

## Test bank

### Chapter 2

#### Historical perspectives

1. The concept that the brain is composed of different subsystems (or modules), located in specific regions of brain tissue is known as:  
A: Lateralization of function  
**B: Localization of function**  
C: Lateralization of structure  
D: Localization of structure
2. Who introduced the idea of localization of function?  
A: Galen  
B: Sperry  
C: Milner  
**D: Broca**
3. The method that allows scientists to make inferences about what function a brain region performs from observing what behaviors are compromised or absent after damage to that region is known as:  
A: Electrophysiological method  
B: Physiological method  
**C: Lesion method**  
D: Observation method
4. Scientists made many important linkages between the brain and behavior in their interactions with many veterans of the two World Wars, especially those who had sustained missile wounds. What technique did they use to show damaged areas of the skull?  
A: Surgery  
**B: X-rays**  
C: Electroencephalography  
D: Computerized Axial Tomography (CAT, or CT)
5. Which case study approach allows researchers to determine the variability across individuals as well as the degree to which the overall group average typifies the behaviour of individuals in the group?  
A: Single-case study  
B: Independent case study  
C: Group case study  
**D: Multiple-case study**
6. A double dissociation occurs when...  
**A: one brain lesion causes a disruption in Function A but not Function B, whereas a different lesion causes a disruption in Function B but not Function A**  
B: one brain lesion causes disruptions in Function A and Function B  
C: two brain lesions cause disruptions in the same function  
D: one brain lesion causes a disruption in Function A but not Function B, whereas a different lesion causes a disruption in Function A and Function B

7. What is the main disadvantage of the lesion method?  
 A: It is difficult to identify patients with lesions to study.  
**B: It does not allow us to directly investigate the functions of a particular brain area.**  
 C: It is expensive and time-consuming.  
 D: It cannot be used in infants.
  
8. All research with animals must be approved by an ethical review board. In general, what are the types of individuals who must be represented on such a board?  
 A: Researchers and scientists.  
 B: Scientists and veterinarians.  
 C: A veterinarian and members of the community.  
**D: One researcher, veterinarian, a member of the community, and a non-scientist.**
  
9. In electroencephalography (EEG) metal electrodes are positioned on the scalp and amplified. How many electrodes are generally used?  
 A: Around 5  
**B: Between 20 and 100**  
 C: Around 500  
 D: Over 1000
  
10. What is EEG typically used to detect in a clinical setting?  
**A: Epilepsy**  
 B: Schizophrenia  
 C: Memory loss  
 D: Lesions
  
11. Which of the following is a major limitation of EEG:  
 A: It has poor temporal resolution  
 B: It's expensive  
**C: Localization of activity to particular brain regions is difficult**  
 D: Subcortical activation is preferentially recorded
  
12. If a participant in an EEG experiment shows pronounced alpha activity what can we conclude about his or her cognitive state?  
**A: The participant is tired**  
 B: The participant is alert  
 C: The participant is asleep  
 D: The participant is upset
  
13. In EEG, the small region of electrical current with a positive and negative endpoints is called:  
 A: A waveform  
 B: An event-related potential  
**C: A dipole**  
 D: A component
  
14. Which of the following would be considered a disconnection syndrome?  
 A: Dichotic listening  
 B: Double dissociation  
 C: Damage to Broca's area  
**D: Conduction aphasia**

15. What is severed in the split-brain procedure?
- A: Basal ganglia
  - B: Thalamus
  - C: Corpus callosum**
  - D: Cerebellum
16. The Wada technique is used to determine which hemisphere is responsible for speech output in patients. Which of the following is true?
- A: It revealed that the right hemisphere is dominant for speech in 95% of right-handers.
  - B: It revealed that the left hemisphere is dominant for speech in 50% of right-handers.
  - C: It revealed that the left hemisphere is dominant for speech in 95% of right-handers.**
  - D: It revealed that the left hemisphere is dominant for speech in 95% of left-handers.
17. A person who has sustained damage to their right hemisphere would have cognitive deficits with which of the following?
- A: Global processing of linguistic and symbolic information**
  - B: Local processing of linguistic and symbolic information
  - C: Processing linguistic and symbolic information
  - D: Processing symbolic information
18. Which method uses X-rays to provide information about the density of structures, with those most dense, such as the skull, appearing in white, cerebrospinal fluid as dark gray, and brain tissue as light gray?
- A: Electroencephalography (EEG)
  - B: Positron emission tomography (PET)
  - C: Magnetic resonance imaging (MRI)
  - D: Computerized axial tomography (CAT)**
19. In positron emission tomography (PET), what type of molecules are introduced into the blood supply and carried to the brain?
- A: Radioactive molecules**
  - B: Negatively-charged molecules
  - C: Positively-charged molecules
  - D: Non-charged molecules
20. Which of these is **not** a disadvantage of PET?
- A: The number of scans an individual can undergo in a year is limited.
  - B: It cannot be used with individuals who have metal in their bodies or pacemakers.**
  - C: Time periods required to obtain a picture of brain activity are typically long.
  - D: Requires expensive equipment that is not easily available.