tungiasis
- B) Warts
- C) Erysipelas
- D) exanthems
- Answer: B) Warts

Which of the following from early childhood diseases is treat by antibiotic:

- A) Fifth disease
- B) Sixth disease
- C) Scarlet fever
- D) Erysipelas

ANS:C