

Modern Art and Human Biology

Modern Art · Answer Key · 15 Questions

1. Which toxic pigment, commonly used by Fauvist painters like Matisse, is known to cause chronic systemic toxicity, specifically targeting the peripheral nervous system and renal function?

- A) Lead white
- B) Cadmium yellow**
- C) Cobalt violet
- D) Scheele's green

2. The Cubist masterpiece 'Les Demoiselles d'Avignon' was influenced by Iberian sculpture; which specific cranial feature is exaggerated in these figures, reflecting the anatomical study of ancient, non-Western artifacts?

- A) Zygomatic arch elongation
- B) Mandibular prognathism
- C) Supraorbital ridge prominence**
- D) Occipital bun enlargement

3. Which physiological condition was famously portrayed by Egon Schiele in his self-portraits, characterized by thin, twisted limbs and a focus on skeletal structure, reflecting the artist's obsession with the 'nude' in a post-Darwinian context?

- A) Cachexia**
- B) Ectomorphy
- C) Lordosis
- D) Scoliosis

4. The inhalation of aerosolized pigment particles, a technique often used in mid-century kinetic art, is most likely to cause which specific pulmonary condition, independent of chemical toxicity?

- A) Pulmonary fibrosis
- B) Pneumoconiosis**
- C) Pleural effusion
- D) Chronic bronchitis

5. In Frida Kahlo's 'The Broken Column,' the artist depicts a surgical corset; which specific spinal injury sustained in her youth forced her to wear this medical device for the remainder of her life?

- A) Lumbar herniation
- B) T12 compression fracture
- C) Cervical whiplash
- D) Thoracolumbar spinal fracture**

6. Marcel Duchamp's 'Nude Descending a Staircase, No. 2' utilizes a chronophotographic style; which sensory system in the human brain is responsible for processing this type of sequential motion perception?

- A) V1 visual cortex
- B) Superior colliculus
- C) Dorsal stream pathway**
- D) Ventrolateral prefrontal cortex

7. Which heavy metal, frequently used in the lead-based paints of the early Modernist period, is scientifically proven to cross the blood-brain barrier and cause 'saturnism' or lead poisoning?

- A) Plumbum**
- B) Arsenic
- C) Mercury
- D) Antimony

8. Francis Bacon's portraits often feature distorted facial features; medically, the specific 'screaming' mouth posture he frequently painted resembles the spasmodic contraction of which facial muscle group?

- A) Zygomaticus major
- B) Platysma**
- C) Orbicularis oris
- D) Masseter

9. Synthetic polymer paints, which became standard in mid-20th-century Pop Art, can release Volatile Organic Compounds (VOCs); which organ is primarily responsible for the biotransformation and detoxification of these absorbed VOCs?

- A) Kidneys
- B) Lungs
- C) Liver**
- D) Pancreas

10. Alberto Giacometti's extremely thin, elongated bronze sculptures are often interpreted through the lens of the human body's 'fight or flight' response; which endocrine gland initiates the release of adrenaline that could theoretically cause such physiological tremors?

A) Adrenal medulla

B) Pituitary gland

C) Thyroid

D) Pineal gland

11. Surrealist artist Salvador Dalí was fascinated by 'paranoiac-critical' visions; the anatomical term 'hypnagogic' refers to which specific state of human consciousness experienced between wakefulness and sleep?

A) REM state

B) Alpha-wave transition

C) Delta-wave deep sleep

D) Theta-wave onset

12. What is the primary anatomical reason that extended periods of painting in a 'hunched' position, common among Abstract Expressionists working on floor canvases, leads to chronic cervical radiculopathy?

A) Brachial plexus compression

B) Cervical disc herniation

C) Trapezius muscle atrophy

D) Lordotic curve reversal

13. The use of cobalt salts in the vibrant blues of Modernist landscapes can lead to cardiomyopathy when systemic exposure is chronic; which specific protein in the heart muscle is typically affected?

A) Troponin

B) Actin

C) Myosin

D) Titin

14. In the context of Modernist performance art, which specific anatomical structure is most vulnerable to repetitive strain injury during prolonged periods of static, anti-gravity posing?

A) Synovial bursa

B) Articular cartilage

C) Intervertebral disc

D) Tendon sheath

15. The 'Dada' movement's focus on the irrational often mirrored studies on the human limbic system; which part of this system is primarily responsible for the processing of 'disgust,' a common theme in Dadaist art?

- A) Amygdala
- B) Hippocampus
- C) Insular cortex**
- D) Hypothalamus