غبنا و غاب الابداع رجعنا نعدل الأوضاع

Integumentary Stystem MCQ'S

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Morphine 💊

1) A key difference between eccrine and apocrine sweat glands lies in their activation and function. Which of the following accurately contrasts these two gland types?

A.
Eccrine glands open into hair follicles for cooling, while apocrine glands open onto the skin surface and are stimulated by emotions.

B.
Eccrine glands become active at puberty and are located in the axilla, while apocrine glands are active from birth and are found all over the body.

C.
Eccrine glands are hormonally controlled and produce a viscous secretion, while apocrine glands are nervously controlled and produce a watery secretion.

D.
Eccrine glands are primarily for thermoregulation via nervous control, while apocrine glands are hormonally controlled and become active at puberty.

2) Which specific cell type in the epidermis is primarily responsible for initiating immune responses against microbes that invade the skin?

A.
Langerhans cells

B.
Merkel cells

C.
Melanocytes

D.
Keratinocytes

3) The stratum granulosum plays a crucial role in forming the skin's waterproof barrier. Which component within this layer directly releases a lipid-rich secretion into the extracellular space?

A.
Keratohyalin granules

B.
Desmosomes

C.
Melanin pigment

D.
Lamellar granules

4) The arrector pili muscle causes 'goosebumps' by contracting. Based on its attachments described in the text, what is the direct mechanical action of this muscle?

A.
It pulls on the hair follicle, causing the hair shaft to become perpendicular to the skin surface.

B.
It compresses the sebaceous gland to release sebum.

C.
It pulls the epidermis down to create a skin depression.

D.
It flattens the dermal papillae to smooth the skin surface.

5) According to the text, the skin is the largest organ of the body by two measures. What are they?

A.
Weight and depth

B.
Number of cells and density

C.
Volume and thickness

D.
Surface Area and weight

6) The stratum corneum is composed of corneocytes. Which statement best describes the nature and primary protein component of these cells?

A.
They are living cells filled with collagen for flexibility.

B.
They are flat, dead cells that are essentially cell membranes filled with keratin.

C.
They are dividing stem cells containing melanin.

D.
They are cube-shaped, living cells that produce lamellar granules.

7) The skin's ability to synthesize Vitamin D is a crucial physiological function. Although not detailed, this process is initiated by exposure to what external factor?

A.
Ultraviolet radiation

B.
Hormonal signals

C.
Water from sweat

D.
Deep pressure

8) What is the primary structural difference between the papillary region and the reticular region of the dermis?

A.
The papillary region contains hair follicles, while the reticular region contains capillary loops.

B.
The papillary region contains lamellated (pacinian) corpuscles, while the reticular region contains Merkel cells.

C.
The papillary region consists of loose areolar connective tissue, while the reticular region consists of dense irregular connective tissue.

D.
The papillary region is composed of dense irregular connective tissue, while the reticular region is composed of loose areolar tissue.

9) The sensation of deep pressure applied to the skin is detected by lamellated (pacinian) corpuscles. According to the text, in which layer(s) are these sensory receptors primarily located?

A.
Attached to the hair follicle alongside the arrector pili muscle.

B.
In the subcutaneous layer and sometimes the dermis.

C.
Exclusively in the papillary region of the dermis.

D.
In the epidermis, specifically within the stratum basale.

10) The epidermis and dermis are interlocked by structures that increase their contact area. What are the names of the dermal projections and the epidermal downgrowths that create this interface?

A.
Dermal projections are called dermal papillae; epidermal downgrowths are called epidermal ridges.

B.
Both structures are referred to as capillary loops.

C.
Dermal projections are called epidermal ridges; epidermal downgrowths are called dermal papillae.

D.
Dermal projections are called reticular fibers; epidermal downgrowths are called corneocytes.

11) Which layer of the epidermis is absent in thin skin, such as the skin on the eyelids?

A.
Stratum granulosum

B.
Stratum lucidum

C.
Stratum corneum

D.
Stratum basale

شكلك يوم الثلاثاء قدام
السؤال 3 :

12) Sebum, secreted by sebaceous glands, serves multiple protective functions. According to the text, which of the following is a key function of sebum?

A.
To detect light touch sensations on the skin surface.

B.
To prevent dehydration and inhibit the growth of certain bacteria.

C.
To cool the body through evaporation.

D.
To synthesize vitamin D upon exposure to sunlight.

13) What is the structural composition of the hair cuticle, the outermost layer of the hair shaft?

A.
Highly keratinized dead cells arranged in an overlapping pattern like roof shingles.

B.
A central core of loosely arranged cells and air spaces.

C.
A middle layer composed of elongated cells forming the bulk of the hair.

D.
Living, cuboidal cells that contain the hair's pigment.

14) Both Merkel cells and melanocytes are found in the stratum basale. How does the functional arrangement of melanocytes differ from that of Merkel cells within the epidermis?

A.
Merkel cells extend branches to adjacent cells, while melanocytes remain as single units.

B.
Melanocytes extend branches between keratinocytes to provide them with pigment.

C.
Both cell types function identically by releasing granules into the extracellular space.

D.
Melanocytes are involved in touch sensation, while Merkel cells produce protective pigments.

15) The subcutaneous layer (hypodermis) has several important functions. Based on the text, which of the following is NOT listed as a function of the subcutaneous tissue?

A.
Acting as a site for continuous cell division to produce new skin.

B.
Serving as an energy storage site.

C.
Absorbing shocks and acting as an insulator.

D.
Attaching the skin to underlying tissues and organs.

16) What is the functional advantage of the dermal papillae and epidermal ridges that form fingerprints?

A.
They help to cool the skin by radiating heat more effectively.

B.
They increase firmness of grip by increasing friction.

C.
They house apocrine glands for emotional sweating.

D.
They increase the surface area for vitamin D synthesis.

17) How does the method of secretion for both eccrine and apocrine sweat glands, as classified in the provided table, differ from their names might suggest?

A.
Eccrine glands are holocrine, while apocrine glands are merocrine.

B.
Eccrine glands are merocrine, while apocrine glands are holocrine (the whole cell ruptures).

C.
Both use the merocrine method, despite the 'apocrine' gland's name.

D.
Both use the apocrine method, where part of the cell pinches off.

18) What is the relationship between keratin, produced by keratinocytes, and desmosomes in the epidermis?

A.
Keratin and desmosomes are unrelated structures within the epidermis.

B.
Keratin dissolves desmosomes to allow for cell shedding.

C.
Keratin filaments bind to desmosomes to help in the adhesion of cells to each other.

D.
Desmosomes produce the keratin that fills the keratinocytes.

19) Based on the description of the reticular region of the dermis, which accessory structure would you NOT expect to find originating or residing primarily within this layer?

A.
Sebaceous glands

B.
Sweat glands

C.
Hair follicles

D.
Corpuscles of touch (Meissner's)

20) Which of the following is considered an accessory structure of the skin, rather than one of its major layers?

A.
Subcutaneous layer

B.
Dermis

C.
Arrector pili muscle

D.
Epidermis

21) The skin functions as a 'blood reservoir'. This implies that the blood vessels of the dermis can change in diameter. Which dermal region contains the capillary loops that would be most directly involved in this function as well as nutrient supply to the epidermis?

A.
The stratum basale

B.
The papillary region

C.
The subcutaneous layer

D.
The reticular region

22) What distinguishes the location of apocrine sweat glands from eccrine sweat glands?

A.
Both gland types are distributed uniformly across the entire surface of the body.

B.
Apocrine glands are found all over the body, while eccrine glands are only in the axilla and groin.

C.
Eccrine glands are concentrated in palms and soles, while apocrine glands are found in areas like the axilla, groin, and bearded regions of the face.

D.
Eccrine glands are only found in thick skin, and apocrine glands are only found in thin skin.

23) The hair follicle is described as a downward extension of which skin layer?

A.
The subcutaneous layer

B.
The papillary region of the dermis

C.
The epidermis

D.
The reticular region of the dermis

24) The secretion of apocrine glands is initially odorless, but can produce body odor. What causes this change?

A.
The secretion mixes with sebum from sebaceous glands.

B.
Bacteria on the skin act on the viscous secretion.

C.
The secretion reacts with oxygen in the air.

D.
Hormonal changes alter the chemical composition of the secretion after it is released.

25) Which layer of the epidermis is characterized by being 8-10 layers thick and composed primarily of keratinocytes held together by desmosomes?

A.
Stratum granulosum

B.
Stratum basale

C.
Stratum corneum

D.
Stratum spinosum

Answers

1)D 2)A 3)D 4)A 5)D 6)B 7)A 8)C 9)B 10)A 11)B 12)B 13)A 14)B 15)A 16)B 17)C 18)C 19)D 20)C 21)B 22)C 23)C 24)B 25)D