

Music, Health, and Human Physiology

Music Appreciation · Answer Key · 10 Questions

1. Which specific part of the inner ear is primarily responsible for transducing sound vibrations from musical instruments into neural signals?

- A) The semi-circular canals
- B) The cochlea**
- C) The eustachian tube
- D) The stapes

2. What physiological effect is frequently observed in patients listening to slow-tempo classical music?

- A) Increased adrenaline production
- B) Elevated cortisol levels
- C) Reduced heart rate**
- D) Increased blood pressure

3. Which brain structure is primarily responsible for processing the emotional content of music?

- A) The amygdala**
- B) The cerebellum
- C) The medulla oblongata
- D) The occipital lobe

4. Long-term musical training has been shown to increase the thickness of which structure connecting the left and right hemispheres of the brain?

- A) The hippocampus
- B) The corpus callosum**
- C) The pineal gland
- D) The basal ganglia

5. In auditory processing, what is the 'Tonotopic Map' referring to?

- A) The layout of sound frequencies on the basilar membrane**
- B) The map of musical notes in the visual cortex
- C) The sensory feedback of guitar strings
- D) The geographical origin of musical scales

6. Which hormone, often associated with social bonding and stress reduction, is released during communal singing?

A) Oxytocin

B) Insulin

C) Thyroxine

D) Glucagon

7. What is the medical term for the involuntary physiological reaction where the body moves in time with a rhythmic beat?

A) Entrainment

B) Synesthesia

C) Vestibular reflex

D) Proprioception

8. Which musical activity has been clinically proven to improve lung capacity and posture in patients with chronic obstructive pulmonary disease?

A) Drumming

B) Choral singing

C) Violin playing

D) Listening to ambient soundscapes

9. The 'Mozart Effect' is a controversial study originally suggesting a temporary enhancement of which cognitive function?

A) Long-term motor memory

B) Spatial-temporal reasoning

C) Color perception

D) Bilingual vocabulary

10. Which cranial nerve transmits auditory information from the inner ear to the brain stem?

A) Vagus nerve

B) Vestibulocochlear nerve

C) Trigeminal nerve

D) Optic nerve