MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Which of the following are the two most important prehospital considerations for reducing secondary brain injury?
   A) Cervical spine immobilization and ventilation
   B) Ventilation and maintaining adequate blood pressure
   C) ICP monitoring and administering corticosteroids
   D) Ventilation and administering corticosteroids

2) Which of the following best describes the percentage of mortality from penetrating trauma to the cranium?
   A) 90 to 95
   B) 10 to 15
   C) 35 to 50
   D) 75 to 80

3) Which of the following is NOT a component of the Glasgow Coma Scale?
   A) Pupillary reaction
   B) Motor ability
   C) Verbal response
   D) Eye opening

4) Which of the following best describes the effect of hyperventilation in the brain-injured patient?
   A) It is detrimental due to vasodilation, causing an increase in tissue edema.
   B) It is beneficial due to vasodilation, resulting in increased cerebral blood flow.
   C) It is detrimental due to vasoconstriction, resulting in decreased cerebral perfusion.
   D) It is beneficial due to vasoconstriction, resulting in decreased tissue edema.

5) For the patient with suspected traumatic brain injury, the ideal positioning of the patient for transport is:
   A) on a long backboard with the foot of the backboard in a 15-degree Trendelenburg position.
   B) on a long backboard with the patient's feet elevated on pillows to achieve a 15-degree angle.
   C) in a left lateral recumbent position on the backboard.
   D) on a long backboard with the head of the backboard elevated 30 degrees.

6) Your patient is a 37-year-old male unrestrained driver of a vehicle. You find him with his upper body across the console and his head hanging down into the passenger's side floor board area. You note pooled blood from a scalp wound. After immobilizing him and loading him into the ambulance where you have more light for your examination, you note that he has a large, full-thickness avulsion of the scalp. The patient's heart rate is 112, respirations are 20, and blood pressure is 82/50. Which of the following statements about this patient is/are true?
   1. The scalp wound itself cannot account for the patient's vital signs.
   2. The scalp wound itself may account for the patient's vital signs.
   3. The patient's vital signs are consistent with increasing intracranial pressure.
   4. Nothing about the vital signs indicates increased intracranial pressure.
   A) 2, 4
   B) 1, 4
   C) 1, 3
   D) 2, 3

7) Your patient has received blunt facial trauma due to an assault. You should maintain a high index of suspicion for all of the following injuries EXCEPT:
   A) Cervical spine trauma.
   B) Airway obstruction.
   C) Basilar skull fracture.
   D) Hypothermia.
8) A growing lesion in the right cranial hemisphere will most likely result in which of the following?  
A) Normal left pupil; dilated, nonreactive right pupil  
B) Bilaterally constricted, nonreactive pupils  
C) Normal right pupil; dilated, nonreactive left pupil  
D) Bilateral midpoint, nonreactive pupils

9) Your patient is a 45-year-old male with extensive blunt trauma to the face. He has decorticate posturing in response to pain; weak, irregular respiratory effort at 6 per minute; and a heart rate of 50 with a good radial pulse. The patient appears to have nasal and mandibular fractures, and an oropharyngeal airway is insufficient to keep the tongue from the posterior pharynx. Which of the following has the MOST potential to negatively impact the patient?  
A) Oral intubation under direct laryngoscopy  
B) Nasotracheal intubation  
C) Retrograde intubation  
D) A nonvisualized dual lumen airway

10) A closed head injury may present with a set of signs known as Cushing’s triad. All of the following are part of Cushing’s triad EXCEPT:  
A) Slowing pulse.  
B) Increasing respirations.  
C) Erratic respirations.  
D) Increasing blood pressure.

11) Your patient is a 22-year-old female assault victim. She has blunt trauma to the face with swelling around the right eye and zygomatic area. Upon assessing her eye movement, you note that the right eye cannot follow your finger and does not move. Which of the following most likely explains this finding?  
A) She has a fracture of the orbit that has trapped the optic nerve, thereby paralyzing her gaze.  
B) She has direct trauma to the eyeball that has damaged the intrinsic muscles of the eye.  
C) She has direct trauma to the eyeball that has damaged the optic nerve, thereby paralyzing her gaze.  
D) She has a fracture of the orbit that has trapped the extrinsic eye muscles.

12) Which of the following parameters should be used to guide the oxygenation and ventilation of the patient with a traumatic brain injury?  
A) Maintain an oxygen saturation level > 95% and a capnography reading < 35%.  
B) Maintain an oxygen saturation level > 90% and a capnography level < 45 mmHg.  
C) Maintain an oxygen saturation > 95% and a capnography reading between 35 and 45 mmHg.  
D) Maintain an oxygen saturation level > 95% and a capnography reading > 45 mmHg.

13) Central herniation syndrome typically results in which of the following?  
A) Retrograde amnesia  
B) Anterograde amnesia  
C) Central neurologic hyperventilation  
D) Cheyne-Stokes respirations

14) Which of the following medications may be indicated in the prehospital management of the patient with traumatic brain injury?  
A) Furosemide  
B) Methylprednisolone  
C) Mannitol  
D) Diazoxide

15) You are caring for a 22-year-old amateur boxer who complained of a sudden obstruction of part of his visual field. This complaint is most consistent with which of the following conditions?  
A) Retinal detachment  
B) Subconjunctival hemorrhage  
C) Hyphema  
D) Extrusion of the eyeball
16) Which of the following mechanisms causes indirect brain injury?  
   A) Acceleration/deceleration forces without a direct blow to the cranium  
   B) Coup/contrecoup injuries  
   C) Cushing’s reflex  
   D) Systemic hypotension combined with increasing intracranial pressure

17) The term *head injury* refers to which of the following?  
   A) Skull fractures  
   B) Trauma to the brain  
   C) Soft tissue injuries to the scalp  
   D) All of the above

18) Which of the following skull fractures are most common?  
   A) Communited  
   B) Linear  
   C) Depressed  
   D) Basilar

19) Which of the following may result from seizure, worsening the condition of the patient with a traumatic brain injury?  
   A) Increased intracranial pressure due to the seizure activity  
   B) Increased cerebral edema due to impaired ventilation  
   C) Exacerbation of existing brain injury due to physical agitation  
   D) All of the above

20) A concussion is best described as which of the following types of brain injuries?  
   A) Direct, focal  
   B) Indirect, diffuse  
   C) Indirect, focal  
   D) Direct, diffuse
1) B
   Diff: 2     Page Ref: 970
   Objective: 46

2) D
   Diff: 1     Page Ref: 959
   Objective: 35

3) A
   Diff: 1     Page Ref: 972
   Objective: 43

4) C
   Diff: 2     Page Ref: 992
   Objective: 41

5) D
   Diff: 2     Page Ref: 986
   Objective: 46

6) A
   Diff: 3     Page Ref: 961
   Objective: 43

7) D
   Diff: 2     Page Ref: 972
   Objective: 37

8) A
   Diff: 2     Page Ref: 972
   Objective: 39

9) B
   Diff: 3     Page Ref: 987
   Objective: 9

10) B
    Diff: 2     Page Ref: 971
     Objective: 43

11) D
    Diff: 2     Page Ref: 973
     Objective: 6

12) C
    Diff: 2     Page Ref: 990
     Objective: 47

13) D
    Diff: 2     Page Ref: 971
     Objective: 39

14) A
    Diff: 2     Page Ref: 992
     Objective: 43

15) A
    Diff: 2     Page Ref: 976
     Objective: 13

16) D
    Diff: 2     Page Ref: 968
     Objective: 37

17) D
    Diff: 2     Page Ref: 961
     Objective: 38

18) B
    Diff: 1     Page Ref: 962
     Objective: 51

19) D
    Diff: 2     Page Ref: 981
     Objective: 39

20) D
    Diff: 2     Page Ref: 968
     Objective: 39
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Name___________________________________

1) ______
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