

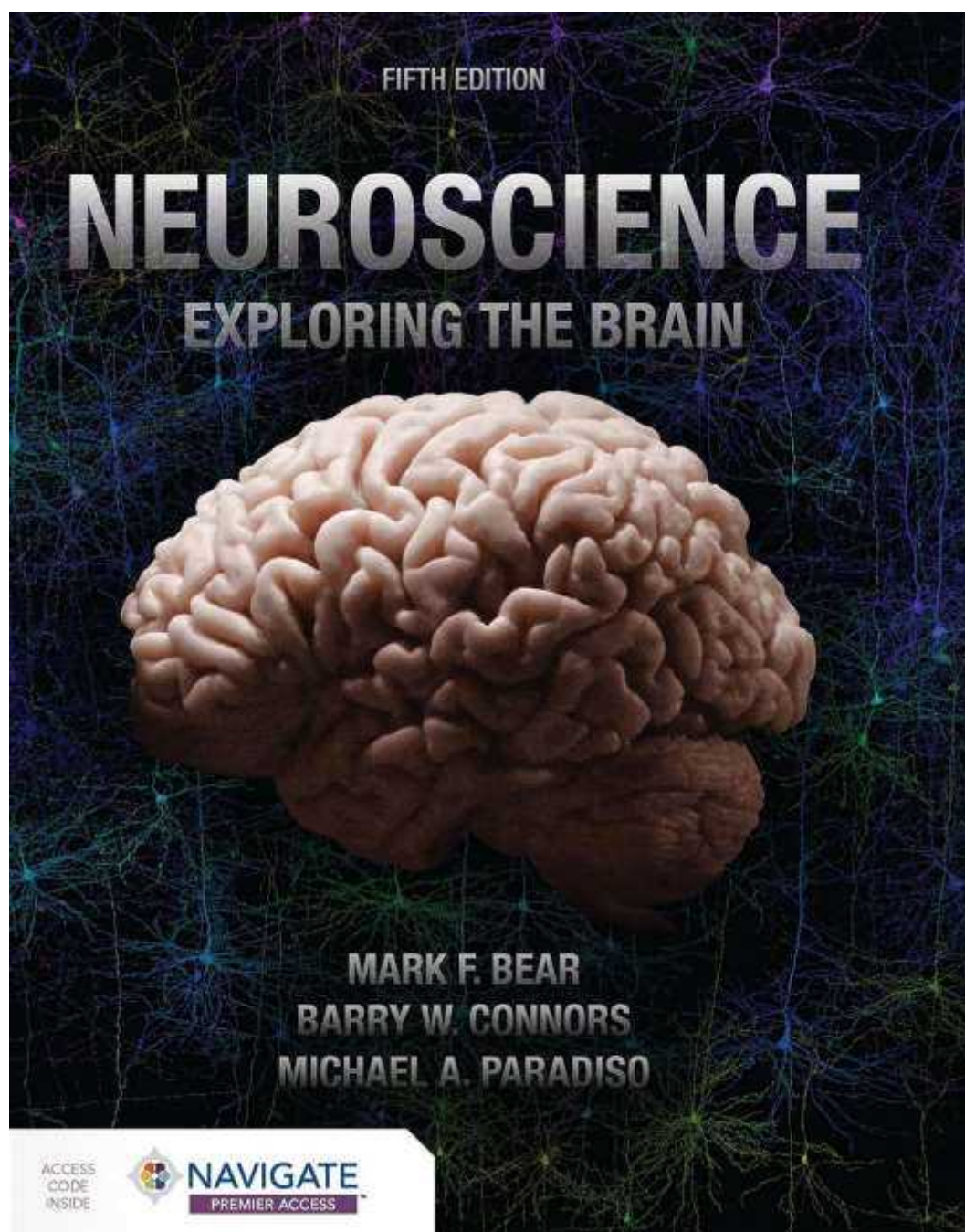
TEST BANK

Neuroscience

Exploring the Brain

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5th Edition



Neuroscience: Exploring the Brain – 5th Edition

Chapter 1: Introduction to Neuroscience

1. According to Hippocrates, which organ is responsible for joys, delights, laughter, and sorrows?

- A) The heart
- B) The liver
- C) The brain
- D) The stomach
- E) The lungs

Answer: C) The brain

2. When was the Society for Neuroscience founded?

- A) 1950
- B) 1960
- C) 1970
- D) 1980
- E) 1990

Answer: C) 1970

3. What is trepanation?

- A) A method of brain imaging
- B) The process of boring holes in skulls
- C) A type of brain surgery for tumors
- D) A technique for measuring brain waves
- E) A form of psychological therapy

Answer: B) The process of boring holes in skulls

4. How long ago were people performing trepanation procedures?

- A) 2000 years ago
- B) 3000 years ago
- C) 5000 years ago
- D) 7000 years ago
- E) 10000 years ago

Answer: D) 7000 years ago

5. According to ancient Egyptian physicians, which organ was considered the seat of the soul?

- A) The brain
- B) The liver
- C) The heart
- D) The lungs
- E) The kidneys

Answer: C) The heart

6. What did ancient Egyptians do with the brain during mummification?

- A) Preserved it carefully in a special jar
- B) Left it inside the skull
- C) Scooped it out through the nostrils and discarded it
- D) Studied it for medical purposes
- E) Offered it to the gods

Answer: C) Scooped it out through the nostrils and discarded it

7. Who is known as the father of Western medicine?

- A) Aristotle
- B) Galen
- C) Hippocrates
- D) Vesalius
- E) Descartes

Answer: C) Hippocrates

8. What did Aristotle believe was the function of the brain?

- A) The seat of intelligence
- B) A radiator for cooling blood
- C) The center of emotions
- D) The source of sensations
- E) The controller of movement

Answer: B) A radiator for cooling blood

9. Who was the most important figure in Roman medicine?

- A) Hippocrates
- B) Aristotle
- C) Galen
- D) Vesalius
- E) Descartes

Answer: C) Galen

10. What were Galen's favorite subjects for dissection?

- A) Humans
- B) Dogs
- C) Sheep
- D) Pigs
- E) Monkeys

Answer: C) Sheep

11. Based on the texture of brain tissue, what did Galen conclude about the cerebrum?

- A) It commanded the muscles
- B) It received sensations

- C) It regulated temperature
- D) It pumped blood
- E) It stored bile

Answer: B) It received sensations

12. What are the hollow spaces inside the brain called?

- A) Cavities
- B) Chambers
- C) Ventricles
- D) Pockets
- E) Cisterns

Answer: C) Ventricles

13. According to Galen's theory, how did the brain communicate with the body?

- A) Through electrical signals
- B) Through movement of humors via hollow nerves
- C) Through solid nerve fibers
- D) Through blood vessels
- E) Through spiritual energy

Answer: B) Through movement of humors via hollow nerves

14. Who was the great anatomist who added more detail to brain structure during the Renaissance?

- A) Galen
- B) Vesalius
- C) Descartes
- D) Bell
- E) Broca

Answer: B) Vesalius

15. What invention in the early seventeenth century supported the ventricular theory of brain function?

- A) The microscope
- B) Hydraulically controlled mechanical devices
- C) The printing press
- D) Electrical generators
- E) Steam engines

Answer: B) Hydraulically controlled mechanical devices

16. Who was a chief advocate of the fluid-mechanical theory of brain function?

- A) Galen
- B) Vesalius
- C) René Descartes
- D) Charles Bell

E) Paul Broca

Answer: C) René Descartes

17. According to Descartes, what made humans different from other animals?

A) Larger brains

B) Better eyesight

C) Possession of intellect and a God-given soul

D) Ability to walk upright

E) Opposable thumbs

Answer: C) Possession of intellect and a God-given soul

18. Through which structure did Descartes believe the mind communicated with the brain?

A) The cerebellum

B) The cerebrum

C) The ventricles

D) The pineal gland

E) The brain stem

Answer: D) The pineal gland

19. What are the two types of brain tissue identified during the seventeenth and eighteenth centuries?

A) Soft matter and hard matter

B) Gray matter and white matter

C) Living tissue and dead tissue

D) Nerve tissue and blood tissue

E) Active tissue and passive tissue

Answer: B) Gray matter and white matter

20. What was white matter correctly believed to contain?

A) Blood vessels

B) Cerebrospinal fluid

C) Fibers that bring information to and from gray matter

D) Waste products

E) Immune cells

Answer: C) Fibers that bring information to and from gray matter

21. What are the bumps on the surface of the brain called?

A) Sulci

B) Fissures

C) Gyri

D) Lobes

E) Nodes

Answer: C) Gyri

22. What are the grooves on the surface of the brain called?

- A) Gyri and lobes
- B) Sulci and fissures
- C) Ridges and valleys
- D) Peaks and troughs
- E) Hills and dales

Answer: B) Sulci and fissures

23. Who published a pamphlet on electricity in 1751?

- A) Thomas Edison
- B) Benjamin Franklin
- C) Luigi Galvani
- D) Charles Bell
- E) Paul Broca

Answer: B) Benjamin Franklin

24. Who showed that muscles can be caused to twitch when nerves are stimulated electrically?

- A) Benjamin Franklin
- B) Charles Bell
- C) Luigi Galvani
- D) Paul Broca
- E) René Descartes

Answer: C) Luigi Galvani

25. What did scientists discover that displaced the notion that nerves communicate by movement of fluid?

- A) Blood circulation
- B) Electrical signals
- C) Chemical messengers
- D) Mechanical vibrations
- E) Magnetic fields

Answer: B) Electrical signals

Who was the Scottish physician that helped identify the functions of spinal nerve roots?

- A) Luigi Galvani
- B) François Magendie
- C) Charles Bell
- D) Paul Broca
- E) David Ferrier

Answer: C) Charles Bell

26. Which spinal root carries sensory information into the spinal cord?

- A) Ventral root

- B) Dorsal root
- C) Anterior root
- D) Posterior root
- E) Both B and D

Answer: E) Both B and D

Which spinal root contains motor fibers?

- A) Dorsal root
- B) Posterior root
- C) Ventral root
- D) Superior root
- E) Inferior root

Answer: C) Ventral root

27. What is the experimental method called in which parts of the brain are systematically destroyed to determine their function?

- A) Lesion method
- B) Ablation method
- C) Dissection method
- D) Removal method
- E) Excision method

Answer: B) Ablation method

28. Who used the experimental ablation method in birds to show that the cerebellum plays a role in movement coordination?

- A) Charles Bell
- B) Paul Broca
- C) Marie-Jean-Pierre Flourens
- D) Franz Joseph Gall
- E) David Ferrier

Answer: C) Marie-Jean-Pierre Flourens

29. Who proposed that personality traits could be related to the dimensions of the head?

- A) Charles Bell
- B) Paul Broca
- C) Franz Joseph Gall
- D) Marie-Jean-Pierre Flourens
- E) René Descartes

Answer: C) Franz Joseph Gall

30. What was the "science" of correlating head structure with personality traits called?

- A) Craniology
- B) Phrenology
- C) Psychology

D) Neurology

E) Anthropology

Answer: B) Phrenology

31. Who was one of the most vociferous critics of phrenology?

A) Franz Joseph Gall

B) Paul Broca

C) Charles Bell

D) Marie-Jean-Pierre Flourens

E) Charles Darwin

Answer: D) Marie-Jean-Pierre Flourens

32. Who is credited with tilting scientific opinion firmly toward localization of functions in the cerebrum?

A) Franz Joseph Gall

B) Paul Broca

C) Charles Bell

D) Marie-Jean-Pierre Flourens

E) David Ferrier

Answer: B) Paul Broca

33. In what year did Broca examine the brain of a patient who could understand language but could not speak?

A) 1851

B) 1856

C) 1861

D) 1870

E) 1881

Answer: C) 1861

34. Where was the lesion located in Broca's famous patient?

A) Right frontal lobe

B) Left frontal lobe

C) Right temporal lobe

D) Left temporal lobe

E) Occipital lobe

Answer: B) Left frontal lobe

35. Who showed in 1870 that applying small electrical currents to the brain could elicit discrete movements?

A) Paul Broca

B) Charles Bell

C) Gustav Fritsch and Eduard Hitzig

D) David Ferrier

E) Hermann Munk

Answer: C) Gustav Fritsch and Eduard Hitzig

36. Which part of the cerebrum did Hermann Munk find was specifically required for vision?

A) Frontal lobe

B) Temporal lobe

C) Parietal lobe

D) Occipital lobe

E) Insular lobe

Answer: D) Occipital lobe

37. Who published "On the Origin of Species" in 1859?

A) Alfred Wallace

B) Charles Darwin

C) Jean-Baptiste Lamarck

D) Gregor Mendel

E) Thomas Huxley

Answer: B) Charles Darwin

38. What is the process by which advantageous traits are passed on to the next generation called?

A) Artificial selection

B) Natural selection

C) Genetic drift

D) Gene flow

E) Mutation

Answer: B) Natural selection

39. What behavioral response did Darwin observe was similar across many mammalian species when frightened?

A) Running away

B) Pupils dilating, heart racing, hairs standing on end

C) Freezing in place

D) Vocalizing loudly

E) Aggressive displays

Answer: B) Pupils dilating, heart racing, hairs standing on end

40. Why do neuroscientists use animal models?

A) Animals are cheaper to study

B) Animals are easier to handle

C) Nervous systems of different species evolved from common ancestors

D) Animals don't feel pain

E) Animals reproduce faster

Answer: C) Nervous systems of different species evolved from common ancestors

41. Which animal model has been particularly useful for studying electrical impulse conduction?

- A) Rat
- B) Mouse
- C) Squid
- D) Monkey
- E) Dog

Answer: C) Squid

42. Who proposed the cell theory in 1839?

- A) Matthias Schleiden
- B) Theodor Schwann
- C) Rudolf Virchow
- D) Robert Hooke
- E) Anton van Leeuwenhoek

Answer: B) Theodor Schwann

43. What is the basic functional unit of the nervous system called?

- A) Cell
- B) Tissue
- C) Neuron
- D) Organ
- E) Fiber

Answer: C) Neuron

44. By what year was the neuron recognized as the basic functional unit of the nervous system?

- A) 1850
- B) 1875
- C) 1900
- D) 1925
- E) 1950

Answer: C) 1900

45. What are the thin projections that extend from a neuron's cell body called?

- A) Dendrites
- B) Axons
- C) Processes
- D) Fibers
- E) All of the above

Answer: E) All of the above