



EnterMedSchool.org

Brain: Basic Anatomy, Locations & Functions

Exam — Brain Anatomy

High-school/pre-med-level questions on major brain regions, lobes, structures and their basic functions.

30 items — Printable Exam

Free & Open-Source

Licensed under Creative Commons — Attribution required when sharing

Generated February 20, 2026

Scan to visit online





1 Which part of the central nervous system is primarily responsible for higher functions such as thinking, memory, and conscious perception?



- A Spinal cord
- B Cerebellum
- C Cerebrum (cerebral hemispheres)
- D Medulla oblongata
- E Hypothalamus

2 Which of the following is NOT part of the brainstem?



- A Midbrain
- B Pons
- C Medulla oblongata
- D Cerebellum
- E All of the above are brainstem structures

3 Which lobe of the cerebral cortex is primarily associated with vision?



- A Frontal lobe
- B Parietal lobe
- C Temporal lobe
- D Occipital lobe
- E Insular cortex





4 The primary motor cortex, which controls voluntary movements of skeletal muscles, is located in the:



- A** Postcentral gyrus of the parietal lobe
- B** Precentral gyrus of the frontal lobe
- C** Temporal lobe
- D** Occipital lobe
- E** Cerebellar cortex

5 The primary somatosensory cortex (for touch, pressure, pain, temperature from the body) is located in the:



- A** Precentral gyrus of the frontal lobe
- B** Postcentral gyrus of the parietal lobe
- C** Temporal lobe
- D** Occipital lobe
- E** Insula

6 Which lobe of the brain is MOST associated with planning, decision-making, personality, and voluntary movement?



- A** Frontal lobe
- B** Parietal lobe
- C** Temporal lobe
- D** Occipital lobe
- E** Cerebellum





7 Which lobe is primarily involved in processing auditory information and is also important for memory and understanding language?



- A Frontal lobe
- B Parietal lobe
- C Temporal lobe
- D Occipital lobe
- E Cerebellum

8 The cerebellum is located:



- A In the frontal lobe behind the forehead
- B Under the occipital lobes, behind the brainstem
- C Between the two cerebral hemispheres, forming the corpus callosum
- D Inside the lateral ventricles
- E At the very top of the brain above the cortex

9 The main function of the cerebellum is to:



- A Generate conscious thoughts and emotions
- B Coordinate movement, balance and posture
- C Control basic breathing and heart rate
- D Produce hormones like insulin
- E Interpret visual information





10 Damage to the cerebellum is most likely to cause:



- A** Complete paralysis of one side of the body
- B** Loss of consciousness
- C** Poor coordination and balance, with clumsy movements
- D** Total blindness
- E** Loss of the sense of smell only

11 The medulla oblongata is crucial for life because it contains centers that control:



- A** Complex thinking and memory
- B** Basic reflexes for breathing and heart rate
- C** Fine motor control of fingers
- D** Color vision
- E** Conscious pain perception only

12 Which structure acts as a major relay station for sensory information going to the cerebral cortex (often called the 'gateway to the cortex')?



- A** Hypothalamus
- B** Thalamus
- C** Cerebellum
- D** Pons





E Amygdala

13 The hypothalamus is BEST known for its role in:



- A Coordinating voluntary muscles
- B Maintaining homeostasis (temperature, hunger, thirst) and controlling the pituitary gland
- C Storing long-term memories
- D Fine-tuning balance and posture
- E Processing visual information

14 The pituitary gland is directly connected to which brain structure?



- A Thalamus
- B Hypothalamus
- C Pons
- D Cerebellum
- E Medulla oblongata

15 The structure that connects the left and right cerebral hemispheres and allows communication between them is the:



- A Brainstem
- B Corpus callosum





- C Thalamus
- D Hypothalamus
- E Pineal gland

16 Gray matter in the brain consists mainly of:



- A Myelinated axons only
- B Neuron cell bodies, dendrites and synapses
- C Cerebrospinal fluid
- D Pure connective tissue
- E Only blood vessels

17 Which statement about the arrangement of gray and white matter in the CEREBRUM is CORRECT?



- A Gray matter is only in the center; white matter is only at the surface
- B Gray matter forms a thin outer cortex and some deeper nuclei; white matter lies beneath the cortex
- C Both gray and white matter are randomly mixed
- D White matter is only found in the spinal cord
- E There is no white matter in the cerebrum

18 The limbic system is mainly involved in:





- A Fine motor control of hand muscles
- B Vision and eye movements
- C Emotions, motivation, and aspects of memory
- D Controlling breathing and heart rate
- E Hearing and balance only

19 Which brain structure is particularly important for forming new long-term declarative memories (facts and events)?



- A Hippocampus
- B Medulla oblongata
- C Pons
- D Cerebellum
- E Pituitary gland

20 The amygdala is most strongly associated with:



- A Regulating heart rate and blood pressure
- B Fine-tuning voluntary movements
- C Processing fear and other emotional responses
- D Controlling endocrine glands directly
- E Producing cerebrospinal fluid





21 In most right-handed people, language production (speaking) is primarily controlled by Broca's area, which is located in the:



- A Right frontal lobe
- B Left frontal lobe
- C Left occipital lobe
- D Right temporal lobe
- E Cerebellum

22 Wernicke's area, important for understanding spoken and written language, is usually found in the:



- A Occipital lobe
- B Right parietal lobe
- C Dominant temporal/parietal region (usually left)
- D Cerebellum
- E Medulla oblongata

23 Which side of the brain primarily controls movements on the RIGHT side of the body?



- A Right cerebral hemisphere
- B Left cerebral hemisphere
- C Cerebellum only
- D Brainstem only
- E Spinal cord only





24 Cerebrospinal fluid (CSF) is produced mainly by the:



- A Cerebral cortex
- B Choroid plexuses in the ventricles
- C Pituitary gland
- D Cerebellar cortex
- E Spinal cord gray matter

25 Which of the following is NOT a function of cerebrospinal fluid (CSF)?



- A Providing buoyancy and cushioning for the brain
- B Helping remove metabolic waste products
- C Transporting some nutrients and chemical signals
- D Directly generating nerve impulses in neurons
- E Providing a stable chemical environment

26 The blood–brain barrier primarily serves to:



- A Allow all substances free access to brain tissue
- B Protect the brain by limiting passage of many substances from blood to brain
- C Generate cerebrospinal fluid
- D Produce myelin for axons
- E Allow proteins and cells to easily enter the brain





27 Which brain region acts as a bridge between the spinal cord and higher brain centers and also plays a role in sleep and breathing?



- A** Pons
- B** Cerebellum
- C** Occipital lobe
- D** Hippocampus
- E** Pituitary gland

28 Which structure is part of the midbrain and is involved in reflex movements of the eyes and head in response to visual and auditory stimuli?



- A** Cerebellar hemispheres
- B** Superior and inferior colliculi (tectum)
- C** Thalamus
- D** Hypothalamus
- E** Basal nuclei

29 Basal nuclei (basal ganglia) are groups of gray matter deep within the cerebral hemispheres that are mainly involved in:



- A** Producing CSF
- B** Coordinating and smoothing motor activity and initiating appropriate movements
- C** Regulating breathing and heart rate
- D** Processing visual information





E Secreting hormones into the blood

30 Which of the following pairings of brain region and MAIN function is MOST accurate?



- A** Occipital lobe – hearing
- B** Temporal lobe – primary control of balance
- C** Medulla – conscious decision-making
- D** Cerebellum – coordination and fine-tuning of movements
- E** Frontal lobe – primary visual processing





#	Ans	Answer Text
	C	
2	D	Cerebellum
	D	
4	B	Precentral gyrus of the frontal lobe
	B	
6	A	Frontal lobe
	C	
8	B	Under the occipital lobes, behind the brainstem
	B	
10	C	Poor coordination and balance, with clumsy movements
	B	
12	B	Thalamus
	B	
14	B	Hypothalamus
	B	
16	B	Neuron cell bodies, dendrites and synapses
	B	
18	C	Emotions, motivation, and aspects of memory
	A	
20	C	Processing fear and other emotional responses
	B	
22	C	Dominant temporal/parietal region (usually left)
	B	
24	B	Choroid plexuses in the ventricles
	D	
26	B	Protect the brain by limiting passage of many substances from blood to b...
	A	
28	B	Superior and inferior colliculi (tectum)
	B	
30	D	Cerebellum – coordination and fine-tuning of movements

