**Review of Integumentary (Skin) System**

**Directions:** Use class notes & Unit 6 Sections 3 (hardcopy edition) and Chapter 7 Sections 3 (electronic version).

**Skin Layers**
Define the following layers of the skin and include a description what each layer contains.

1. epidermis: the outermost layer of the skin where cells are constantly shed
   contains: stratum corneum and stratum germinativum
2. dermis: the corium or the true skin middle layer of skin
   contains: blood vessels, lymph vessels, nerves, involuntary muscles, sweat and oil glands, hair follicles
3. hypodermis: the innermost layer of skin
   contains: made of elastic and fibrous connective tissue and adipose tissue and connects the skin to underlying muscles

**Skin Anatomy (Parts)**
Use Figure 6-9 on p. 114 of hardcopy book and Figure 7-9 on p. 152 of electronic book to label the missing skin components in the cross-sectional diagram shown below.

**Glands**
Define the following two types of glands and explain the function (physiology) of each.

12. sudoriferous: sweat glands, coiled tubes extending through dermis and open on surface of the skin at pores
    function: perspiration to eliminate some water, salts, and body waste
13. sebaceous: oil glands that usually open onto hair follicles
    function: produce sebum, an oil that keeps the skin and hair from becoming dry and brittle
Skin Physiology (Function)
List and explain the seven major functions (physiology) of skin.

14. Function #1: **protection**
Explanation: barrier to the sun’s ultraviolet rays, barrier to germs or pathogens, and holds in moisture to prevent deeper tissues from drying out

15. Function #2: **sensory perception**
Explanation: the nerves in the skin help the body respond to pain, pressure, temperature, and touch

16. Function #3: **body temperature regulation**
Explanation: the blood vessels in the skin help the body retain or lose heat

17. Function #4: **storage**
Explanation: the skin has tissues for temporary storage of fat, glucose, water, vitamins, and salts

18. Function #5: **absorption**
Explanation: certain substance can be absorbed through the skin through such as transdermal medications

19. Function #6: **excretion**
Explanation: the skin helps the body eliminate salt, a small amount of waste, and excess water and heat

20. Function #7: **production**
Explanation: the skin helps in the production of vitamin D by using ultraviolet rays

Skin Pigmentation and Discoloration
Define the following pigments, their functions, and abnormal colors. For the abnormal colors, include their causes.

21. melanin: a brownish-black skin pigment; can lead to a black, brown or yellow skin tint
   function: can absorb ultraviolet light to tan the skin or create freckles

22. carotene: yellowish-red skin pigment
   function: helps determine skin color

23. albino: pinkish skin tint and the hair is pale yellow or white
   cause: caused by an absence of color pigments

24. erythema: reddish color of the skin
   cause: can be caused by either burns or a congestion of blood in the vessels

25. jaundice: a yellow discoloration of the skin
   cause: bile in the blood as a result of liver or gallbladder disease

26. cyanosis: a bluish discoloration of the skin
   cause: associated with heart, lung, and circulatory diseases or disorders
**Skin Eruptions**
Define the following skin eruptions. When possible, indicate the common diseases associated with each.

27. macules: flat spots on the skin, such as freckles
28. papules: firm, raised areas such as pimples and the eruptions seen in chicken pox or syphilis
29. vesicles: blisters, or fluid filled sacs, such as those seen in chicken pox
30. pustules: pus filled sacs such as those seen in acne, or pimples
31. crusts: areas of dried pus and blood (scabs)
32. wheals: itchy, elevated areas with an irregular shape; hives and insect bites for example
33. ulcer: a deep loss of skin surface that extend into the dermis (may cause bleeding and scaring)

**Skin Diseases (Pathophysiology)**
Define the following skin diseases. When possible, indicate the cause (fungus, virus, etc.) and whether it is contagious.

34. acne: an inflammation of the sebaceous glands
35. athlete’s foot: contagious fungal infection that usually affects the feet
36. skin cancer: occurs as basal cell carcinoma, squamous cell carcinoma and malignant melanoma
37. dermatitis: inflammation of the skin, can be caused by any substance that irritates the skin
38. eczema: a noncontagious, inflammatory skin disorder cause by allergen or irritant
39. impetigo: highly contagious skin disease caused by bacterial infection
40. psoriasis: a chronic, noncontagious, inherited skin disease that results in red/white scaly skin patches
41. ringworm: a highly contagious fungal infection of the skin
42. verrucae: (warts) caused by a viral infection of the skin

**Diagnosing Skin Diseases**
For the following pictures, identify the skin disease (use your answers to previous section to help you).

43. ringworm
44. wheals
45. psoriasis
46. skin cancer