

Scientific Foundations of Drama and Theatre

Theatre Science · Practice Test · 25 Questions

1. Which organ is primarily responsible for the production of the human voice used in theatrical projection?

- A) Larynx
- B) Heart
- C) Liver
- D) Kidney

2. In theatre architecture, what is the primary scientific phenomenon used to distribute sound evenly to the audience?

- A) Refraction
- B) Acoustic reflection
- C) Magnetic resonance
- D) Gravitational pull

3. Which ancient civilization developed the use of stone amphitheaters designed to optimize natural sound amplification?

- A) Ancient Greeks
- B) Ancient Egyptians
- C) Ancient Persians
- D) Ancient Chinese

4. What is the term for the visual phenomenon where a performer's movement appears continuous rather than flickering?

- A) Persistence of vision
- B) Doppler effect
- C) Quantum entanglement
- D) Thermal expansion

5. The study of how sound behaves in an enclosed space like a theatre is known as what?

- A) Acoustics
- B) Optics
- C) Mechanics
- D) Biology

6. Which type of light source, historically used in theatres, produces light by heating a cylinder of calcium oxide?

- A) Limelight
- B) LED
- C) Fluorescent
- D) Neon

7. What physical property of light allows theatre lighting designers to use color filters (gels)?

- A) Wavelength transmission
- B) Conduction
- C) Surface tension
- D) Inertia

8. Human performers use which system to regulate the precise muscular movements required for complex choreography?

- A) Central Nervous System
- B) Digestive System
- C) Excretory System
- D) Endocrine System

9. What is the main function of a theatre proscenium arch in relation to stage mechanics?

- A) It frames the stage and hides machinery
- B) It prevents floor collapse
- C) It regulates oxygen levels
- D) It generates electricity

10. Which scientific tool is used in modern theatre to precisely control the intensity of lighting fixtures?

- A) Dimmer switch
- B) Thermometer
- C) Barometer
- D) Hydrometer

11. What is the primary material used in historical 'theatre makeup' to adhere pigments to the skin?

- A) Oil or wax base
- B) Liquid nitrogen
- C) Sulfuric acid
- D) Hydrochloric acid

12. Which acoustic element is added to theatre walls to minimize sound echoes (reverberation)?

- A) Sound-absorbing materials
- B) Mirrored surfaces
- C) Steel plates
- D) Glass sheets

13. The speed of sound in air, which impacts how quickly an audience hears a performer, is approximately how many meters per second?

- A) 343
- B) 10
- C) 5000
- D) 1

14. What biological state is induced in an audience when they observe highly emotional theatrical performances?

- A) Empathy (mirror neuron response)
- B) Photosynthesis
- C) Cellular mitosis
- D) Osmosis

15. Which gas was historically pumped into early gas-lit theatres, posing a significant fire risk?

- A) Coal gas
- B) Helium
- C) Argon
- D) Neon

16. In theatre, what term describes the physical weight and balance of stage scenery?

- A) Center of gravity
- B) Molecular density
- C) Atomic mass
- D) Thermal conductivity

17. What is the scientific term for the intensity of sound measured in theatres?

- A) Decibels
- B) Kelvins
- C) Newtons
- D) Joules

18. Which anatomical structure allows actors to expand their lungs for sustained vocal projection?

- A) Diaphragm
- B) Appendix
- C) Gallbladder
- D) Spleen

19. The 'fourth wall' in theatre is a metaphorical concept; which science studies the physical barriers between people?

- A) Proxemics
- B) Astronomy
- C) Geology
- D) Chemistry

20. What chemical process occurs when stage 'fog' (from dry ice) is created in a theatre?

- A) Sublimation
- B) Combustion
- C) Oxidation
- D) Distillation

21. Which unit of measurement is used to determine the brightness of stage lights?

- A) Lumens
- B) Celsius
- C) Grams
- D) Metres

22. The structure of a theatre stage is often built on a rake; what does this mean scientifically?

- A) It is slanted for better visibility
- B) It is made of magnetic iron
- C) It is cooled by liquid gas
- D) It rotates at high speeds

23. What is the study of human movement in theatre, specifically regarding energy and space?

- A) Kinesiology
- B) Botany
- C) Petrology
- D) Zoology

24. When an actor uses a 'mask', what sensory information is limited for the performer?

- A) Peripheral vision
- B) Auditory capacity
- C) Olfactory sense
- D) Tactile feedback

25. Which simple machine is used in theatre fly systems to lift heavy scenery with less force?

- A) Pulley
- B) Lever
- C) Inclined plane
- D) Wedge