

Scientific Foundations of Art and Design

Art & Design Basics · Practice Test · 8 Questions

1. Which optical phenomenon explains why a painting's colors may appear different under various light sources, such as incandescent versus fluorescent bulbs?

- A) Newton's Rings
- B) Maxwell's Equations
- C) Metamerism
- D) Doppler Effect

2. The Gestalt principle of 'Proximity' suggests that elements are perceived as a group when they are:

- A) Identical in shape and color
- B) Moving in the same direction
- C) Close to each other
- D) Continuously connected

3. In color theory, which type of color mixing involves combining light waves, typically seen in digital displays and screens?

- A) Subtractive Color Mixing
- B) Additive Color Mixing
- C) Impressionistic Color Mixing
- D) Chroma Color Mixing

4. The human eye's fovea, responsible for sharpest vision, is most densely populated with which type of photoreceptor cells?

- A) Rods
- B) Cones
- C) Melanocytes
- D) Osteocytes

5. According to the Fibonacci sequence and the Golden Ratio, the most aesthetically pleasing proportions are often found in a ratio close to:

- A) 1:1
- B) 2:1
- C) 1.618:1
- D) 3:2

6. Which psychological principle describes the tendency for the brain to perceive continuous lines or curves even when interrupted, a concept widely used in logo design?

- A) Figure-Ground Separation
- B) Law of Closure
- C) Symmetry Bias
- D) Color Constancy

7. The phenomenon of 'afterimage' in visual perception, where an image persists in the mind's eye after the stimulus is removed, is a direct result of:

- A) The magnetic field of the artwork
- B) Photochemical reactions in the retina
- C) The diffusion of pigments
- D) The viewer's mood

8. In typography, the study of the physical space between characters, called kerning, is primarily influenced by the geometric shapes and negative space of:

- A) The ink viscosity
- B) The paper's fiber structure
- C) The letterforms themselves
- D) The printing press pressure