

## Udaan 2025

## Biology

DHA: 03

## Control and Coordination

**Q1** Which of the following helps in protection of brain?

- (A) Cranium
- (B) Meninges
- (C) Cerebrospinal Fluid (CSF)

☒ (D) All of these

**Q2** The highest coordinating centre in the human body is:

- (A) spinal cord
- (B) heart
- ☒ (C) brain
- (D) kidney

**Q3** Main function of cerebrum is:

- ☒ (A) thinking
- (B) hearing
- (C) vision
- (D) balancing

**Q4** What would happen to the person if cerebellum of his brain is damaged?

- (A) He will lose his memory power.
- (B) He will not be able to swallow food properly.
- ☒ (C) He will be unable to coordinate and stand properly.
- (D) He will lose his power of vision and hearing.

**Q5** Hypothalamus has control centers for

- (A) Sweating
- (B) Sleep
- (C) Body temperature
- ☒ (D) All of these



# Answer Key

Q1 (D)

Q2 (C)

Q3 (A)

Q4 (C)

Q5 (D)



# Hints & Solutions

Note: scan the QR code to watch video solution

## Q1 Text Solution:

The brain is protected by several components:

1. **Skull (Cranium):** The bony structure that encases the brain, providing a hard, protective barrier against physical impacts.
2. **Meninges:** Three layers of membranes (dura mater, arachnoid mater, and pia mater) that surround the brain and spinal cord, offering additional protection and supporting the blood-brain barrier.
3. **Cerebrospinal Fluid (CSF):** A clear fluid that circulates around the brain and spinal cord, providing cushioning and helping to absorb shocks from sudden movements or impacts.

Hence, **option (D) All of these** is correct.

### Video Solution:



## Q2 Text Solution:

The highest coordinating center in the human body is the **brain**. Within the brain, the **cerebral cortex** is particularly important for coordinating complex activities. It is responsible for higher-level functions such as sensory perception, thought, reasoning, and voluntary muscle movement.

Hence, **option (C) brain** is correct.

### Video Solution:



## Q3 Text Solution:

While the cerebrum is involved in various functions such as hearing and memory, its primary role includes higher cognitive processes like thinking, reasoning, and problem-solving. Balancing, on the other hand, is primarily controlled by the cerebellum.

Hence, **option (A) thinking** is correct.

### Video Solution:



## Q4 Text Solution:

If the cerebellum of a person's brain is damaged:

The cerebellum is crucial for coordinating voluntary movements, maintaining posture, and balance. Damage to this area can result in loss of muscle coordination, making it difficult for the person to perform movements smoothly and maintain balance.

Hence, option (C) is correct: **He will be unable to coordinate and stand properly.**

### Video Solution:



## Q5 Text Solution:

The hypothalamus is a vital part of the brain that regulates a variety of physiological processes, including sweating, sleep, and body temperature, among other functions.

Hence, option (D) **All of these** is correct.

### Video Solution:

