A6 · The spinal cord and the brain · Practice key

This is the worked key. Every practice question is worked step by step.

Worked examples

Read these first. There is one for each kind of question in this lesson.

Example 1 · Find the part of the brain from a lost job

After a stroke, a person cannot understand sounds, though the ears are healthy. Which part is affected?

1. Step 1: the job lost is hearing.
2. Step 2: hearing is a sense, so it is in the cerebrum.
3. Step 3: the lobe for hearing is the temporal lobe.

Answer: The temporal lobe.

Example 2 · Read a cross-section of the spinal cord

On a cross-section of the spinal cord, a neuron leaves at the front. What kind of neuron is it?

1. The root at the front is the ventral root.
2. Motor neurons leave through the ventral root.

Answer: A motor neuron.

Practice

Questions 1 to 4 are easy. Questions 5 to 8 are medium. Questions 9 and 10 are harder.

EASY

1. Name the fluid that cushions the brain.

1. It lies between the meninges.
2. It is cerebrospinal fluid.

EASY

2. State where grey matter is found in the spinal cord.

1. White matter is on the outside.
2. Grey matter is in the centre.

EASY

3. Name the largest part of the brain.

1. It fills the top of the skull.
2. It is the cerebrum.

EASY

4. Name the band of nerves that joins the two cerebral hemispheres.

1. It lies deep in the groove between them.
2. It is the corpus callosum.

MEDIUM

5. Explain why white matter is white.

1. It is made of axons with a myelin sheath.
2. Myelin is white.

MEDIUM

6. State the main job of the frontal lobe and of the occipital lobe.

1. Frontal lobe: voluntary movement and thinking.
2. Occipital lobe: vision.

MEDIUM

7. State the job of the pons.

1. It is a relay station.
2. It passes messages between the cerebellum and the medulla oblongata.

MEDIUM

8. A person has trouble moving the left leg after a stroke. Name the hemisphere and the lobe most likely affected.

1. Each hemisphere controls the opposite side, so it is the right hemisphere.
2. Voluntary movement is controlled by the frontal lobe.

HARDER

9. Alcohol makes a person stagger and slur. Use the four steps to name the part of the brain most affected.

1. The job changed is balance and coordinated movement.
2. It is not a sense, a chosen movement or thinking.
3. From the second table: the cerebellum.

HARDER

10. An injury to the medulla oblongata is often fatal. An injury to the cerebellum is not. Explain the difference.

1. The medulla oblongata controls breathing and heart rate.
2. The cerebellum controls balance and coordination.
3. A person can live with poor balance, but not without breathing.