

Physiology of Performance

Human Biology In Performance · Answer Key · 8 Questions

1. Which anatomical structure, when engaged during 'diaphragmatic breathing' for stage projection, primarily increases the thoracic cavity volume by moving inferiorly?

- A) The external intercostals
- B) The diaphragm muscle**
- C) The sternocleidomastoid
- D) The scalene muscles

2. During a sustained operatic or theatrical vocal performance, which specific cartilage in the larynx is primarily responsible for the abduction and adduction of the vocal folds?

- A) Cricoid cartilage
- B) Thyroid cartilage
- C) Arytenoid cartilage**
- D) Epiglottis

3. In high-intensity physical theatre, what is the primary biochemical byproduct produced by anaerobic metabolism in skeletal muscles during rapid, repetitive movement?

- A) Lactic acid**
- B) Citric acid
- C) Pyruvic acid
- D) Acetylcholine

4. Which cranial nerve, often referred to as the 'wandering nerve,' is primarily responsible for the parasympathetic control of the heart and the sensory innervation of the larynx?

- A) Trigeminal nerve
- B) Facial nerve
- C) Vagus nerve**
- D) Hypoglossal nerve

5. What is the physiological function of the 'Valsalva manoeuvre' if performed incorrectly during heavy stage lifting or straining?

- A) Increased venous return to the heart
- B) Reduction of intra-abdominal pressure
- C) Decreased cardiac output due to increased intrathoracic pressure**
- D) Enhanced oxygenation of the myocardium

6. Which muscle is the primary mover for the elevation of the scapula, a movement frequently observed in the 'shrugging' gesture used in character acting?

A) Trapezius

B) Pectoralis major

C) Latissimus dorsi

D) Deltoid

7. The resonance of the human voice is largely determined by the shape of the vocal tract; which part of the body acts as the primary supraglottic resonator for high-frequency formants?

A) The nasal cavity

B) The oropharynx

C) The oral cavity

D) The paranasal sinuses

8. In dance and stage movement, what is the 'vestibular system' located in the inner ear primarily responsible for maintaining in the performer?

A) Auditory pitch perception

B) Proprioceptive feedback from limbs

C) Equilibrium and spatial orientation

D) Dilation of the pupil