

# The Integumentary System Assignment – Student Edition

## I. Multiple Choice

Choose the letter of the correct answer.

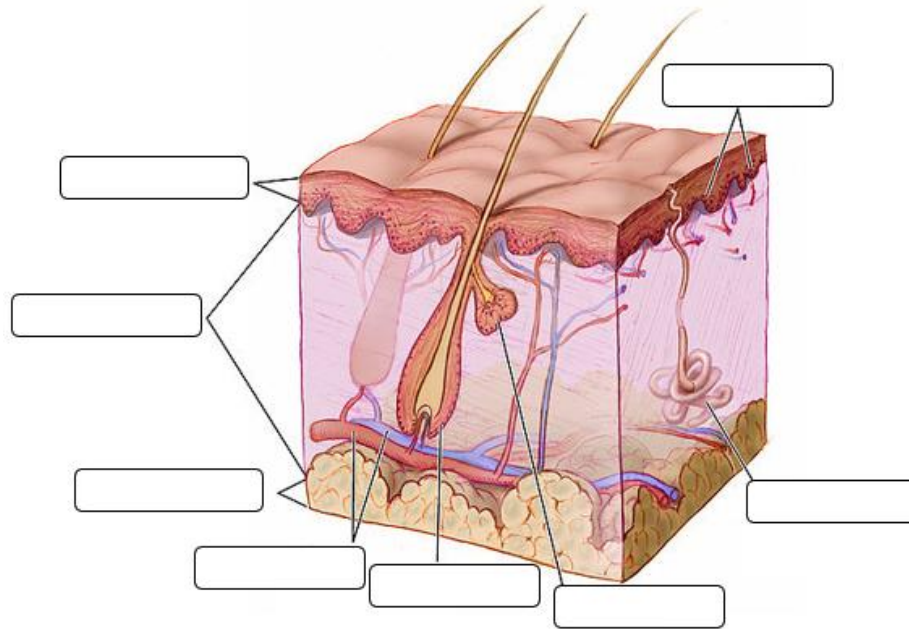
1. Which of the following is a function of the integumentary system?
  - A. maintaining a stable body temperature
  - B. preventing the body from drying out
  - C. keeping bacteria out of the body
  - D. all of the above
2. Which of the following is found in the outer layer of the skin?
  - A. melanocytes
  - B. sweat glands
  - C. blood vessels
  - D. nerve endings
3. What attaches the dermis to the epidermis?
  - A. nerve fibers
  - B. keratin fibers
  - C. muscle fibers
  - D. collagen fibers
4. Which of the following is **not** found in the dermis?
  - A. hair follicles
  - B. sweat glands
  - C. sebaceous glands
  - D. melanin producing cells
5. Which is the function of sebum?
  - A. keeping the body cool
  - B. absorbing ultraviolet light
  - C. waterproofing the hair and skin
  - D. preventing the sweat to come out

## II. Labeling Diagram

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Label the parts of the skin. Choose from the given word bank below.

blood vessels	dermis	epidermis	follicle
hypodermis	melanocytes	oil gland	sweat gland



### III. True or False

Decide whether the statement is true or false.

- \_\_\_\_\_ 1. The skin is the major organ of integumentary system.
- \_\_\_\_\_ 2. Hair, nails, and teeth are all parts of integumentary system.
- \_\_\_\_\_ 3. The outermost layer of the skin consists of melanocytes.
- \_\_\_\_\_ 4. The more melanin a person has, the lighter his skin color is.
- \_\_\_\_\_ 5. Sweat glands, oil glands, and blood vessels are located in the hypodermis of the skin.
- \_\_\_\_\_ 6. Fingernails and toenails are made of specialized cells that grow out of the epidermis.
- \_\_\_\_\_ 7. Both fingernails and hair are covered with a tough protein called collagen.

### IV. Identification

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Circle the term/s that best completes the sentence.

The epidermis is the **(inner, outer)** layer of skin. It consists almost entirely of **(nerve, epithelial)** cells. There are no blood vessels, nerve endings, or glands in this skin layer. Nonetheless, this layer of skin is very active. The cells at the bottom of the epidermis are always dividing by **(meiosis, mitosis)** to form new cells. The new cells gradually move up through the epidermis toward the surface of the body. As they move, they produce the tough, fibrous protein called **(keratin, collagen)**. By the time the cells reach the surface, they have filled with keratin and died. On the surface, the dead cells form a protective, **(moist, waterproof)** layer. Dead cells are gradually shed from the surface of the epidermis. As they are shed, they are replaced by other dead cells that move up from below.

The **(dermis, epidermis)** also contains cells called melanocytes, which produce melanin. Melanin is a **(brown, black)** pigment that gives skin much of its color. Everyone’s skin has about the same number of melanocytes per square inch. However, the melanocytes of people with darker skin produce **(less, more)** melanin. The amount of melanin that is produced depends partly on your genes and partly on how much ultraviolet light strikes your skin. The **(less, more)** light you get, the more melanin your melanocytes produce. Melanin has the important role of absorbing ultraviolet light. This prevents the light from reaching and damaging the dermis.

## V. Short Responses

Answer the following questions.

1. How does the integumentary system perform its vital functions of protection, sensation, and thermoregulation?

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2. What are some common disorders or diseases that affect the integumentary system and how do they impact overall health and well-being?

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3. How does the structure and function of the skin vary across different regions of the body and how does this impact the types of cells and tissues found in each area?

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