

Physiology of Performance

Drama & Theatre · Answer Key · 20 Questions

1. Which anatomical structure is primarily responsible for the 'vocal fry' effect often cautioned against in vocal pedagogy due to potential laryngeal fatigue?

- A) The arytenoid cartilages**
- B) The epiglottis
- C) The hyoid bone
- D) The thyroid notch

2. During sustained theatrical 'projection' without amplification, which muscle group performs the primary work of forced exhalation to increase subglottal pressure?

- A) External intercostals
- B) Internal intercostals**
- C) Pectoralis minor
- D) Sternocleidomastoid

3. What is the clinical term for the localized swelling on vocal folds, often resulting from chronic mechanical trauma during rigorous stage acting?

- A) Laryngeal polyp
- B) Vocal nodule**
- C) Contact granuloma
- D) Laryngocele

4. In dance-heavy theatre, which ligament is most frequently strained during rapid, repetitive lateral movements common in choreography?

- A) Anterior talofibular ligament**
- B) Iliofemoral ligament
- C) Ligamentum flavum
- D) Posterior cruciate ligament

5. What is the physiological role of the 'Valsalva manoeuvre' in the context of stage combat or lifting heavy props?

- A) Increasing oxygen saturation in the blood
- B) Stabilizing the core via intra-abdominal pressure**
- C) Relaxing the trapezius muscles
- D) Lowering the heart rate to prevent stage fright

6. Chronic exposure to theatrical 'fog juice' (glycol-based) can result in which specific respiratory condition if ventilation is poor?

- A) Emphysema
- B) Pulmonary fibrosis
- C) Occupational asthma**
- D) Chronic bronchitis

7. Which cranial nerve is most directly responsible for the motor innervation of the intrinsic muscles of the larynx used in speech production?

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

8. When performing 'stage falls', which anatomical structure is specifically designed to absorb shock and protect the underlying nerve clusters in the elbow?

- A) Olecranon bursa**
- B) Medial epicondyle
- C) Ulnar nerve
- D) Radial head

9. What is the primary mechanism by which 'Alexander Technique' aims to improve stage performance through bodily awareness?

- A) Muscle hypertrophy
- B) Reflexive inhibition of habitual tension**
- C) Cardiovascular conditioning
- D) Increased bone density

10. In theater lighting, the 'Stroboscopic Effect' can trigger what specific health condition in photosensitive individuals?

- A) Vertigo
- B) Myoclonic jerks**
- C) Tinnitus
- D) Vasovagal syncope

11. The 'subglottic pressure' required for operatic singing is significantly higher than conversational speech; what is the approximate range in cm H₂O for professional singers?

- A) 2-5 cm H₂O
- B) 10-30 cm H₂O**
- C) 50-70 cm H₂O
- D) 80-100 cm H₂O

12. Stage actors often suffer from 'vocal attrition'; which layer of the vocal fold is most susceptible to permanent scarring from excessive vibration?

- A) Epithelium
- B) Superficial lamina propria
- C) Vocalis muscle

D) Basement membrane zone

13. Which joint is most frequently impacted by the 'en pointe' position in ballet, leading to potential sesamoiditis?

A) Metatarsophalangeal joint

- B) Talocrural joint
- C) Subtalar joint
- D) Interphalangeal joint

14. To maintain posture during long theatrical monologues, which spinal segment provides the primary support against gravity?

- A) Cervical curvature
- B) Thoracic kyphosis

C) Lumbar lordosis

- D) Sacral fusion

15. What is the medical term for the physical manifestation of 'stage fright' characterized by the involuntary constriction of the throat?

A) Globus pharyngeus

- B) Dysphonia plica ventricularis
- C) Laryngospasm
- D) Vocal fold paresis

16. Which muscle is the primary 'workhorse' for inspiration, essential for actors needing quick, 'silent' breaths between lines?

A) Diaphragm

- B) Rectus abdominis
- C) Latissimus dorsi
- D) Serratus anterior

17. The use of heavy stage makeup can lead to 'acne cosmetica'; which ingredient is the most common culprit in theatrical greasepaint?

A) Isopropyl myristate

- B) Zinc oxide
- C) Titanium dioxide
- D) Kaolin clay

18. What physiological phenomenon occurs when an actor experiences a 'blood rush' or syncope during rapid standing after long periods of kneeling on stage?

A) Orthostatic hypotension

B) Hypertension

C) Vasodilation

D) Peripheral neuropathy

19. In stage fencing, which muscle group is primarily engaged to prevent hyper-extension of the knee during a 'lunge'?

A) Quadriceps femoris

B) Hamstrings

C) Gastrocnemius

D) Tibialis anterior

20. Which specific bone is most susceptible to fracture during repetitive high-impact stage landings if proper biomechanics are ignored?

A) Calcaneus

B) Talus

C) Cuboid

D) Navicular