Chapter 20 Chemical Texture Services

Name:

Instructions: Answer each question using information from your readings and lessons as a guide.

1. Why do you think a stylist who performs chemical texture services should

have a basic understanding of chemistry?

*(Answers may vary, but should include the idea that chemical texture*

*services involve the application of chemicals to a client’s hair. If a stylist*

*does not know how these chemicals work, he or she may damage the*

*client’s hair, skin, or clothing.)*

2. What do chemical textures services include?

a) *(Permanent waving—adding wave or curl to the hair)*

b) *(Relaxing—removing curl from the hair, leaving it smooth and wave*

*free)*

c) *(Curl re-forming—loosening overly curly hair)*

3. Explain what chemical texturizers do to change the hair’s natural curl pattern. *(They raise the pH of the hair to a more alkaline state in order to soften and swell the hair shaft. This action lifts the cuticle layer and allows the solution to reach the cortex layer where restructuring takes place.)*

4. What are the two steps of the permanent wave process?

a) *(The first is the physical change caused by wrapping the hair on*

*perm rods.)*

b) *(The second involves the chemical changes caused by the*

*permanent waving solution and the neutralizer.)*

5. What does perming only the base of the hair achieve? *(It creates volume and lift without curl)*

6. Why is it important to extend end papers beyond the ends of the hair? *(To keep the hair ends straight and prevent fishhooks)*

7. List the three most common end-paper techniques and explain each.

a) *(Double flat wrap: uses two end papers, one placed under and one*

*placed over the strand of hair being wrapped)*

b) *(Single flat wrap: uses only one end paper, placed over the top of*

*the strand of hair being wrapped)*

c) *(Bookend wrap: uses one end paper folded in half over the hair*

*ends like an envelope)*

8. How do you determine the size, shape, and direction of panels? *(By the*

*type of wrapping pattern and the type and size of the rod being used)*

9. Why is it important to remember to wrap in the natural direction of hair

growth? *(It causes the least amount of stress on the hair.)*

10. What is a double tool or piggyback wrap, and when is it beneficial? *(The hair is wrapped on one rod from the scalp to midway down the hair shaft; another rod is used to wrap the remaining hair strand in the opposite direction. It is most beneficial for extra-long hair.)*

11. What is the benefit of wrapping long hair in a piggyback wrap? *(It allows for better penetration of the processing solution and a tighter curl near the scalp.)*

12. What does an alkaline permanent waving solution do? *(It softens and swells the hair, raising the cuticle and permitting the solution to penetrate the cortex.)*

13. What occurs once the waving solution is in the cortex? *(The solution breaks the disulfide bonds through a chemical reaction called reduction.)*

14. What is a reduction reaction? *(Involves the addition of hydrogen or the removal of oxygen.)*

15. What is a reduction reaction in permanent waving? *(It is the addition of hydrogen.)*

16. Explain the chemical process of permanent waving.

a) *(A disulfide bond joins the sulfur atoms in two adjacent polypeptide*

*chains.)*

b) *(Permanent wave solution breaks a disulfide bond by adding a*

*hydrogen atom to each of its sulfur atoms.)*

c) *(The sulfur atoms attach to the hydrogen from the permanent*

*waving solution, breaking their attachment to each other.)*

d) *(Once the disulfide bond is broken, the polypeptide chains can form*

*into their new curled shape.)*

17. Why is ammonia added to the thioglycolic acid product? *(Because thio is an acid and acids neither swell the hair nor penetrate into the cortex; it is necessary to add an alkalizing agent, and ammonia is an alkalizing agent.)*

18. What happens when you mix an oxidizer with permanent waving solution? *(a rapid release of heat and an increase in the temperature of the solution, which shortens the processing time)*

19. Where can you find information about the chemicals in a permanent wave product? *(The manufacturer's instructions and the product’s material safety data sheet or MSDS)*

20. What does the additional processing time allow? *(Time for the polypeptide chains to shift into their new configuration)*

21. What occurs if the hair is underprocessed? *(The hair will not be sufficiently softened and will not be able to hold the desired curl.)*

22. What are the two important functions of neutralization?

a) *(It deactivates any waving solution that remains in the hair.)*

b) *(It rebuilds the disulfide bonds that were broken by the waving*

*solution.)*

23. What will happen if the hair is insufficiently blotted? *(The excess water left in the hair reduces the effectiveness of the neutralizer.)*

24. How should you towel-blot the hair after rinsing? *(Gently, never firmly or aggressively)*

25. What information can be obtained from preliminary test curls?

a) *(The correct processing time for the best curl development)*

b) *(Results you can expect from the type of perm solution you have*

*selected)*

c) *(Curl results for the rod size and wrapping technique you are*

*planning to use)*

26. List the safety precautions for permanent waving.

a) *(Protect the client’s clothing.)*

b) *(Do not give a perm to any client who has had an allergic*

*reaction to a previous permanent.)*

c) *(Examine the scalp before the perm service; do not perm if you see*

*signs of scalp damage or disease.)*

d) *(Do not perm hair that is excessively damaged or shows signs of*

*breakage.)*

e) *(Do not attempt to perm hair that has been previously treated with*

*hydroxide relaxers.)*

f) *(Apply protective barrier cream around the client’s hairline and ears.)*

g) *(Do not dilute or add anything to the waving lotion or neutralizer.)*

h) *(Keep waving lotion out the client’s eyes.)*

i) *(Follow the manufacturer’s directions.)*

j) *(Wear gloves when applying solutions.)*

k) *(Immediately replace saturated cotton or towels.)*

l) *(Do not save any opened, unused waving solution or neutralizer.)*

27. Why are hydroxide relaxers incompatible with thio relaxers? *(Because they use a different chemistry)*

28. Why should base cream not touch the hair during the hair-relaxing process? *(Because it will slow down the chemical straightening process)*

29. List the different strengths of relaxers and what each is formulated for.

a) *(Mild strength: formulated for fine, color-treated, or damaged hair)*

b) *(Regular strength: intended for normal hair texture with a medium natural curl)*

c) *(Super strength: used for maximum straightening on very coarse, extremely curly hair)*

30.What does the application of an acid-balanced shampoo or normalizing lotion do? *(Neutralizes any remaining hydroxide ions to lower the pH of the hair and scalp)*

31. What hair straightening process requires special ventilation because it releases formaldehyde during the process? *(Keratin straightening treatments, which are also called smoothing treatments or Brazilian keratin treatments)*

32. What does curl re-forming accomplish? *(It makes the existing curl larger and looser)*