1. The scientific study of hair, its diseases and care is called:
   a. dermatology
   b. trichology
   c. biology
   d. cosmetology

2. The two parts of a mature hair strand are the hair shaft and:
   a. dermis
   b. hair follicle
   c. hair root
   d. hair ends

3. The portion of hair that projects above the skin is the:
   a. dermal papilla
   b. hair shaft
   c. hair root
   d. follicle

4. The follicle, bulb, papilla, arrector pili muscle and sebaceous glands are main structures of the:
   a. hair shaft
   b. sudoriferous glands
   c. cortex layers
   d. hair root

5. The tubelike depression or pocket in the skin or scalp that contains the hair root is the:
   a. follicle
   b. shaft
   c. bulb
   d. scalp

6. Hair follicles are not found on the palms of the hands or the:
   a. forehead area
   b. elbow area
   c. soles of the feet
   d. back of the neck

7. The follicle extends downward from the epidermis, where it surrounds the:
   a. epidermis layer
   b. dermal papilla
   c. hair root
   d. hair shaft

8. The lowest area or part of the hair strand is the:
   a. hair bulb
   b. hair shaft
   c. arrector pili
   d. sebaceous gland

9. A small, cone-shaped area at the base of the hair follicle that fits into the hair bulb is the:
   a. sweat pore
   b. hair follicle
   c. dermal papilla
   d. lymph gland

10. A tiny, involuntary muscle fiber inserted in the base of the hair follicle is the:
    a. dermal papilla
    b. arrector pili
    c. lanugo hair
    d. hair bulb

11. The oil glands of the skin connected to the hair follicles are:
    a. sweat glands
    b. dermal papilla
    c. sebaceous glands
    d. hair streams

12. An oily substance secreted from the sebaceous glands is:
    a. sweat
    b. medulla
    c. sebum
    d. salt

13. The overlapping layer of hair with transparent, scale-like cells is the:
    a. bulb
    b. follicle
    c. cuticle
    d. medulla

14. The three main layers of the hair shaft are the cuticle, medulla and:
    a. cortex
    b. shaft
    c. root
    d. bulb
15. Swelling the hair raises the cuticle layer and allows for:
   a. primary defense
   b. penetration
   c. cross sections
   d. growth phase

16. For chemicals to penetrate a healthy cuticle hair layer, they must:
   a. expose the mantle layer
   b. stiffen the hair shaft
   c. have an alkaline Ph
   d. remove the cuticle layer

17. The fibrous protein core of the hair, formed by elongated cells containing melanin pigment, is the:
   a. lower follicle
   b. cortex layer
   c. vellus hair
   d. dermal papilla

18. The medulla is the innermost layer of the hair and is composed of:
   a. oval cells
   b. round cells
   c. coarse hair
   d. hair follicles

19. Hair is composed of a protein that grows from cells originating within the:
   a. hair shaft
   b. hair follicle
   c. amino acids
   d. main elements

20. The process whereby living cells mature and begin their journey up the hair shaft is:
   a. simplicity
   b. scalp
   c. keratinization
   d. medulla

21. The five main elements that make up, the chemical composition of human hair are carbon, oxygen, hydrogen and:
   a. protein and amino
   b. cells and keratin
   c. elements and proteins
   d. nitrogen and sulfur

22. The chemical bonds that hold together the amino acid molecules are:
   a. convex bonds
   b. peptide bonds
   c. hydrogen drops
   d. protein cells

23. An end bond is also known as a(n):
   a. molecule bond
   b. chain bond
   c. peptide bond
   d. elastic bond

24. When peptide bonds hold together a very long chain of amino acids, it is called a:
   a. polypeptide chain
   b. hydrogen chain
   c. COHNS bond
   d. elasticity chain

25. The three types of cross-links that form the knods between the polypeptide chains are hydrogen bonds, salt bonds and:
   a. disulfide bonds
   b. water bonds
   c. nitrogen bonds
   d. elasticity chain

26. A weak type of physical side bond that is easily broken by water or heat is a(n):
   a. amino acid
   b. peptide chain
   c. single bond
   d. hydrogen bond

27. A salt bond is easily broken with the use of:
   a. several acidic solutions
   b. conditioning treatments
   c. strong alkaline or acidic solutions
   d. thermal styling techniques

28. Bonds that must be chemically separated are:
   a. disulfide bonds
   b. sulfur bonds
   c. cross links
   d. porosity

29. Hydrogen chemical hair relaxers break disulfide bonds and during rinsing convert them to:
   a. COHNS bonds
   b. protein bonds
   c. sebum bonds
   d. lanthionine bonds
30. The natural hair pigment found in the cortex layer of the hair is:
   a. melanin  
   b. tissue  
   c. protein  
   d. brown

31. Two different types of melanin are eumelanin and:
   a. phosphorus  
   b. pheomelanin  
   c. keratin  
   d. sulfur

32. Natural wave patterns are the result of:
   a. trichoptilosis  
   b. health  
   c. structure  
   d. genetics

33. Asians tend to have:
   a. extremely straight hair  
   b. extremely curly hair  
   c. straight to wavy hair  
   d. wavy to curly hair

34. Extremely curly hair grows:
   a. in long twisted spirals  
   b. in short curves  
   c. in a very regular pattern  
   d. with very thick texture

35. To help minimize tangles in extremely curly hair when washing, you should use:
   a. a drying shampoo  
   b. strong scalp manipulations  
   c. a detangling rinse  
   d. regular soap instead of shampoo

36. Extremely curly hair may often break or knot easily due to:
   a. humidity  
   b. density  
   c. high elasticity  
   d. low elasticity

37. Four important factors to consider in hair analysis are texture and porosity:
   a. elasticity and density  
   b. dryness and length  
   c. oiliness and length  
   d. oiliness and color

38. The thickness or diameter of the individual hair strand is the:
   a. hair strand  
   b. hair porosity  
   c. hair texture  
   d. hair elasticity

39. Hair texture is classified as:
   a. coarse, medium or fine  
   b. coarse, straight or curly  
   c. large or small diameter  
   d. long, medium or short

40. The measurement of individual hair strands on one square inch of the scalp is:
   a. hair density  
   b. hair structure  
   c. hair length  
   d. texture

41. The ability of the hair to stretch and return without breaking is:
   a. elasticity  
   b. bounce  
   c. porosity  
   d. melanin

42. Chemical services performed on hair with low porosity require:
   a. neutral solutions  
   b. more acidic solutions  
   c. more alkaline solutions  
   d. water solutions

43. Hair with high porosity is often the result of:
   a. over processing  
   b. conditioning  
   c. too many shampoos  
   d. hair texture

44. The ability of the hair to stretch and return without breaking is:
   a. elasticity  
   b. bounce  
   c. porosity  
   d. melanin
45. Wet hair with normal elasticity will stretch up to:
   a. 25 percent  c. 50 percent
   b. 40 percent  d. 70 percent

46. When shaping and styling hair, consider the hair’s:
   a. length and color  c. natural shine and condition
   b. natural growth patterns  d. texture and color

47. Dry hair and scalp can be caused by:
   a. inactive sebaceous glands  c. dry shampoo
   b. normalizing shampoo  d. warm water

48. Oily scalp and hair can be treated by properly shampooing with:
   a. alkaline shampoo  c. color shampoo
   b. normalizing shampoo  d. warm water

49. Hair that is not pigmented and almost never has a medulla is:
   a. oily  c. dark
   b. pigmented  d. vellus

50. Long, soft hair found on the scalp, legs, arms and bodies of males and females is:
   a. average  c. terminal
   b. scabies  d. vellum

51. The phases of hair growth are anagen, catagen and:
   a. telogen  c. repeated
   b. melanin  d. carbuncle

52. The growth phase where new hair is produced is:
   a. transition  c. anagen
   b. telogen  d. regular

53. The average growth of healthy scalp hair is:
   a. one half inch per week  c. three quarters of an inch
   b. one half inch per year  d. one inch per month

54. The final or resting phase in the hair growth cycle is:
   a. broken stage  c. anagen stage
   b. telogen stage  d. hypertrichosis stage

55. In general, the cross sections of curly hair can be:
   a. oval  c. even
   b. triangular  d. square

56. The term used to identify abnormal hair loss is:
   a. androgenic  c. areata
   b. alopecia  d. genetic

57. The sudden falling out of hair in round patches or baldness in spots is called:
   a. terminal hair  c. alopecia areata
   b. hypertrichosis  d. alopecia androgenic

58. Two products approved by the FDA to stimulate hair growth and allowed for sale in the United States are:
   a. minoxidil and finasteride  c. conditioning and rogaine
   b. tinea and medication  d. finasteride and androgenic

59. The technical term used to describe gray hair is:
   a. albinos  c. alopecia
   b. acquired  d. canities
60. A variety of canities, characterized by alternating bands of gray and pigmented hair, is:
   a. ringed hair
   b. alopecia areata
   c. hypertrichosis
   d. trichoptilosis

61. A condition of abnormal hair growth on areas of the body is:
   a. trichorrhexis
   b. hyperactive
   c. hypertrichosis
   d. electrolysis

62. Trichorrhexis nodosa is characterized by brittleness of the hair and the formation of:
   a. swelling along the hair shaft
   b. split ends along the hair shaft
   c. lubricated dry ends
   d. alternating bands of color

63. The technical term used to describe beaded hair is:
   a. monilethrix
   b. monoglycerine
   c. finasteride
   d. fragile

64. The medical term for dandruff is:
   a. canities
   b. pityriasis
   c. alopecia
   d. simplex

65. The medical term used to describe a fungal organism characterized by itching, scales and painful circular lesions is:
   a. scapular
   b. seborrheic
   c. tinea
   d. alopecia

66. The type of fungal infection characterized by red papules at the opening of the hair follicles is:
   a. tinea capitis
   b. pediculosis
   c. steatoides
   d. pityriasis

67. A highly contagious skin disease caused by a mite parasite is:
   a. scabies
   b. capitis
   c. infestation
   d. furuncles

68. An acute localized bacterial infection of the hair follicle that produces constant pain is:
   a. a furuncle
   b. scabies
   c. pediculos
   d. carbuncle

69. An inflammation of the subcutaneous tissue caused by staphylococci is:
   a. a carbuncle
   b. pediculosis
   c. anagen
   d. alopecia

70. The spread of diseases can be prevented by practicing approved:
   a. healthy diet and exercise
   b. sanitation and disinfection procedures
   c. various options
   d. hair analysis procedures