

The Human Physiology of Cinema

Film Studies · Answer Key · 20 Questions

1. What is the standard frame rate of film (24 fps) designed to exploit in the human visual system to create the illusion of smooth motion?

A) Persistence of vision

- B) The blind spot
- C) Foveal peripheral fusion
- D) Retinal light adaptation

2. Extended exposure to high-intensity strobe lighting in films can trigger seizures in individuals with which specific health condition?

A) Photosensitive epilepsy

- B) Type 1 diabetes
- C) Hypertension
- D) Narcolepsy

3. When filming in extreme cold environments for long durations, which physiological response is the body's primary method of generating heat to maintain a core temperature?

A) Vasodilation

B) Shivering thermogenesis

- C) Bradycardia
- D) Hyperventilation

4. During a long film screening, which human muscle is most responsible for maintaining posture while sitting in a theater seat?

A) Biceps brachii

B) Erector spinae

- C) Gastrocnemius
- D) Deltoid

5. In 3D cinema, 'vergence-accommodation conflict' often causes which physical symptom for viewers?

A) Ear infection

B) Nausea and eye strain

- C) Increased heart rate
- D) Improved night vision

6. What is the primary human organ responsible for maintaining balance, which can be disrupted by the rapid camera movements found in handheld 'shaky cam' cinematography?

A) The cochlea and vestibular system

- B) The frontal lobe
- C) The cerebellum
- D) The pituitary gland

7. Exposure to high-decibel audio levels during action film post-production can lead to temporary threshold shift, which affects which human sensory organ?

- A) Olfactory bulb
- B) Tympanic membrane

C) Organ of Corti in the inner ear

- D) Gustatory receptors

8. What physiological state occurs when a film editor experiences intense 'flow' or concentration, often leading to a temporary decrease in blink rate?

A) Dry eye syndrome

- B) Hyper-salivation
- C) Tachycardia
- D) Muscle atrophy

9. When actors perform high-altitude scenes, the lower partial pressure of oxygen can lead to which physiological condition?

A) Hypoxia

- B) Hyperglycemia
- C) Dehydration
- D) Hypocalcemia

10. In film lighting, what is the 'Kelvin' scale primarily used to measure, which influences the body's circadian rhythm when exposed to artificial set lights?

A) Color temperature of light

- B) Sound frequency
- C) Lumen intensity
- D) Radiant heat

11. The study of ergonomics in film animation work focuses on preventing injury to which part of the human body?

A) Carpal tunnel and musculoskeletal system

- B) Hair follicles
- C) Subcutaneous fat
- D) Enamel density

12. Prolonged sitting during marathon film viewings can increase the risk of Deep Vein Thrombosis (DVT) in which part of the human body?

- A) The lungs
- B) The lower extremities**
- C) The cranial cavity
- D) The heart

13. What substance is produced in the human pineal gland and is suppressed by blue-light exposure from cinema screens, affecting sleep onset?

- A) Melatonin**
- B) Adrenaline
- C) Insulin
- D) Cortisol

14. During a 'foley' recording session, which human joint is most frequently engaged in repetitive motion to simulate footsteps?

- A) Ankle and knee**
- B) Temporomandibular joint
- C) Thoracic spine
- D) Cervical vertebrae

15. High-contrast film images can cause 'afterimages' on the retina due to the fatigue of which specific type of photoreceptor cell?

- A) Cones**
- B) Osteocytes
- C) Adipocytes
- D) Chondrocytes

16. What is the primary role of the pupil in the human eye when an audience member moves from a brightly lit lobby into a dark theater?

- A) Constriction
- B) Dilation**
- C) Eversion
- D) Calcification

17. The psychological phenomenon of 'suspension of disbelief' is supported by activity in which part of the human brain?

- A) Prefrontal cortex**
- B) Medulla oblongata
- C) Cerebellum
- D) Brain stem

18. Which nutrient deficiency is most commonly linked to poor visual acuity in low-light environments, relevant to watching noir films?

A) Vitamin A

B) Vitamin C

C) Calcium

D) Iron

19. When an actor performs a 'scream' in a horror film, which anatomical structure is primarily responsible for the vocal sound production?

A) Larynx

B) Esophagus

C) Trachea

D) Diaphragm

20. What is the average human blink rate per minute, which is relevant to how film editors manage jump cuts to hide continuity errors?

A) 15-20 times

B) 50-60 times

C) 100-120 times

D) 2-5 times