Critical Care Air Transport Team (CCATT) Initial Practice Test (Sample)

Study Guide

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Questions

1. What is the ambient partial pressure of O2 at increased altitudes according to Dalton’s Law?

A. Increases with altitude

B. Decreases with altitude

C. Remains the same

D. Varies with temperature

2. How many patients can CCATT care for at high acuity levels?

A. 1

B. 3

C. 5

D. 6

3. Before a flight, what type of ventilator calculations should RT complete?

A. Only ground calculations

B. Only flight calculations

C. Both ground and flight calculations

D. Neither ground nor flight calculations

4. In a medical context, which aspect does the term "green" signify on an airworthiness certification?

A. Disapproved

B. Approved

C. Under review

D. Conditionally approved

5. What is the role of a Validating Flight Surgeon (VFS)?

A. To train new CCATT members

B. To oversee non-medical missions

C. To provide final authority for patient transport

D. To manage logistical support during missions

6. What is TRAC2ES primarily used for?

A. Command and control for all medical missions

B. Command and control for regulated missions

C. Tracking patient outcomes

D. Research and development in medical protocols

7. What is the primary mission associated with aeromedical evacuation (AE)?

A. Transporting non-urgent patients

B. Time sensitive ERC regulated and unregulated missions

C. Training medical personnel

D. Routine supply transport

8. What should an RT do before taking over care of a vented patient for a flight?

A. Change the ventilator setting

B. Conduct an ABG test

C. Get a report including tube size and cuff pressure

D. Administer a sedative

9. What is the primary function of the Surgical Resuscitation Team (SRT)?

A. Provide routine medical care to patients

B. Manage surgical interventions during flight

C. Perform emergency preventive measures

D. Take medical authority over a patient

10. What is the primary aircraft used for tactical intra-theater air transport?

A. C-30

B. C-21

C. C-135

D. KC-17

Answers

1. B
2. B
3. C
4. B
5. C
6. B
7. B
8. C
9. D
10. B

Explanations

1. What is the ambient partial pressure of O2 at increased altitudes according to Dalton's Law?

A. Increases with altitude

B. Decreases with altitude

C. Remains the same

D. Varies with temperature

At increased altitudes, the ambient partial pressure of oxygen decreases due to the reduction in total atmospheric pressure, as described by Dalton's Law. Dalton's Law states that in a mixture of gases, the total pressure exerted is the sum of the partial pressures of each individual gas. As altitude increases, the overall atmospheric pressure drops, which also leads to a decrease in the partial pressure of oxygen. This reduction at higher altitudes can significantly impact oxygen availability for breathing and is an essential consideration in critical care transport and aeromedical practices. As the altitude rises, despite the composition of air remaining largely the same (with oxygen still making up about 21% of the atmosphere), the number of air molecules per volume decreases, thus lowering the partial pressure of oxygen available for respiration. Understanding this concept is crucial for effective patient care during air transport scenarios, particularly when dealing with patients who may have compromised respiratory function.

2. How many patients can CCATT care for at high acuity levels?

A. 1

B. 3

C. 5

D. 6

CCATT, or Critical Care Air Transport Team, is specifically designed to provide critical care for patients who require intensive monitoring and intervention during air transport. In high acuity scenarios, CCATT is equipped and trained to handle three patients simultaneously. This number is based on the team composition and the resources available, which typically include specialized medical personnel, equipment, and space within the aircraft. Handling three patients allows the team to maintain a high level of care, ensuring adequate monitoring and intervention can be provided to each patient as needed. The capacity is reinforced by the training and protocols established within CCATT operations, which prioritize patient safety and effective care delivery during transport.

3. Before a flight, what type of ventilator calculations should RT complete?

A. Only ground calculations

B. Only flight calculations

C. Both ground and flight calculations

D. Neither ground nor flight calculations

The appropriate choice regarding ventilator calculations before a flight is both ground and flight calculations. This is important due to several factors that affect ventilator performance and patient safety during transport. Ground calculations typically involve initial assessment of the ventilator settings based on the patient's needs while on the ground. This includes accounting for factors such as tidal volume, respiratory rate, and airway pressure. Ensuring these settings are accurate helps stabilize the patient under normal operating conditions. Flight calculations are equally vital because altitude changes can significantly affect ventilator function. As the aircraft ascends, the atmospheric pressure decreases, which can impact the delivery of oxygen and the effectiveness of ventilation. Calculating adjustments for gas volumes and pressures ensures that the ventilator continues to operate effectively in the reduced pressure environment. Together, completing both ground and flight calculations allows the respiratory therapist to prepare adequately, ensuring patient safety and optimized ventilatory support throughout the flight.

4. In a medical context, which aspect does the term "green" signify on an airworthiness certification?

A. Disapproved

B. Approved

C. Under review

D. Conditionally approved

The term "green" in the context of airworthiness certification is universally understood to signify approval. When an aircraft or medical transport system is labeled as "green," it indicates that it meets all necessary safety and operational standards required for operation. This designation confirms that the equipment has been thoroughly inspected and deemed fit for service without any restrictions or conditions. In contrast, other terms like "disapproved," "under review," and "conditionally approved" each imply some level of concern or limitation regarding the equipment's fitness for use. Therefore, "green" stands out clearly as the designation illustrating full compliance and readiness, highlighting the importance of ensuring the highest safety standards in medical air transport operations.

5. What is the role of a Validating Flight Surgeon (VFS)?

A. To train new CCATT members

B. To oversee non-medical missions

C. To provide final authority for patient transport

D. To manage logistical support during missions

The role of a Validating Flight Surgeon (VFS) is crucial in ensuring the safety and appropriateness of patient transports during air medical missions. This position is responsible for providing the final authority for patient transport, which means that the VFS evaluates the medical status of patients, determines their suitability for flight, and makes critical decisions based on medical assessments. This responsibility requires a high level of medical knowledge and management skills, as the VFS must consider various factors such as the patient's condition, potential risks during transport, and the availability of medical support and equipment on board. With the VFS's authority, patient safety is prioritized, and any necessary adjustments or authorizations regarding the transport can be made to ensure optimal conditions for the patient during flight. In contrast, other roles like training new CCATT members or overseeing non-medical missions does not reflect the primary responsibilities of a VFS. Additionally, while logistical support is important during missions, management of logistics falls under different team members rather than the VFS, who focuses primarily on medical oversight and authorizations.

6. What is TRAC2ES primarily used for?

A. Command and control for all medical missions

B. Command and control for regulated missions

C. Tracking patient outcomes

D. Research and development in medical protocols

TRAC2ES, or the Theater Regulation and Command Enterprise System, is primarily utilized for command and control specifically for regulated missions. This system provides a comprehensive framework that enables the management of medical missions by ensuring compliance with established regulations and operational guidelines. The emphasis on regulated missions highlights the importance of adhering to specific standards and protocols necessary for maintaining patient safety and operational efficiency within the military medical transport environment. TRAC2ES enhances situational awareness, allows for efficient resource allocation, and supports decision-making processes in complex medical mission scenarios. While command and control for all medical missions might seem broad, TRAC2ES's focus is particularly aimed at those that require regulatory oversight. Additionally, while aspects like patient outcomes tracking or medical protocol research and development are vital in the broader military medical context, they fall outside the primary operational scope of TRAC2ES itself.

7. What is the primary mission associated with aeromedical evacuation (AE)?

A. Transporting non-urgent patients

B. Time sensitive ERC regulated and unregulated missions

C. Training medical personnel

D. Routine supply transport

The primary mission associated with aeromedical evacuation (AE) focuses on the timely and efficient transport of patients who require immediate medical attention, especially those whose conditions are time-sensitive. These missions, whether regulated by the Emergency Medical Services (EMS) or not, prioritize patients whose medical needs are critical and cannot wait for standard ground transportation. The essence of AE is to ensure that patients can be moved swiftly to facilities equipped to provide necessary care, thus minimizing the risk of disease progression or deterioration of their condition. Transporting non-urgent patients does not align with the primary purpose of AE, as these missions center around critical cases that necessitate prompt evacuation. Training medical personnel, though vital in an overall healthcare context, is not the focus of AE missions, which prioritize patient transport over education. Similarly, routine supply transport does not encapsulate the urgent and medically-driven nature of aeromedical evacuation, which is centered around patient care rather than logistics of supplies.

8. What should an RT do before taking over care of a vented patient for a flight?

A. Change the ventilator setting

B. Conduct an ABG test

C. Get a report including tube size and cuff pressure

D. Administer a sedative

Before taking over care of a vented patient for a flight, obtaining a comprehensive report, which includes critical details such as tube size and cuff pressure, is essential. This information provides the respiratory therapist (RT) with a clear understanding of the patient's current respiratory status and ensures that the airway is secured properly. Knowing the tube size helps assess the adequacy of ventilation and any potential complications that may arise during transport. Additionally, cuff pressure is vital to maintain effective ventilation and prevent complications such as air leaks or aspiration. Proper cuff pressure ensures that there is adequate ventilation and minimizes the risk of injury to the trachea. Collecting this information is crucial for ensuring patient safety and continuity of care in the critical care environment during air transport. While conducting an ABG test is important for assessing the patient's gas exchange, it is typically done after assessing the current state of the patient and may not be feasible before flight transport, depending on the circumstances. Changing ventilator settings should be avoided until you have a clear understanding of the patient's condition to ensure that any modifications are clinically warranted. Administering a sedative without full knowledge of the patient's current condition and ventilatory needs could pose risks, making it crucial to gather all necessary information first.

9. What is the primary function of the Surgical Resuscitation Team (SRT)?

A. Provide routine medical care to patients

B. Manage surgical interventions during flight

C. Perform emergency preventive measures

D. Take medical authority over a patient

The primary function of the Surgical Resuscitation Team (SRT) centers on providing immediate and effective surgical interventions in response to life-threatening conditions, particularly in a critical environment such as during transport. Their expertise allows them to address acute surgical needs that may arise unexpectedly, ensuring patients receive prompt care that stabilizes their condition. In emergency situations, taking medical authority over a patient is crucial when rapid decision-making is required, and the SRT often finds itself in situations where standard protocols must be adapted or where immediate intervention is necessary to save a life. This responsibility includes assessing the patient's condition, determining the urgency of surgical needs, and executing lifesaving procedures, all of which fall under the purview of a medical authority during critical care situations. In contrast, providing routine medical care and performing emergency preventive measures do not fully encapsulate the specialized and urgent nature of the SRT's role in surgical and trauma care. These activities may involve more general care rather than focused surgical intervention when time is of the essence. Additionally, while managing surgical interventions during flight is a component of their responsibilities, the overarching function of the SRT extends beyond just this aspect, reinforcing the importance of their authority to make critical decisions regarding patient care in high-pressure environments.

10. What is the primary aircraft used for tactical intra-theater air transport?

A. C-30

B. C-21

C. C-135

D. KC-17

The primary aircraft used for tactical intra-theater air transport is indeed the C-21. This aircraft is designed for rapid response and can effectively transport personnel and light cargo within a theater of operations. Its size, speed, and range make it well-suited for tactical missions, allowing for quick insertion and evacuation of personnel, including critical-care patients. The C-21 is versatile and can operate from smaller airfields, enhancing its capability to provide support in various combat and operational scenarios. In contrast, while the other aircraft options serve important roles within military air transport, they are generally utilized for different types of missions. The C-30, a variant of the C-130, is more focused on larger cargo and troop transport rather than specifically tactical intra-theater missions. The C-135 serves primarily as a tanker and for strategic airlift roles, and the KC-17 is primarily a refueling aircraft designed for long-range strategic operations. Thus, the C-21 stands out for its tactical efficiency in intra-theater air transport.