

## Test Bank - Chapter 01

**Q1:** Which of the following is an expected role of a respiratory therapist? 1. Promoting lung health and wellness 2. Providing patient education 3. Assessing the patient's cardiopulmonary health status 4. Selling oxygen (O<sub>2</sub>) therapy devices to patients

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2, and 3 only (Correct)**
- D. 2, 3, and 4 only

*Rationale: Respiratory care has been defined as the health care discipline that specializes in promoting optimal cardiopulmonary function and health. RTs apply scientific principles to prevent, identify, and treat acute or chronic dysfunction of the cardiopulmonary system. In 1974, the designation respiratory therapist became standard, and the RT became the allied health professional primarily concerned with the assessment, diagnostic testing, treatment, education, and care of patients with deficiencies and abnormalities of the cardiopulmonary system.*

**Q2:** Where are the majority of respiratory therapists employed?

- A. Skilled nursing facilities
- B. Diagnostic laboratories
- C. Hospitals or acute care settings (Correct)**
- D. Outpatient physician offices

*Rationale: Approximately 75% of all respiratory therapists work in hospitals or other acute care settings.*

**Q3:** Who is considered to be the "father of medicine"?

- A. Hippocrates (Correct)**
- B. Galen
- C. Erasistratus
- D. Aristotle

*Rationale: The foundation of modern Western medicine was laid in ancient Greece with the development of the Hippocratic Corpus. This collection of ancient medical writings is attributed to the "father of medicine," Hippocrates, a Greek physician who lived during the fifth and fourth centuries BC.*

**Q4:** In 1662, a chemist published a book that described the relationship between gas, volume, and pressure. What was the chemist's name?

- A. Sir Isaac Newton
- B. Robert Boyle (Correct)**
- C. Anthony van Leeuwenhoek

D. Nicolaus Copernicus

*Rationale: The chemist, Robert Boyle, published what is now known as “Boyle’s law,” governing the relationship between gas, volume, and pressure.*

**Q5:** Who discovered O<sub>2</sub> in 1774 and described it as “dephlogisticated air”?

- A. Robert Boyle
- B. Jacque Charles
- C. Thomas Beddoes
- D. Joseph Priestley (Correct)**

*Rationale: In 1774, Joseph Priestley described his discovery of O<sub>2</sub>, which he called “dephlogisticated air.”*

**Q6:** Who is credited with first describing the law of partial pressures for a gas mixture?

- A. John Dalton (Correct)**
- B. Joseph Priestley
- C. Jacque Charles
- D. Thomas Young

*Rationale: John Dalton described his law of partial pressures for a gas mixture in 1801 and his atomic theory in 1808.*

**Q7:** Who was the first scientist in 1865 to suggest that microorganisms caused many diseases?

- A. Thomas Young
- B. Louis Pasteur (Correct)**
- C. Henry Graham
- D. Robert Koch

*Rationale: In 1865, Louis Pasteur advanced his “germ theory” of disease, which held that many diseases are caused by microorganisms.*

**Q8:** Who discovered the x-ray and opened the door for the modern field of radiology?

- A. John Dalton
- B. William Smith
- C. William Roentgen (Correct)**
- D. Thomas Young

*Rationale: In 1895, William Roentgen discovered the x-ray and the modern field of radiologic imaging sciences was born.*

**Q9:** What was the primary duty of the first inhalation therapists?

- A. Provide airway care.

**B. Support O2 therapy. (Correct)**

- C. Aerosol therapy to patients.
- D. Maintain patients on mechanical ventilation.

*Rationale: The first inhalation therapists were really just O2 technicians.*

**Q10:** When did the designation “respiratory therapist” become standard?

- A. 1954
- B. 1964
- C. 1974 (Correct)**
- D. 1984

*Rationale: In 1974, the designation “respiratory therapist” became standard.*

**Q11:** Who was the first to develop the large-scale production of O2 in 1907?

- A. Robert Dalton
- B. David Boyle
- C. Thomas Anderson
- D. Karl von Linde (Correct)**

*Rationale: Large-scale production of O2 was developed by Karl von Linde in 1907.*

**Q12:** When was the first Venti-mask introduced that allows the precise delivery of 24%, 28%, 35%, and 40% O2?

- A. 1945
- B. 1954
- C. 1960 (Correct)**
- D. 1972

*Rationale: The Campbell Venti-mask, which allowed the administration of 24%, 28%, 35%, or 40% O2, was introduced in 1960.*

**Q13:** When were aerosolized glucocorticoids for the maintenance of patients with moderate to severe asthma first introduced?

- A. In the 1950s
- B. In the 1960s
- C. In the 1970s (Correct)**
- D. In the 1980s

*Rationale: The use of aerosolized glucocorticoids for the maintenance of patients with moderate to severe asthma began in the 1970s.*

**Q14:** Which of the following medications has never been delivered as an aerosol by a respiratory therapist?

**A. Inotropes (Correct)**

B. Anticholinergic

C. Mucolytic

D. Antibiotic

*Rationale: There has been a proliferation of medications designed for aerosol administration, including bronchodilators, mucolytic, antibiotic, anticholinergic, and antiinflammatory agents.*

**Q15:** Which two names are linked to the development of the iron lung, which was extensively used to treat the polio epidemic in the 1950s?

A. Allison and Smyth

**B. Drinker and Emerson (Correct)**

C. Drager and Bennett

D. Byrd and Tyler

*Rationale: The iron lung was developed by Drinker, an engineer at Harvard University. Jack H. Emerson developed a commercial version of the iron lung that was used extensively during the polio epidemics of the 1930s and 1950s.*

**Q16:** Which of the following was one of the first positive-pressure ventilators developed?

A. MA-1

B. Bird Mark 7

**C. Draeger Pulmotor (Correct)**

D. Engstrom

*Rationale: Early positive-pressure ventilators included the Draeger Pulmotor (1911), the Spiropulsator (1934), the Bennett TV-2P (1948), the Morch Piston Ventilator (1952), and the Bird Mark 7 (1958).*

**Q17:** When was positive end expiratory pressure (PEEP) first introduced to treat patients with acute respiratory distress syndrome?

A. 1935

B. 1946

C. 1958

**D. 1967 (Correct)**

*Rationale: Positive end expiratory pressure (PEEP) was introduced for use in patients with ARDS in 1967.*

**Q18:** How is competency to practice Respiratory Care determined?

A. Achievement of good grades in school and graduating from an approved program.

- B. Applying for a state license.
- C. Graduating from a CoARC approved program.

**D. Obtaining a passing grade on a credentialing examination administered by the NBRC after graduation from a CoARC approved program. (Correct)**

*Rationale: Competency is typically determined by obtaining a passing grade on a credentialing examination (administered by the NBRC) after graduation from an approved training program. State licensing boards also set the number of continuing education credits required to maintain active licensure.*

**Q19:** Who introduced the first laryngoscope, in 1913?

- A. Thomas Allen
- B. Chevalier Jackson (Correct)**
- C. Jack Emerson
- D. Forrest Bird

*Rationale: In 1913, the laryngoscope was introduced by Chevalier Jackson.*

**Q20:** Who introduced the use of soft rubber endotracheal tubes around 1930?

- A. Davidson
- B. McGill (Correct)**
- C. Haight
- D. Murphy

*Rationale: Ivan McGill introduced the use of soft rubber endotracheal tubes.*

**Q21:** In 1846, who developed a water seal spirometer, which allowed accurate measurement of the patient's vital capacity?

- A. Hutchinson (Correct)**
- B. Strohl
- C. Tiffeneau
- D. Davis

*Rationale: In 1846, John Hutchinson developed a water seal spirometer, with which he measured the vital capacity.*

**Q22:** What was the name of the first professional organization for the field of respiratory care?

- A. American Association for Inhalation Therapy
- B. National Organization for Inhalation Therapy
- C. Inhalation Therapy Association (Correct)**
- D. Better Breathers Organization

*Rationale: Founded in 1947 in Chicago, the Inhalational Therapy Association (ITA) was the first professional association for the field of respiratory care.*

**Q23:** What organization has developed an examination to enable respiratory therapists to become licensed?

- A. American Respiratory Care Board
- B. National Board for Respiratory Care (Correct)**
- C. American Association for Respiratory Care
- D. National Organization for Respiratory Therapist

*Rationale: During the 1980s, the AARC began a major push to introduce state licensure for respiratory care practitioners based on the National Board for Respiratory Care (NBRC) credentials.*

**Q24:** Today, respiratory care educational programs in the United States are accredited by what organization?

- A. National Board for Respiratory Care (NBRC)
- B. American Association for Respiratory Care (AARC)
- C. Committee on Accreditation for Respiratory Care (CoARC) (Correct)**
- D. Joint Review Committee for Respiratory Therapy Education (JRCRTE)

*Rationale: Today, respiratory care educational programs in the United States are accredited by the CoARC.*

**Q25:** The majority of respiratory care education programs in the United States offer what degree?

- A. Associate's degree (Correct)**
- B. Bachelor's degree
- C. Master's degree
- D. Certificate degree

*Rationale: Respiratory care educational programs in the United States are offered at technical and community colleges, 4-year colleges, and universities. These programs are designed to prepare competent RTs to care for patients. The minimum degree required to become an RT has traditionally been an associate degree. However, many associate degree graduates see great opportunity in pursuing their bachelor's degree and some even higher degrees—master's and doctorates. In an effort to promote bachelor's-level education for respiratory therapy, the CoARC no longer entertains applications for the accreditation of new associate degree programs. At present, there are approximately 443 degree programs in the United States, including 1 in Puerto Rico and 11 master's degree programs. In addition, there are several accredited respiratory care programs in Canada; and a handful in Mexico, South America, Japan, India, Taiwan, Qatar, and other countries.*