

Contents

- 1 Introduction to Neuroscience
- Part 1 Overview of Neurology
- 2 Neuroanatomy
- 3 Neurologic Disorders and the Neurologic Examination
- 4 Neuroimaging and Neuroanatomy Atlas
- Part 2 Neuroscience at the Cellular Level
- 5 Physical and Electrical Properties of Cells in the Nervous System
- 6 Neural Communication: Synaptic and Extrasynaptic Transmission
- 7 Neuroplasticity
- Part 3 Development of the Nervous System
- 8 Development of the Nervous System
- Part 4 Vertical Systems
- 9 Autonomic Nervous System
- 10 Peripheral Somatosensory System
- 11 Central Somatosensory System
- 12 Pain as a Disease and as a Symptom, 182
- 13 Motor System: Lower Motor Neurons and
- 14 Motor System: Upper Motor Neurons, 224
- 15 Motor, Cognitive, and Emotion Systems: The Cerebellum
- 16 Motor and Psychologic Functions: Basal Ganglia
- 17 Control of Movement
- Part 5 Regions
- 18 Peripheral Region
- 19 Spinal Region
- 20 Cranial Nerves
- 21 Brainstem Region
- 22 Visual System
- 23 Vestibular System
- 24 Dizziness and Unsteadiness
- 25 Cerebrospinal Fluid System
- 26 Blood Supply, Stroke, Fluid Dynamics, and

Intracranial Pressure

27 Cerebrum

28 Memory, Consciousness, and Intellect

29 Behavior, Emotions, Decision Making,
Personality: Prefrontal Cortex and Temporal
Poles

30 Communication, Directing Attention,
and Spatial Cognition: Temporoparietal
Association Cortex and Inferior Frontal
Gyrus

Part 6 Neurologic Tests

31 Neurologic Tests

Glossary

Index