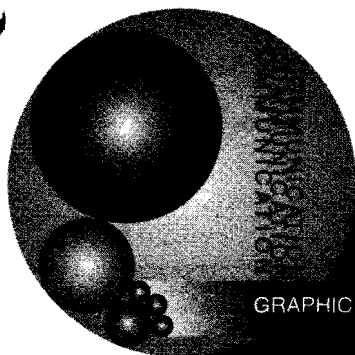


Name _____

Date _____ Score _____

Ink

25



Learning Objectives

After studying this chapter, you will be able to:

- Summarize the various properties of ink.
- Define commonly used terms relating to ink.
- Identify the characteristics of inks used for different printing processes.
- Describe the characteristics of some specialized inks.
- Describe how to mix and match ink.
- Explain how ink characteristics affect the printed product.

Answer the following questions. Write your answer in the space provided.

1. Identify the three main ingredients used in the formulation of ink and explain their function.

A. _____

B. _____

C. _____

2. Driers accelerate the ink drying process and are designed to prevent _____ that occurs when sheets are stacked and ink is transferred or smeared.

2. _____

3. Explain each of the following properties of ink.

A. Color strength

(Continued)

B. Ink body

C. Ink stability

D. Ink length

E. Ink tack

F. Ink drying

4. An ink ____ gauge is used to measure the thickness of the ink film on the press. An ink ____ gauge measures the pigment particle size in the ink with a very high degree of accuracy.

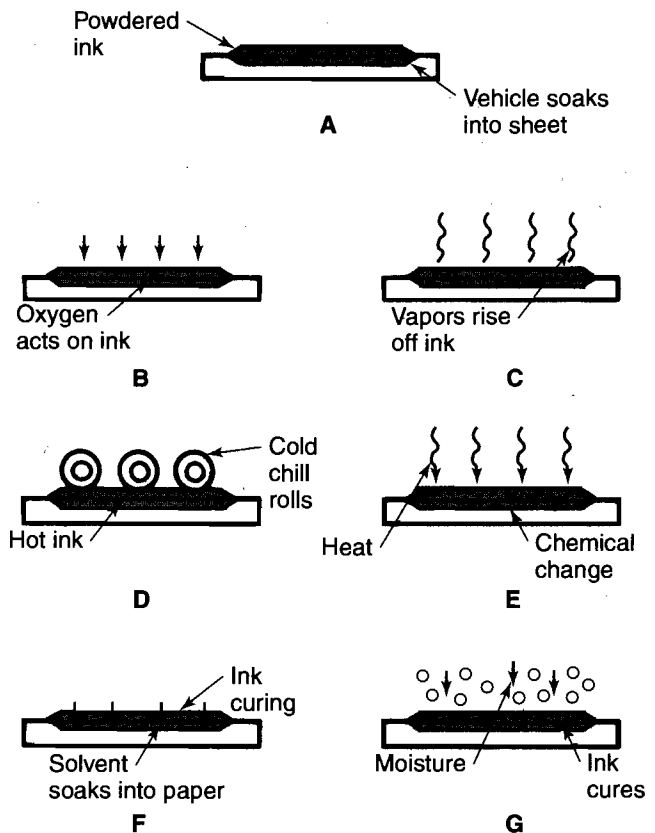
4. _____

5. Picking, splitting, and tearing are printing problems caused by excessive ____.

5. _____

6. Identify the different methods used for drying ink in the illustration at right.

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____



Name _____

7. Newspapers commonly use ink that dries by _____. 7. _____

8. What type of ink dries by absorbing oxygen from the surrounding air?

9. _____ ink is a very stable ink that can tolerate sunlight, chemicals, heat, moisture, and gases without fading. 9. _____

- a. Fugitive
- b. Opaque
- c. Resistant
- d. Fluorescent

10. Ink _____ refers to how easily an ink will flow. 10. _____

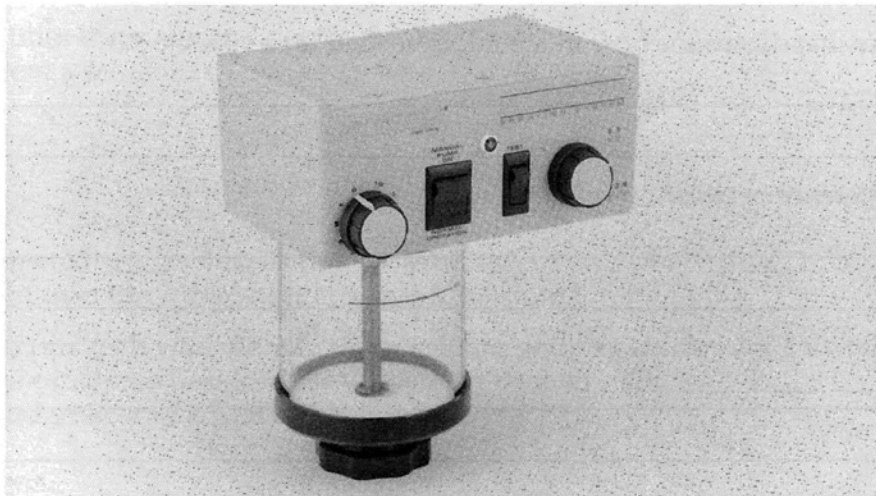
11. What is *halftone black* ink?

12. _____ cuts an ink's tack and body and can be used to correct problems like picking and linting. 12. _____

- a. Liquid tack reducer
- b. Paste tack reducer
- c. Cleaning white
- d. Spray powder

13. What additives must be used when dried ink makes direct contact with food or edible materials?

14. The _____ shown below is a special press attachment used to prevent ink setoff. 14. _____



15. Alcohol-based inks used in flexographic printing typically dry by _____. 15. _____

16. Inking the recessed cells of a gravure plate or cylinder is a process known as _____. 16. _____

17. Screen printing inks use a(n) _____ to hold together the pigment and help adhere the ink to the substrate. 17. _____
18. Why does the formulation of lithographic inks vary greatly?

19. What are the two main causes of *scumming*?

20. _____ is a problem in which a slight tint of ink is left on the nonimage area of the printed sheet. 20. _____
21. Explain why vegetable-oil based color inks are more environmentally safe than conventional inks.

22. _____ inks are converted from a liquid state to a solid through a chemical reaction called *polymerization*. 22. _____
a. Proofing
b. Sheet-fed
c. Laser-proof
d. UV-curable
23. A(n) _____ is a computer-controlled color matching instrument that measures the relative intensity of radiation through the spectrum based on a sample. 23. _____
24. List four factors that determine how much ink is needed for a specific job.

25. Explain the difference between *set ink* and *dry ink*.

26. Explain the following ink-related printing problems and identify how they are commonly caused.
- A. Chalking _____

- B. Strike-through _____

(Continued)

Name _____

C. Setoff _____

_____D. Ink sticking _____

_____E. Plate wear _____

_____F. Off color _____

_____G. Specking _____

27. Ink _____ identifies the range and depth of colors that can be produced from a set of inks. 27. _____
a. hue error
b. efficiency
c. strength
d. purity
28. A color is considered _____ when its predominant color reflects less light than the white sheet of paper it is printed on. 28. _____
29. A _____ is a color diagram designed for visualizing the hue error and grayness factor of actual colors in relation to ideal colors. 29. _____
a. color hexagon
b. color circle
c. color key
d. subtractive color triangle
30. The percentage of _____ is best determined by ink density readings and evaluation of the four basic ink characteristics. 30. _____