



Jerusalem Science Contest 5784

Neuroscience

Test 7

Form – A

Answer Key

- 1) Which of the following is always required to diagnose TBI?
 - a) Skull fracture
 - b) Symptoms or signs of TBI at the time of the injury**
 - c) Bleeding
 - d) Loss of consciousness

- 2) TBI signs and symptoms can include which of the following:
 - a) Skull fracture
 - b) Penetrating injury
 - c) Difficulty breathing
 - d) Confusion**

- 3) John Green is a 43 year old man found at home by his nephew. He had been in his usual active healthy state the day prior. He has been resting at home for 1 week due to a bad “stomach virus”. Mr. Green is very confused and complains of headache and dizziness. Would TBI be a concern based on this description?
 - a) No, because Mr. Green is too old.
 - b) Yes, because Mr. Green exhibits symptoms (headache and dizziness) and signs (confusion) of TBI.
 - c) No, because Mr. Green did not sustain an impact or jolt to his head.**
 - d) Yes, because TBI is the most common cause of headache and dizziness.

- 4) Which TBI outcome is the most common?
 - a) Death
 - b) Severe disability
 - c) Full recovery**
 - d) Brain surgery

- 5) How many people sustain TBI each year in the USA?
- a) 35,000
 - b) 65,000
 - c) 350,000
 - d) 3.5 million or more**
- 6) Which of the following is NOT true regarding focal injury?
- a) It is more likely to be treatable with surgery.
 - b) It is the most important type of injury for determining long-term prognosis.**
 - c) It commonly includes bleeding outside or within the brain.
 - d) It can be readily detected with CT scan.
- 7) Diffuse injury typically appears with:
- a) Bleeding
 - b) Penetrating injury
 - c) Skull fracture
 - d) Normal CT scan**
- 8) Why is bleeding outside of the brain, such as an epidural hematoma, dangerous?
- a) It can be treated with surgery.
 - b) The blood loss can diminish oxygen in the body.
 - c) Pressure on the brain can be fatal.**
 - d) It occurs with skull fracture.
- 9) Which statement best describes the timeframe for diffuse injury after a blow or jolt to the head?
- a) Immediately as the axons are torn at the time of the violent head movement
 - b) Within two hours of the impact
 - c) It does not occur at a specific time, but evolves over weeks or longer**
 - d) After one year has passed since the injury
- 10) Which type of function is most likely to be affected by diffuse injury.
- a) Walking
 - b) Memory**
 - c) Sensing with the fingertips
 - d) Taste
- 11) Which part of the neuron is affected by diffuse injury?
- a) Dendrite
 - b) Cell body
 - c) Axon**
 - d) Synaptic vesicle

- 12) Which of the following *may sometimes* be visible on MRI due to diffuse injury.
- a) Contusion (bruising)
 - b) Bleeding**
 - c) Axonal disconnection
 - d) Swelling
- 13) What makes mild TBI mild?
- a) Absence of bleeding in the brain
 - b) Absence of symptoms
 - c) Complete recovery in 99% of patients
 - d) Mild symptoms at the time of injury**
- 14) Which is a common mild TBI symptom?
- a) Seizures
 - b) Paralysis
 - c) Fatigue**
 - d) Skull deformity
- 15) What is most important for the care of a patient *after* they have sustained a concussion.
- a) Prevention
 - b) Stimulant medication to get the brain going
 - c) Surgery
 - d) Avoiding a second head injury before recovery is complete**
- 16) In which of the following contexts does the Torah mention mental instability?
- a) The Torah never mentions mental instability.
 - b) It is one of the curses that will befall the community if the Jewish people abandon Hashem.
 - c) It is a consequence of other calamities; that is, the Jewish people will suffer trauma-induced insanity as a result of witnessing the other calamities.
 - d) Both b and c**
- 17) Which of the following are mentioned by the Talmud as causes for mental illness?
- a) Physical illness.
 - b) A lifestyle of inactivity.
 - c) Substance abuse.
 - d) All of the above.**
- 18) What is an example in the Talmud of the process of medical diagnosis?
- a) Chagigah 3b: Determining whether a person is a Shoteh**
 - b) Kesuvos 77b: Determining whether a person has parasitic meningitis
 - c) Chulin 24b: Determining the cause of tremors
 - d) Pesachim 112b: Determining the cause of epilepsy

19) What type of approach for treating some forms of anxiety may be derived from the verse in Mishlei (12:25), "דָּאָגָה בְּלֵב-אִישׁ יִשְׁחָנָה"?

a) Prayer

b) Social support

c) Psychiatric medication

d) Cognitive-behavioral therapy

20) When we pray for the sick, do we also include those who are suffering from health issues of the mind?

a) The standardized prayers do not include them, but one may add a specific addition if one wants.

b) No, our prayers refer only to physical illness.

c) No, our prayers refer only to spiritual maladies.

d) Yes, our prayers refer to all forms of illness.