

Study Guide for The Nervous System

FUNCTIONS AND DIVISIONS OF THE NERVOUS SYSTEM p. 388- / 386-

NEUROGLIA (as a group; not individual types) p. 389- / 388-

REVIEW OF RMP, CHEMICAL SYNAPSES, ACTION POTENTIALS, POSTSYNAPTIC POTENTIALS: EPSPs, IPSPs, & Summation p. 399-405 / 395-413

MEMORY – p. 460- / 457-

Short-term memory

Long-term Potentiation (LTP)

View 7 min video on memory, chemical synapse activity, and potentiation.

NEUROTRANSMITTERS (OYO from handout)

Practical Applications: Generic Effects of Drugs / Meds. (OYO from handout)

NT Hall of Fame (OYO from handout)

Good Animations of “How Drugs Work” can be seen at:

www.pbs.org/wnet/closetohome/science/html/animations.html

Skip the “In The Body” section but look at those in the “In The Brain” section.

BLOOD FLOW TO THE BRAIN

ISCHEMIA vs. HYPOXIA

SYNCOPE

TIA

CVA

Video (15 min) Cerebral cortex functions, Stroke, Formation of new synapses, Nerve growth factor, “When wires get crossed,” etc.

PHYSIOLOGIES OF DEPRESSION and ADDICTION

NERVE PLEXUSES p. 509- / 502-

What? Why? Pros and Cons.

SPINAL REFLEXES and REFLEX ARCS p. 521 - / 514-

Generic components of a reflex arc.

Clinical use of reflexes

DERMATOMAL MAPS - clinical use p. 516- / 510-

DIVISIONS OF THE CNS and their Functions (OYO from handout received in lab. Replaces and improves Table 12.1 p. 453)

CEREBROSPINAL FLUID (CSF)

Formation, pathway, fate & functions

p. 465- / 463-

BLOOD-BRAIN BARRIER

What? Where? Why? Pros and cons.

p. 467- / 463-

The AUTONOMIC NERVOUS SYSTEM

Parasympathetic division

Sympathetic division

p. 535- / 526-

EFFECTS of ANS on target tissues

Table 14.5 p. 546 / Table 14.4 p 538

NEUROTRANSMITTERS AND RECEPTORS OF THE ANS

Cholinergic

Adrenergic

p. 543- / 535-

CLINICAL APPLICATIONS: Meds. examples

(my notes)

EXAM #4