New York State Basic Emergency Medical Technician (EMT-B) Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. What is the correct sequence and number of vertebrae sections?

- **A. Cervical (7), thoracic (5), lumbar (12), sacral (5), coccygeal (4)**
- **B. Cervical (5), thoracic (12), lumbar (7), sacral (4), coccygeal (5)**
- **C. Cervical (12), thoracic (4), lumbar (7), sacral (5), coccygeal (5)**
- **D. Cervical (7), thoracic (12), lumbar (5), sacral (4), coccygeal (3)**

2. When taking a patient's pulse, what are you actually counting?

- **A. Pressure waves of blood that the heart sends through an artery**
- **B. Swelling of the vein as blood returns to the heart**
- **C. Heartbeats in the column of blood in a large vein**
- **D. Vibrations of the heart muscles as they push blood through**

3. What is the correct management approach for pelvic injuries?

- **A. The patient should be immobilized in a seated position**
- **B. The patient should be transported immediately**
- **C. The patient should be immobilized on a backboard**
- **D. The patient should be moved to a stretcher without further assessment**

4. A 40-year-old female with difficulty breathing shows an altered mental status and shallow respirations. What is the most important action for the EMS provider?

- **A. Ask about a history of COPD**
- **B. Assist with high-concentration oxygen using a BVM**
- **C. Watch the patient and obtain vital signs**
- **D. Assess accessory muscle usage**

5. In the case of a brain injury, what is the MOST IMPORTANT aspect to monitor?

A. Vital signs

B. Respiratory rate

C. Changes in mental status

D. Pupil reaction

6. What is a contusion commonly referred to as?

A. Flap

B. Road rash

C. Bruise

D. Jagged cut

7. When treating a victim with a suspected shoulder injury, what should you do first?

A. Apply ice to the injury.

B. Manually stabilize the injury site.

C. Rush victim to the hospital.

D. Perform a range of motion assessment.

8. According to emergency response protocols, what is the priority when assessing a patient?

A. Check for responsiveness

B. Assess airway and breathing

C. Activate emergency response

D. Control bleeding

9. What could cause a patient to exhibit noisy breathing resembling snoring?

A. Asthma attack

B. Partially obstructed airway

C. Pneumonia

D. Bronchitis

10. Which of the following is NOT part of the respiratory system?

A. Trachea

B. Alveoli

C. Bronchi

D. Esophagus

Answers

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

Explanations

1. What is the correct sequence and number of vertebrae sections?

A. Cervical (7), thoracic (5), lumbar (12), sacral (5), coccygeal (4)

B. Cervical (5), thoracic (12), lumbar (7), sacral (4), coccygeal (5)

C. Cervical (12), thoracic (4), lumbar (7), sacral (5), coccygeal (5)

D. Cervical (7), thoracic (12), lumbar (5), sacral (4), coccygeal (3)

The correct sequence of the vertebrae sections is critical for understanding human anatomy, particularly in the context of emergency medical services and patient assessment. The cervical vertebrae at the top of the spine consist of seven individual bones, labeled C1 through C7. These vertebrae support the head and allow for neck movement. Following this, there are twelve thoracic vertebrae (T1 to T12), which articulate with the ribs and provide stability to the upper body. Lumbar vertebrae, which are five in total (L1 to L5), are located in the lower back and are the largest because they bear most of the body's weight and allow for flexibility and movement. Next, the sacral vertebrae are five fused bones that create the back part of the pelvis (S1 to S5). Finally, the coccygeal vertebrae, commonly referred to as the tailbone, typically consist of four fused vertebrae (Co1 to Co4) at the very base of the spinal column. Understanding this sequence and the number of vertebrae is fundamental for EMTs when assessing injuries related to the spine or when performing procedures that might engage these areas. Each section has its specific characteristics and functions integral

2. When taking a patient's pulse, what are you actually counting?

A. Pressure waves of blood that the heart sends through an artery

B. Swelling of the vein as blood returns to the heart

C. Heartbeats in the column of blood in a large vein

D. Vibrations of the heart muscles as they push blood through

When assessing a patient's pulse, you are counting the pressure waves of blood that are propelled through the arteries as a result of the heart's contractions. Each time the heart beats, it ejects blood into the arterial system, creating a wave of pressure that travels along the arteries. This pressure wave is what you feel when you palpate a pulse point, such as the radial or carotid arteries. Understanding the mechanism of how a pulse is formed is essential for determining cardiovascular health. By counting the number of pressure waves over a specific time period, such as 60 seconds, you can determine the pulse rate, which indicates how effectively the heart is pumping blood throughout the body. The other choices do not accurately describe what a pulse measurement reflects. Monitoring swelling of a vein or vibrations from the heart muscles does not provide an accurate representation of the heart's activity or the flow of blood in the arteries, which is what pulse assessment is fundamentally about. Therefore, focusing on the pressure waves in the arteries gives you a true reflection of the cardiovascular function.

3. What is the correct management approach for pelvic injuries?

A. The patient should be immobilized in a seated position

B. The patient should be transported immediately

C. The patient should be immobilized on a backboard

D. The patient should be moved to a stretcher without further assessment

The correct management approach for pelvic injuries involves immobilizing the patient on a backboard. This method is important because it helps stabilize the pelvis and minimize movement, which could exacerbate any potential bleeding or further injury. Pelvic injuries can lead to significant internal bleeding and may compromise the blood supply to the lower extremities. By using a backboard, you provide the necessary support to keep the spine aligned and limit motion in the pelvic region during transport, which is crucial for the patient's safety. Transporting the patient without proper immobilization could lead to increased risk of complications from the injury. While immediate transport is usually necessary for patients with serious injuries, it must be balanced with ensuring that the patient is stabilized adequately before moving them. Additionally, placing a patient in a seated position may not provide the necessary support for a pelvis injury and could cause discomfort or further harm. Therefore, proper backboard stabilization is essential in the management of such injuries in the prehospital setting.

4. A 40-year-old female with difficulty breathing shows an altered mental status and shallow respirations. What is the most important action for the EMS provider?

A. Ask about a history of COPD

B. Assist with high-concentration oxygen using a BVM

C. Watch the patient and obtain vital signs

D. Assess accessory muscle usage

In this scenario, assisting with high-concentration oxygen using a Bag-Valve-Mask (BVM) is critical due to the patient's altered mental status and shallow respirations. These symptoms indicate that she may not be adequately ventilating, which can quickly lead to a decrease in oxygen levels in the body. The use of a BVM allows for the delivery of positive pressure ventilation, which helps to ensure that oxygen is effectively provided to the patient, improving the chances of maintaining adequate oxygenation and ultimately preventing further deterioration. Prioritizing high-concentration oxygen assistance is essential, as inadequate respiratory effort can lead to severe hypoxia and other complications. In cases of altered mental status, there is also a risk that the patient may not be able to maintain their airway. Using a BVM provides both the necessary oxygenation and assists in maintaining proper airway management, addressing the immediate threats to the patient's life. While obtaining the patient's history, assessing vital signs, and evaluating accessory muscle usage are all important components of a complete patient assessment, they are secondary to ensuring that the patient is receiving adequate oxygenation and ventilation in a time-sensitive emergency situation. In the context of this patient's critical condition, rapidly addressing the risk of compromised airways and insufficient oxygen by using a

5. In the case of a brain injury, what is the MOST IMPORTANT aspect to monitor?

A. Vital signs

B. Respiratory rate

C. Changes in mental status

D. Pupil reaction

Monitoring changes in mental status is critically important in cases of brain injury due to the potential for progressive neurological deterioration. The brain plays a pivotal role in conscious awareness, cognitive function, and the overall coordination of body systems. Alterations in mental status can indicate increasing intracranial pressure, the onset of conditions like a hematoma, or other serious complications that require immediate intervention. By observing shifts in a patient's alertness, orientation, and responsiveness, healthcare providers can make informed decisions about the urgency and type of care needed. This includes determining whether to escalate treatment, conduct further assessments, or prepare for potential surgical intervention. While monitoring vital signs, respiratory rate, and pupil reaction are also important in the evaluation of brain injuries, they are secondary aspects compared to the immediate and sometimes rapidly changing mental status, which is often an indicator of the brain's current condition and ongoing injuries. Identifying subtle or significant changes in mental status can lead to timely interventions that can be critical in preventing long-term damage or death.

6. What is a contusion commonly referred to as?

A. Flap

B. Road rash

C. Bruise

D. Jagged cut

A contusion is commonly referred to as a bruise. This term describes a type of injury that occurs when small blood vessels under the skin break due to impact or trauma, causing blood to leak into the surrounding tissues. This pooling of blood results in the characteristic discoloration associated with bruises, which can range in color from red to purple and later yellow or green as healing occurs. The other terms listed refer to different types of injuries. A flap usually describes a piece of skin that has been lifted or torn but not fully severed, often requiring careful suturing. Road rash is a type of abrasion that results from skin scraping against a rough surface, commonly seen in motorcycle accidents or falls. A jagged cut typically refers to a laceration with irregular edges, which is distinct from the blunt force damage seen in a contusion. Thus, the most accurate recognition of a contusion is clearly identified as a bruise.

7. When treating a victim with a suspected shoulder injury, what should you do first?

A. Apply ice to the injury.

B. Manually stabilize the injury site.

C. Rush victim to the hospital.

D. Perform a range of motion assessment.

In the case of a suspected shoulder injury, the primary goal is to prevent further injury and provide support to the affected area. Manually stabilizing the injury site is the most critical first step. By stabilizing the shoulder, you minimize movement and reduce the risk of additional damage to the muscles, ligaments, or joints, which can occur if the injury is aggravated. This approach allows you to assess the situation without causing the victim unnecessary pain or worsening their condition. Stabilizing the area also helps in managing any potential complications, such as dislocations or fractures, until further medical treatment can be provided. Applying ice, rushing the victim to the hospital, or performing a range of motion assessment are important steps that may be taken later, but they should not precede the stabilization of the injury. Each of these responses could inadvertently increase the risk of further injury or provide inadequate support during a critical moment of care.

8. According to emergency response protocols, what is the priority when assessing a patient?

A. Check for responsiveness

B. Assess airway and breathing

C. Activate emergency response

D. Control bleeding

Assessing a patient requires a systematic approach that prioritizes immediate life threats, particularly those involving the airway and breathing. When responding to an emergency situation, the first step is to ensure that the patient is responsive, but it is crucial to rapidly follow up on the airway and breathing status since these are vital for survival. Airway and breathing assessments determine if the patient can effectively obtain oxygen, which is essential for maintaining vital organ functions. If the airway is obstructed or breathing is inadequate, immediate interventions must be initiated to restore a clear airway and achieve adequate ventilation. This can include repositioning the patient's head, using suction if necessary, or providing artificial ventilation. While checking for responsiveness is important as it provides initial insight into the patient's consciousness and potential neurological function, it does not address the most critical areas of immediate concern. Activating emergency response is a vital step in ensuring advanced care is on the way, but this would occur after ensuring that the patient's immediate needs for airway and breathing are established. Controlling bleeding is also essential but is secondary to assessing and maintaining airway and breathing stability, as massive bleeding should be addressed after confirming that the airway is clear and the patient is breathing appropriately. In summary, assessing airway and breathing takes precedence because it directly

9. What could cause a patient to exhibit noisy breathing resembling snoring?

A. Asthma attack

B. Partially obstructed airway

C. Pneumonia

D. Bronchitis

Noisy breathing that resembles snoring often indicates a partially obstructed airway. This can occur when the upper airway is compromised, such as by a relaxed tongue or pharyngeal tissue that partially collapses. When air passes through this narrowed space, it creates a sound similar to snoring. In this case, the partial obstruction can be caused by various factors, including the patient's position, level of consciousness, or presence of an object blocking the airway. Recognizing this sign is critical for EMTs, as it highlights the need for immediate airway management to prevent further complications, such as complete obstruction or inadequate ventilation. Other conditions like asthma attacks, pneumonia, and bronchitis generally produce different types of respiratory sounds. For instance, asthma may lead to wheezing due to bronchoconstriction, pneumonia commonly results in crackles or rales, and bronchitis can produce a productive cough with rhonchi sounds. Understanding these distinctions helps in assessing and managing airway obstruction effectively.

10. Which of the following is NOT part of the respiratory system?

A. Trachea

B. Alveoli

C. Bronchi

D. Esophagus

The esophagus is indeed not part of the respiratory system; rather, it is a component of the digestive system. Its primary function is to transport food from the throat to the stomach, whereas the respiratory system is responsible for the exchange of gases—specifically oxygen and carbon dioxide—during the process of breathing. The trachea, bronchi, and alveoli are all essential structures within the respiratory system. The trachea serves as the main airway that directs air into the lungs. The bronchi are the passages that branch from the trachea into the lungs, further dividing into smaller tubes. Alveoli are tiny air sacs within the lungs where gas exchange occurs, allowing oxygen to enter the bloodstream and carbon dioxide to be expelled. Understanding these distinctions is crucial for recognizing how the body functions in terms of both respiration and digestion.