



PreHospital Trauma Life Support Course Pretest

Name _____

Date _____ Score _____ /50 = _____ %

Directions: All participants, regardless of scope of practice, are expected to answer all items. Circle the letter of the best answer for each item. There is no minimum score required on the pretest. This is a tool to help you prepare for the course. However, participants will not be admitted to the course without first having completed the pretest.

01. When the application of kinetic energy to the body from either a blunt or penetrating mechanism displaces tissue, this is known as:
 - a. Cavitation
 - b. Deceleration
 - c. The cone of injury
 - d. Shearing

02. Which injury is **most** likely to be sustained by the driver in a lateral impact collision to the left side of the vehicle with no side impact airbags (assuming the driver sits on the left)?
 - a. Bilateral hip dislocation
 - b. Fracture of the right temporal bone
 - c. Contusion to the liver
 - d. Fractured left clavicle

03. Which of the following best describes an injury caused by compression forces?
 - a. A knife blade penetrates the spleen, leaving a path of destruction through the tissue
 - b. A car falls from a jack onto a patient's chest, forcing blood backward from the heart into the head and neck
 - c. A person is struck by a vehicle so that his torso accelerates away from the neck and head
 - d. A vehicle comes to a sudden stop from a high speed. The occupant's liver continues moving forward and is torn at the ligamentum teres



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04. Approximately _____ percent of occupants ejected from the vehicle in a collision sustain fatal injuries.
- 25
 - 50
 - 75
 - 90
05. Which of the following is an example of a tertiary phase blast injury?
- Crushing injury due to structural collapse
 - Shrapnel injuries
 - Pulmonary contusion
 - Exposure to radiation
06. Which of the following characteristics of a projectile is most critical in determining the amount of energy it can transfer to the body?
- Tumble
 - Yaw
 - Velocity
 - Fragmentation
07. Which of the following characteristics is common in pedestrian-vehicle collisions in the adult population, but not in the pediatric population?
- Head and face strike the front or hood of the vehicle
 - Pedestrian is thrown down and run over or drug beneath the vehicle
 - Front of car impacts thorax
 - More likely to turn away from the vehicle
08. Which of the following is *least* likely to affect the amount of energy transmitted to the body in a fall?
- Height the patient falls from
 - Part of the body the patient lands on
 - Type of surface the patient lands on
 - The velocity at which the patient strikes the landing surface



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09. Most on-the-job injuries and deaths of EMS responders are the result of:
- exposure to a communicable disease
 - motor vehicle related incidents
 - assaults by patients or bystanders
 - lifting and moving heavy patients
10. The most common threat to life among trauma patients is:
- Cervical spine injury
 - Traumatic brain injury
 - Internal hemorrhage
 - Inadequate tissue oxygenation
11. Your patient is an injured construction worker bleeding profusely from a large laceration to the left thigh. He is confused and has pale, moist skin. Direct pressure applied to the wound by a first responder has failed to control the bleeding. The next step in controlling bleeding is to apply:
- A topical hemostatic agent
 - PASG
 - Pressure to the femoral artery pressure point
 - A tourniquet proximal to the laceration
12. Your patient opens her eyes to loud verbal stimuli, gives confused answer to your questions, and slaps your hand away when you provide a painful stimulus. Her GCS is:
- 15
 - 12
 - 8T
 - 6
13. In an adult patient, a ventilatory rate of 30 or greater per minute is considered to be:
- Within normal limits
 - Slightly increased
 - Moderately fast
 - Abnormally fast



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14. A trauma patient is orally intubated the endotracheal (ET) tube is inserted to the 27 cm mark at the teeth. Breath sounds are absent on the left side of the chest. You should immediately:
- Ventilate with greater force
 - Perform needle decompression of the left chest
 - Remove the ET tube and ventilate by bag-valve-mask
 - Reposition the ET tube
15. Of the various methods for managing airway and ventilation, _____ has been shown to be superior in terms of patient survival after traumatic injury.
- Bag-valve-mask
 - Dual lumen airway
 - Endotracheal intubation
 - None
16. Recent studies demonstrate that EMS providers tend to make which of the following errors in managing critical patients?
- Hypoventilation
 - Hyperventilation
 - Hypo-oxygenation
 - Hyperoxygenation
17. A patient with severe facial trauma and bleeding from a shotgun blast is sitting up and leaning forward on your arrival. The front of his face is essentially destroyed. The patient is maintaining his airway and has a respiratory rate of 24, GCS of 14. Of the choices below, the best management is:
- Cervical collar, immobilization to a long back board, O₂ by non-rebreather mask, backboard tilted to the left, suction as needed
 - Allow the patient to remain in a seated position, O₂ by non-rebreather mask, suction as needed
 - Provide a surgical airway so the patient can be placed supine for spinal immobilization
 - Initiate medication facilitated intubation so that the patient can be placed supine for spinal immobilization



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18. Which of the following is most often indicated in the prehospital management of the trauma patient who needs an airway intervention?
- Basic adjuncts
 - Dual lumen airway
 - Endotracheal tube
 - Needle cricothyrotomy
19. Minute volume of ventilation is best represented as _____ multiplied by the ventilatory rate.
- Tidal volume
 - Tidal volume minus inspiratory reserve volume (TV – IRV)
 - Total lung capacity minus tidal volume (TLC – TV)
 - Vital capacity
20. Shock is best defined as:
- loss of 30% or greater of blood volume
 - systolic blood pressure less than 90 mmHg
 - widespread inadequate perfusion of the tissues
 - any injury leading to decreased level of consciousness
21. Regardless of the type of shock present, the underlying problem is:
- Hypotension
 - Excessive accumulation of ATP
 - Severe metabolic alkalosis
 - Insufficient oxygen delivery to the cells
22. What percentage of blood volume loss in an adult patient is associated with findings of tachycardia (>120 beats/minute), tachypnea (30 to 40 breaths/minute), and hypotension (systolic BP < 90 mmHg)?
- < 15
 - 15 to 30
 - 30 to 40
 - > 40



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23. The most common type of shock in trauma patients is:
- Neurogenic
 - Cardiogenic
 - Septic
 - Hypovolemic
24. A male patient suffered a stab wound to his left flank. He is found to be in Class III shock. During the 25 minute transport to the trauma center, intravenous fluids should be administered at a rate sufficient to maintain a: _____ mmHg.
- Systolic blood pressure of > 110
 - Mean arterial pressure of > 90
 - Systolic blood pressure of 80 to 90
 - Systolic blood pressure of 60 to 70
25. Hypotension due to spinal cord trauma occurs due to interruption of the _____ nervous system pathway.
- Cranio-sacral
 - Sympathetic
 - Central
 - Parasympathetic
26. A fractured femur can result in _____ mL of hemorrhage.
- 100 to 500
 - 500 to 1000
 - 1000 to 2000
 - 1500 to 3000
27. During pregnancy, signs and symptoms of shock may appear _____ due to a/an 48% _____ in maternal blood volume.
- Earlier, decrease
 - Earlier, increase
 - Later, decrease
 - Later, increase



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28. IV fluids administered to patients in shock should be _____ in order to _____.

- a. warm, prevent hypothermia
- b. room temperature, prevent overheating
- c. cold, decrease metabolism
- d. hot, increase metabolism

29. The greatest threat to life from injury to a hollow abdominal organ is:

- a. Hemorrhage
- b. Peritonitis
- c. Multiple organ failure
- d. Ascites

30. PASG is contraindicated in patients with _____.

- a. Pelvic fracture
- b. Chest trauma
- c. Hypotension
- d. Retroperitoneal bleeding

31. When administering isotonic crystalloid solution, about _____ will remain in the vascular system after 1 hour.

- a. One-third
- b. One-half
- c. Two-thirds
- d. Three-fourths

32. The most commonly fractured ribs are ribs:

- a. 2 through 5
- b. 4 through 8
- c. 3 through 10
- d. 8 through 12



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33. A hemothorax is differentiated from a tension pneumothorax by:
- A penetrating mechanism of injury
 - Hypotension
 - Dull percussion on the affected side
 - Jugular venous distension
34. Cardiac tamponade is suspected with the findings of muffled heart sounds, _____, and _____, known as _____.
- jugular vein distension, hypotension; Beck's triad
 - jugular vein distention, hypotension; Commotio cordis
 - bradycardia, hypertension; Cushing's triad
 - irregular breathing, hypertension; Kussmaul's phenomenon
35. Which of the following mechanisms is most likely to result in cardiac tamponade?
- An unrestrained driver strikes the steering wheel with his chest in a moderate speed impact
 - A baseball player is struck over the sternum in a collision with another player
 - A patient is stabbed in the anterior neck with a screwdriver
 - A patient is struck in the left anterior chest by a nail ejected from a nail gun
36. Management of flail chest includes:
- Stabilizing the flail segment by taping an IV bag over the injured area
 - Pain management
 - Ventilatory support
 - Lying the patient on the side of the flail segment to stabilize it
 - 100% O₂
- 1, 2, 3, 5
 - 2, 3, 4, 5
 - 2, 3, 5
 - 1, 3, 5



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37. Hypotension in hemothorax is associated with:
- The ability of each side of the thorax to hold up to 3 liters of blood
 - Interference with blood return to the heart due to increased intrathoracic pressure
 - Decreased cardiac output due to compression of the myocardium by accumulating blood around the heart
 - Hypoxia
38. Which of the following is the most common cause of spinal injuries?
- Falls
 - Sports injuries
 - Motor vehicle collisions
 - Penetrating trauma
39. Which of the following types of traumatic brain injury is most likely to be associated with hemorrhage from the middle meningeal artery?
- Subdural hematoma
 - Epidural hematoma
 - Intracerebral hematoma
 - Subarachnoid hemorrhage
40. Which of the following groups of findings represents Cushing's phenomenon?
- Unequal pupils, elevated blood pressure, bradycardia
 - Elevated blood pressure, distended jugular veins, bradycardia
 - Bradycardia, abnormal respiratory pattern, elevated blood pressure
 - Cheyne-stokes breathing, unequal pupils, decorticate posturing
41. Your patient is a 32 year old female who was thrown from a horse and struck her head on the ground. She was not wearing a helmet. She does not respond verbally or open her eyes to painful stimuli, but responds to painful stimuli with decerebrate posturing. Her right pupil is dilated and does not react to light. Her respirations are 6 per minute and irregular, pulse 56, blood pressure 188/98. You should ventilate the patient at a rate of _____ per minute.
- 16
 - 20
 - 24
 - 28



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42. The preferred fluid for resuscitation of the patient with significant burns is:
- Lactated Ringer's solution
 - Half normal (0.45%) saline
 - Normal (0.9%) saline
 - Albumin or hetastarch
43. A burn with a reddened, glistening base that may have blisters is most characteristic of a _____ degree burn.
- First
 - Second
 - Third
 - Fourth
44. Which of the following is indicated for the prehospital management of a circumferential second degree burn extending from the wrist to the elbow in a 70 kg patient?
- IV Lactated Ringer's at 200 mL per hour
 - A dry, sterile dressing
 - Analgesia
 - Topical antibiotic ointment
- 1, 2, 3, 4
 - 1, 2, 3
 - 1, 2
 - 2, 3
45. A chemical solution with a pH of 4.0 is considered a/an _____ and causes damage to the tissues via _____.
- Acid, liquefaction necrosis
 - Alkali, liquefaction necrosis
 - Acid, coagulation necrosis
 - Alkali, liquefaction necrosis
46. An electrical burn caused by superheated air near the source of electricity is a/an _____ burn.
- Current
 - Arc
 - Contact
 - Ionic



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47. Your patient is an 82 year old female who was an unrestrained front seat passenger in a motor vehicle collision. Which of the following is the *most* reliable indication of shock in this patient?
- Blood pressure
 - Capillary refill
 - Heart rate
 - Level of consciousness
48. Which of the following findings is *not* expected in assessment of a pregnant patient?
- A decreased blood pressure in the third trimester
 - An increased heart rate in the third trimester
 - A decreased blood pressure in the second trimester
 - Increased ventilatory rate near term
49. Which of the following is contraindicated in the management of a pregnant trauma patient in the third trimester?
- PASG
 - Supine position
 - Short spinal immobilization device
 - Use of analgesia for isolated extremity trauma
50. During assessment of the trauma patient, auscultation of lung sounds is first performed during:
- the primary survey
 - the secondary survey
 - scene survey
 - transport