



Daily Article (Bharath's Reading list) - Answers and Explanations 28.09.2023

Article link : [Link](#) (Why the Brain's Connections to the Body Are Crisscrossed)

1. Mathematically, the brain's crisscrossed connections to the body is explained by which of the following?

- A. For the nervous system to maintain uncrossed connections, the brain would need to keep flipping one axis of its body maps as the body parts moved, which would be impossible
- B. The topologically simplest way to avoid errors while projecting 3D space onto a 2D surface in the brain is to direct nerve fibers across the midline
- C. As neurons are scattered willy-nilly throughout the brain, an internal map of neural connections that accurately reflects spatial relations in the world makes sense can be only created through crisscrossed connections
- D. All the above

Explanation : B

Option B is clearly stated in the article. Option A is incorrect; the article says for uncrossed connections, the brain would need to keep flipping one axis of its body maps as the body parts moved, which would be impossibly complex (not impossible). Neurons are not scattered willy-nilly throughout the brain, so option C is also incorrect.

2. According to the article, people rarely confuse "q" and "d" while they confuse "p" and "q" because:

- A. While left and right are relative to an object and depend upon the viewpoint, as bilaterally symmetrical creatures we never mistake up and down, because those directions are always the same
- B. When we look at letters what is really happening in the eye is a front-back transformation, showing the letter according to the mental perception you form from the inside looking out

- C. In the first case, the identical shapes are flipped along the vertical axis while in the second, they are flipped along the horizontal axis
- D. All the above

Explanation: A

Option A is true: 'As bilaterally symmetrical creatures we never mistake up and down, because those directions are always the same, regardless of viewpoint, but left and right are relative to an object.'

Option B is factually incorrect while C is not related to the given two pairs of letters

3. Neural cross wiring is ____ in the animal kingdom, suggesting there are ____ benefits to it. Which of the following pairs of words best fits the blanks in the sentence given?

- A. atypical, biological
- B. ubiquitous, evolutionary
- C. singular, topological
- D. commonplace, mathematical

Explanation: B

The article states neural cross wiring is ubiquitous in the animal kingdom and that, 'for evolution to have conserved this arrangement so doggedly, surely there's some benefit to it'.