

## GIARRANO-SENIOR COSMETOLOGY- OFF-SITE LEARNING PACKET DAY 3

### DIRECTIONS:

1. IF YOUR PACKET BEGINS WITH A SUMMARY AND REVIEW PLEASE READ THOSE PAGES FIRST
2. COMPLETE THE WORK SHEETS AND VOCABULARY WHERE IF INCLUDED. YOU MAY GOOGLE AND REFERENCE THE MILADY WEB SITE FOR VOCABULARY WORDS. NOT ALL ASSIGNMENTS CONTAIN VOCABULARY, OR WORK SHEETS. THEY MAY BE SLIGHTLY DIFFERENT.
3. COMPLETE THE PRACTICE TESTS TO THE BEST OF YOUR ABILITY.
4. YOU MAY USE YOUR MILADY OR COURSEMATE ONLINE PROGRAM TO ASSIST YOU IN ANY WAY.
5. PLEASE PUT YOUR NAME ON EVERY PAGE YOU HAVE COMPLETED.

## Chemical Texture

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_ 1. The process of permanently altering the natural wave pattern of hair is described as:  
a. chemical hair softening  
b. chemical texture services  
c. natural hair services  
d. alternative texture services
- \_\_\_\_ 2. The tough exterior layer of the hair structure is called the:  
a. cortex  
b. strand  
c. cuticle  
d. medulla
- \_\_\_\_ 3. Another term that is used to describe the medulla of the hair structure is the:  
a. stretch  
b. effective  
c. smooth  
d. core
- \_\_\_\_ 4. The term used to measure the hydrogen ions in a solution that determine its alkalinity or acidity is:  
a. possible hydrogen  
b. positive hydrogen  
c. potential hydrogen  
d. peptide ions
- \_\_\_\_ 5. The range of numbers used in the pH scale is:  
a. 0 to 5  
b. 0 to 7  
c. 0 to 10  
d. 0 to 14
- \_\_\_\_ 6. Chemical hair texturizers temporarily raise the pH of the hair in order to:  
a. expand and harden the shaft  
b. harden and close the shaft  
c. swell and set the shaft  
d. soften and swell the shaft
- \_\_\_\_ 7. The building blocks of proteins are:  
a. polypeptide chains  
b. chemical acids  
c. amino acids  
d. peptide acids
- \_\_\_\_ 8. Chemical-based side bonds that are formed when two sulfur-type chains are joined together are:  
a. disulfide bonds  
b. peptide bonds  
c. keratin bonds  
d. amino bonds
- \_\_\_\_ 9. Hydrogen bonds are easily broken by water or heat and are re-formed when the hair is:  
a. stretched  
b. dried  
c. softened  
d. styled
- \_\_\_\_ 10. Chemical services should not be performed if the scalp analysis shows any signs of:  
a. porosity  
b. abrasions  
c. disorders  
d. tightness
- \_\_\_\_ 11. The term used to describe the diameter of a single strand of hair is:  
a. elasticity  
b. porosity  
c. density  
d. texture
- \_\_\_\_ 12. The key to ensuring complete penetration of permanent wave solution on coarse hair is:  
a. less processing time  
b. saturation of the scalp  
c. saturation of the cortex  
d. fast processing lotions
- \_\_\_\_ 13. Chemical services performed on overly porous hair require solutions that are:  
a. high pH  
b. alkaline  
c. diluted  
d. low pH

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- \_\_\_\_\_ 14. More than any other single factor, what determines the ability of the hair to hold a curl?  
 a. porosity  
 b. absorption  
 c. elasticity  
 d. density
- \_\_\_\_\_ 15. In permanent waving, the shape and type of curl are determined by the shape and type of rod and the:  
 a. long rods  
 b. hair length  
 c. sectioning  
 d. wrapping method
- \_\_\_\_\_ 16. Permanent wave rods that produce a tighter curl in the center and looser curl on either side of the strand are:  
 a. bender rods  
 b. concave rods  
 c. straight rods  
 d. short rods
- \_\_\_\_\_ 17. The wrapping technique that provides the most control over hair ends and keeps them evenly distributed over the entire length of the rods is a:  
 a. single flat wrap  
 b. bookend wrap  
 c. double flat wrap  
 d. placed wrap
- \_\_\_\_\_ 18. The wrap that is used on endpaper folded in half over the hair ends like an envelope is a(n):  
 a. double flat wrap  
 b. bookend wrap  
 c. single flat wrap  
 d. end wrap
- \_\_\_\_\_ 19. In permanent waving, panels of hair are divided into smaller subsections called:  
 a. rod sections  
 b. base sections  
 c. outer sections  
 d. placements
- \_\_\_\_\_ 20. The angle at which a permanent wave rod is positioned on the head is referred to as:  
 a. wrapping technique  
 b. rod direction  
 c. diagonal technique  
 d. base direction
- \_\_\_\_\_ 21. The two methods of wrapping the hair around a perm rod are:  
 a. flat and spiral  
 b. croquignole and even  
 c. spiral and perpendicular  
 d. croquignole and spiral
- \_\_\_\_\_ 22. Once in the cortex, the waving solution breaks the disulfide bonds through a chemical reaction called:  
 a. rearranging  
 b. normalization  
 c. reduction  
 d. alkaline
- \_\_\_\_\_ 23. In permanent waving, the reduction reaction is due to the addition of:  
 a. hydrogen  
 b. oxygen  
 c. salt  
 d. carbon
- \_\_\_\_\_ 24. The most common reducing agents used are:  
 a. ammonia water  
 b. hydrogen peroxide  
 c. thioglycolic acids  
 d. hydrogen acids
- \_\_\_\_\_ 25. The main active ingredient or reducing agent in alkaline permanent waves is:  
 a. ammonium thioglycolate  
 b. hydrogen thioglycolate  
 c. alkaline acids  
 d. glyceryl monothioglycolate
- \_\_\_\_\_ 26. Most alkaline permanent waves have a pH between:  
 a. 4.5 and 5.5  
 b. 6.0 and 7.0  
 c. 9.0 and 9.6  
 d. 10.0 and 11.0
- \_\_\_\_\_ 27. An acid with a low pH that is the primary reducing agent in acid waves is:  
 a. glyceryl monothioglycolate  
 b. ammonium thioglycolic  
 c. sodium hydroxide  
 d. sodium hydrochloride
- \_\_\_\_\_ 28. Most acid waves have a pH value between:  
 a. 5.5 and 6.5  
 b. 7.8 and 8.2  
 c. 9.0 and 10.0  
 d. 10.1 and 10.5

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- \_\_\_\_\_ 29. Waves that are activated from an outside heat source are considered:  
 a. stabilized  
 b. endothermic  
 c. exothermic  
 d. acid waves
- \_\_\_\_\_ 30. The most common reducing agents used in thio-free waves are mercaptamine or:  
 a. oxygen  
 b. cysteamine  
 c. ammonia  
 d. lanthionization
- \_\_\_\_\_ 31. The process of stopping the action of permanent waves and hardening the hair into its new form is:  
 a. sectioning  
 b. rinsing  
 c. neutralization  
 d. normalization
- \_\_\_\_\_ 32. The double rod technique is also called the:  
 a. piggyback wrap  
 b. straight wrap  
 c. spiral wrap  
 d. weave technique
- \_\_\_\_\_ 33. The bands of permanent wave rods should be smooth and fastened:  
 a. at a diagonal angle on top of rod  
 b. straight across the top of the rod  
 c. twisted at sides of rods  
 d. tightly at base area
- \_\_\_\_\_ 34. The process of rearranging the basic structure of extremely curly hair into a straighter or smoother form is:  
 a. texturizing  
 b. permanent waving  
 c. chemical softening  
 d. chemical hair relaxing
- \_\_\_\_\_ 35. The neutralizer used in thio relaxers is an oxidizing agent, usually:  
 a. ammonium thio  
 b. ammonia water  
 c. hydrogen peroxide  
 d. hydrogen hypochlorite
- \_\_\_\_\_ 36. The active ingredient in all hydroxide relaxers is the:  
 a. hydrogen ion  
 b. keratin ion  
 c. peroxide ion  
 d. lithium ion
- \_\_\_\_\_ 37. Hydroxide relaxers remove one atom of sulfur from a disulfide bond, converting it into a(n):  
 a. normalization bond  
 b. acidic bond  
 c. lanthionine bond  
 d. atom bond
- \_\_\_\_\_ 38. Unlike thio neutralization, the neutralization process of hydroxide relaxers does not involve:  
 a. oxidation  
 b. residues  
 c. restoring  
 d. rinsing
- \_\_\_\_\_ 39. The neutralizing of remaining hydroxide ions to lower the pH of the hair and scalp after a relaxer requires a(n):  
 a. oxidation shampoo  
 b. concentrated lotion  
 c. normalizing lotion  
 d. conditioning shampoo
- \_\_\_\_\_ 40. Relaxers that contain only one component and are used without mixing are:  
 a. neutralizing relaxers  
 b. metal hydroxide relaxers  
 c. guanidine hydroxide relaxers  
 d. calcium hydroxide relaxers
- \_\_\_\_\_ 41. Relaxers that contain two components and must be mixed immediately prior to use are:  
 a. guanidine hydroxide relaxers  
 b. ammonium thioglycolate  
 c. no-lye relaxers  
 d. potassium hydroxide relaxers
- \_\_\_\_\_ 42. The difference in the strength of most chemical hair relaxers is determined by the concentration of:  
 a. lanthionization  
 b. hydroxide  
 c. ammonia  
 d. coatings

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- \_\_\_\_\_ 43. Conditioners with an acidic pH that condition and restore the natural pH of hair after a relaxer but prior to shampooing are:
- a. lanthionization solutions
  - b. natural solutions
  - c. swelling solutions
  - d. normalizing solutions
- \_\_\_\_\_ 44. After applying a relaxer, periodic strand tests are performed to determine:
- a. stretching time
  - b. neutralizing time
  - c. processing time
  - d. rinsing time
- \_\_\_\_\_ 45. During a relaxer strand test, hair pressed with the back of the comb, fingers, or applicator brush that continues to curl is:
- a. sufficiently relaxed
  - b. insufficiently relaxed
  - c. normalized
  - d. overprocessed
- \_\_\_\_\_ 46. The application for chemical relaxers should be started in the most resistant area, usually the:
- a. back of head
  - b. front hairline
  - c. scalp area
  - d. side area
- \_\_\_\_\_ 47. Prior to sodium hydroxide relaxer retouch service, the hair should never be:
- a. sectioned
  - b. detangled
  - c. combed
  - d. shampooed
- \_\_\_\_\_ 48. During a retouch relaxer application, to avoid overprocessing or hair breakage, do not:
- a. smooth hair ends
  - b. smooth the relaxer
  - c. overlap the relaxer
  - d. apply to resistant areas first
- \_\_\_\_\_ 49. A combination of a thio relaxer and a thio permanent wrapped on large rods is a:
- a. permanent wave
  - b. soft curl perm
  - c. hard curl perm
  - d. relaxer retouch
- \_\_\_\_\_ 50. Hair that is treated with hydroxide relaxers must not be treated with:
- a. conditioning solutions
  - b. color shampoos
  - c. thio relaxers
  - d. normalizing solutions

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## ESSENTIAL EXPERIENCE

## Matching

Match the following essential terms with their identifying phrase or definition.

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|------------------------|--|
| _____ Coarse texture   | 1. Result of over processing.                            |
| _____ Cortex           | 2. Processes more quickly than other textures.           |
| _____ Cuticle          | 3. Usually requires more processing than other textures. |
| _____ Fine texture     | 4. Normal hair.  |
| _____ Good porosity    | 5. Resistant hair.                                       |
| _____ Medium texture   | 6. Innermost section of the hair.                        |
| _____ Medulla          | 7. Generally no problems processing.                     |
| _____ Over porous      | 8. Outer covering of the hair.                           |
| _____ Poor porosity    | 9. Major component of the hair structure.                |
| _____ Under processing | 10. Sulfite permanent.                                   |
| _____ Plastic cap      | 11. One end paper folded over hair strand.               |
| _____ Elasticity       | 12. Hair ends wound from ends toward scalp.              |
| _____ Density          | 13. The number of hairs per square inch.                 |
| _____ Body wave        | 14. The ability of the hair to stretch and contract.     |
| _____ Waving lotion    | 15. Porous papers used to cover hair ends.               |
| _____ Book end         | 16. Heat is created chemically within the product.       |
| _____ Exothermic       | 17. Fits over the wrapped rods.                          |
| _____ Croquignole      | 18. Amino acids are bonded together and form these.      |
| _____ End wraps        | 19. Caused by insufficient processing time.              |
| _____ Polypeptides     | 20. A liquid that softens and swells the hair.           |

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ESSENTIAL EXPERIENCE

Purpose and Action of Chemical Hair Relaxing

List the products used in sodium hydroxide relaxers:

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In your own words, explain the action of hydroxide relaxers on the hair.

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What is the common ingredient in a thio type relaxer and permanent waving solution?

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Explain the action of this common ingredient.

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