Chapter 4  Skin and Body Membranes

4.1  Short Answer

Using Figure 4.1, identify the following:
1) The region that contains adipose tissue is indicated by letter __________.
2) The hair follicle is indicated by letter __________.
3) The layer responsible for whorled ridges on the epidermal surfaces is indicated by letter __________.
4) The structure that pulls the hair follicle into an upright position is indicated by letter __________.
5) The gland that produces a mixture of oily substances and fragmented cells is indicated by label __________.
6) The gland that produces sweat is indicated by label __________.

Fill in the blank or provide a short answer:
7) The dry cutaneous membrane forms the __________.
8) The specific serous membrane covering the digestive organs is called the __________.
9) The part of a hair that projects from the surface of the scalp or skin is called the __________.
10) The outermost layer of the epidermis is keratinized and known as stratum __________.
11) The three pigments that contribute to skin color are __________, __________, and __________.
12) The dermis is composed of the reticular and __________ layers.
13) "Goosebumps" are caused by contractions of the __________ muscles.

14) The type of burn that involves injury to the epidermis and the upper region of the dermis and is red, blistered, and painful is termed as a __________-degree burn.

15) The white, cheesy-looking substance that is produced by the sebaceous glands and protects a baby's skin while it is floating in its water-filled sac inside the mother is called __________.

16) The part of the hair enclosed in the follicle is known as the __________.

17) The white crescent area located over the nail matrix is called the __________.

18) The layer of the serous membrane that covers an organ is known as the __________ layer.

19) The Staphylococcus infection of the skin that causes pink, water-filled, raised lesions is known as __________.

20) The type of gland responsible for body temperature regulation is the __________ gland.

21) The letters in the ABCD rule for recognizing melanomas stand for __________, __________, __________, and _____________.

**Multiple Choice**

22) Synovial membranes are found in the:
   A) joint cavities
   B) covering of the heart
   C) lining of the stomach cavity
   D) covering of the brain

23) The skin and its derivatives (nails, glands, and hairs) form the:
   A) skeletal system
   B) integumentary system
   C) endocrine system
   D) immune system
24) Which of the following is a vital function of the skin:
A) it converts modified epidermal cholesterol to vitamin D
B) it aids in the transport of materials throughout the body
C) the cells of the epidermis store glucose as glycogen for energy
D) it absorbs vitamin C so that the skin will not be subject to diseases

25) Although you get wet while swimming, a tough protein within the skin prevents it from soaking up moisture like a sponge. This substance is:
A) serous fluid
B) melanin
C) keratin
D) carotene

26) The epidermis is composed of:
A) simple columnar epithelium
B) stratified squamous epithelium
C) adipose tissue
D) areolar tissue

27) The uppermost layer of skin is:
A) called the dermis
B) full of keratin
C) fed by a good supply of blood vessels
D) called the hypodermis
E) composed of dense connective tissue

28) The two main layers of skin are:
A) papillary layer and reticular layer
B) stratum basale and dermis
C) epidermis and dermis
D) stratum corneum and dermis

29) A needle would pierce the epidermal layers of the forearm in which order:
1. stratum basale
2. stratum corneum
3. stratum granulosum
4. stratum lucidum
5. stratum spinosum
A) 2, 3, 5, 1
B) 1, 5, 3, 4, 2
C) 2, 4, 3, 5, 1
D) 1, 3, 5, 2, 4
E) 2, 3, 4, 1, 5
30) Which of the following homeostatic imbalances is caused by skin exposure to chemicals:
A) athlete's foot
B) cold sores
C) impetigo
D) contact dermatitis

31) The "tanning" effect (darkening of the skin) that occurs when a person is exposed to the sun is due to:
A) melanin
B) keratin
C) oil
D) Langerhans cells

32) A splinter penetrates to the deepest layer of the epidermis on your foot. This layer is:
A) stratum basale
B) stratum corneum
C) stratum granulosum
D) stratum lucidum
E) stratum spinosum

33) Which layer of the epidermis produces dandruff:
A) stratum basale
B) stratum corneum
C) stratum granulosum
D) stratum lucidum
E) stratum spinosum

34) In order to warm the body up when cold:
A) vitamin D is synthesized
B) sudoriferous glands release sweat
C) sebaceous glands release oil
D) the arrector pili muscles contract to stand hairs upright

35) Finger-like upward projections of the dermis into the epidermis are called:
A) hair follicles
B) hair bulbs
C) Meissner's corpuscles
D) dermal papillae

36) Nails are composed of:
A) melanin
B) hemoglobin
C) keratin
D) sebum
37) The secretion of sweat is stimulated:
A) by high temperatures
B) when the air temperature drops
C) by hormones, especially male sex hormones
D) as a protective coating when one is swimming
E) both by high temperatures and by hormones, especially male hormones

38) Which of the following abnormal skin colors results from liver disorders:
A) cyanosis
B) pallor
C) erythema
D) jaundice
E) bruising

39) What is the first threat to life from a massive third-degree burn:
A) infection
B) dehydration
C) unbearable pain
D) loss of immune function
E) blood loss

40) A physician estimates the volume of fluid lost in a severely burned patient by:
A) measuring urinary output and fluid intake
B) observing the tissues that are usually moist
C) blood analysis
D) using the "rule of nines"

41) Which of the following is an indication of melanoma:
A) a symmetrical mole
B) a pigmented spot that has smooth borders
C) a spot on the skin that is smaller than the size of a pencil eraser
D) a pigmented spot that is black
E) a pigmented spot that contains areas of different colors

42) Explain the ABCD rule.