

Physio 67 midterm key words

<p>Ch2 Nissl stain cytoarchitecture Golgi stain Cajal neuron doctrine</p> <p>Unipolar bipolar multipolar pseudounipolar stellate cell pyramidal cell sensory neuron motor neuron interneuron</p> <p>Neurons cell body/soma neurites axon dendrite cytoplasm cytosol</p>	<p>organelles mitochondria nucleus endoplasmic reticulum smooth ER rough ER ribosomes golgi apparatus vesicles microtubules neurofilament microfilament</p> <p>DNA chromosomes genes gene expression proteins protein synthesis mRNA transcription splicing translation promoter polyribosomes</p>	<p>Synapse innervation Presynaptic axon terminal terminal bouton synaptic cleft synaptic vesicles receptor sites postsynaptic dendrite transmission neurotransmitter Dendritic spines terminal arbor dendritic tree Axoplasmic transport anterograde transport retrograde transport</p> <p>Glia Oligodendrocyte Schwann cell astrocyte Myelin ependymal cells microglia</p>
<p>Ch7 Directions: Dorsal - ventral anterior - posterior superior - inferior lateral - medial rostral - caudal sagittal, mid-sagittal Coronal ipsilateral - contralateral</p> <p>Central nervous system CNS Peripheral nervous system PNS efferent afferent autonomic nervous system ANS somatic visceral</p>	<p>Brain areas: Cerebrum Frontal lobe parietal lobe occipital lobe Temporal lobe Insula Cerebellum Brain stem Meninges pia mater subarachnoid space arachnoid Dura mater Sulcus gyrus Fissure Central sulcus precentral gyrus</p>	<p>postcentral gyrus lateral fissure Cerebral cortex right and left hemisphere Thalamus hypothalamus pituitary Pineal amygdala hippocampus Mamillary body fornix corpus callosum olfactory bulb optic nerve optic chiasm optic tract basal ganglia cortical white matter</p>
<p>...Ch7</p>	<p>ventral roots</p>	<p>Prosencephalon</p>

<p>Lateral ventricles third ventricle cerebral aqueduct fourth ventricle spinal canal midbrain tegmentum tectum hindbrain pons Medulla Pontine reticular formation medullary pyramid superior colliculus inferior colliculus substantia nigra</p> <p>Spinal cord: ventral column ventral horn ventral root filaments</p>	<p>lateral column dorsal horn dorsal column dorsal root filaments dorsal roots dorsal root ganglion spinal nerve spinal pia mater subarachnoid space spinal arachnoid spinal Dura mater</p> <p>endoderm mesoderm ectoderm neural plate neural groove neural fold neural tube somites neural crest</p>	<p>Diencephalon telencephalon mesencephalon rhombencephalon metencephalon myelencephalon</p> <p>Cranial nerves: I olfactory II optic III oculomotor IV trochlear V trigeminal VI abducens VII facial VIII auditory-vestibular IX glossopharyngeal X Vagus XI spinal accessory XII hypoglossal</p>
<p>Ch3 Action potential excitable membrane resting membrane phospholipid bilayer hydrophilic hydrophobic ions anions cations Na+ K+ Ca2+ Cl-</p>	<p>Protein enzyme peptide bond polypeptides amino acids R-groups subunit receptor ion channel gating ion selectivity ion pump Diffusion concentration gradient sodium potassium pump</p>	<p>Electricity voltage electrical potential electrical current electrical conductance electrical resistance depolarization ohms law ionic equilibrium potential Nernst equation Goldman equation relative ion permeability blood brain barrier</p>
<p>Ch4 Action potential resting membrane rising phase overshoot falling phase undershoot</p>	<p>hyperpolarization threshold Absolute refractory period relative refractory period Sodium influx potassium efflux voltage gated Na+ channels</p>	<p>voltage gated K+ channels delayed rectifier Saltatory conduction Meylan node of Ranvier Axon Hillock spike-initiation zone</p>

<p>Ch5 Synaptic transmission chemical synapse gap junction postsynaptic potential Secretory granule dense-core vesicle membrane differentiation active zones postsynaptic density Synaptic arrangements axodendritic synapse axosomatic Axoaxonic Neuromuscular junction motor endplate NT release</p>	voltage gated Ca ²⁺ channels exocytosis endocytosis transmitter gated ion channels excitatory postsynaptic potential inhibitory postsynaptic potential G protein coupled receptors second messenger metabotropic receptor autoreceptors enzymes degradation neuropharmacology inhibitors receptor antagonists receptor agonist nicotinic acetylcholine receptor	Synaptic integration miniature postsynaptic potential graded potential quantal analysis spatial summation temporal summation dendritic cable properties: length constant internal resistance membrane Resistance excitable dendrites shunting inhibition modulation cAMP protein can maces phosphorylation
<p>Ch6 receptor subtype nicotinic ACh receptor muscarinic ACh receptor co-transmitter rate-limiting step retrograde messenger kinesin v-snare protein t-snares SNAP</p>	Major neurotransmitters: Amino acids: <ul style="list-style-type: none"> • <u>GABA</u> • <u>glutamate</u> • glycine Amines: <ul style="list-style-type: none"> • <u>acetylcholine</u> • dopamine • epinephrine • histamine • norepinephrine • serotonin 	Peptides: <ul style="list-style-type: none"> • cholecystokinin • Dynorphin • enkephalins • NAAG • neuropeptide Y • somatostatin • substance P • thyroiddropin releasing - hormone • vasoactive intestinal polypeptide
<p>Ch13 Skeletal muscle muscle fiber somatic motor system Neuromuscular junction motor end plate synergist muscle agonist group antagonist group motor plant alpha motor neuron</p>	motor unit motor neuron pool fast motor unit Slow motor unit twitch lower motor neuron upper motor neuron convergence divergence renshaw cell cervicocollic reflexes	velocity sensitivity muscle spindle proprioceptor simple reflex myotatic reflex intrafusal fibers extrafusal fiber gamma motor neuron Golgi tendon organ Reciprocal inhibition central pattern generator
<p>Ch8 gustation olfaction chemoreceptor papilla</p>	receptor potential transduction gustatory nucleus ventral posterior medial - nucleus	pheromone olfactory epithelium olfactory bulb cribriform plate glomerulus

<p>taste bud taste pores taste receptor cell fungiform foliate</p>	<p>primary gustatory cortex population coding</p>	<p>olfactory cortex sensory map temporal coding olfactory tract</p>
<p>Ch12 Somatic sensation mechanoreceptor Thermoreceptor receptive field sensory array dermatome spinothalamic pathway</p>	<p>Pacinian corpuscle Ruffini's ending Hair follicle receptor Meissner's corpuscle Merkel's disk free nerve endings</p>	<p>synesthesia plasticity lateral inhibition hyperalgesia nociception</p>
<p>Ch9 Vision refraction retina pupil iris lens cornea sclera extraocular muscles ciliary muscles optic nerve optic disk macula fovea aqueous humor vitreous humor</p>	<p>dioppter accomodation pupillary light reflex visual field visual acuity visual angle photoreceptor bipolar cell ganglion cell horizontal cell amacrine cell ganglion cell layer inner nuclear layer outer nuclear layer layer of photoreceptor outer - segments inner plexiform layer outer plexiform layer rod photoreceptor cone photoreceptor</p>	