**Reading Outline for Plotnik’s Introduction to Psychology, 4th Edition**

**Module 3 “Brain’s building Blocks”**

**Introduction**

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1. **Overview: Human Brain**

*Four Questions about the Brain*

 1. What is the Brain Made Of?

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Glial cells –

 Neurons –

 2. How Do Brain Cells Develop?

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 3. Can the Brain Repair Its Damaged Cells?

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 4. Is the Brain the Same as the Mind?

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**B. Neurons: Structure and Function**

 1. The cell body –

 2. Dendrites –

 3. The axon –

 4. The myelin –

 5. Terminal buttons –

 6. The synapse –

**C. Neurons versus Nerves**

 Can arms be Reattached?

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 The peripheral nervous system –

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 The central nervous system –

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**D. Sending Information**

 1. Axon Membranes: Chemical Gates

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 2. Ions: Charged Particles

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 3. Resting State: Charged Battery

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 4. Action Potential: Sending Information

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 5. Nerve Impulse: Combining Action Potentials

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 5a. The all-or-none-law –

 5b.

 5c.

 5d.

**E. Neurotransmitters & Receptors**

 *Neurotransmitter –*

 1.

 2.

 3.

 4.

 5.

 6.

 *How Many Chemical Keys and Locks?*

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 *How Does Alzheimer’s Affect Neurotransmitters?*

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 *What are the New Neurotransmitters?*

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**F. Reflex Responses**

 *How Do You Move Your Hand Without Thinking?*

 Reflex –

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 *Four steps in a reflex response*

 1.

 2.

 3.

 4.

 *Why Do We Have Reflexes?*

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G. Research Focus: Phantom Limb

 *What Happens after Amputation?*

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 *What is Phantom Limb?*

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 *What is Neural Plasticity?*

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**H. Cultural Diversity**

 *How do drugs affect neurotransmitters?*

1. Cocaine: Blocking reuptake

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2. Curare: Blocking Receptors

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 3. Mescaline: Mimics neurotransmitter

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**I. Application: Concerns about Research**

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 *Issues Surrounding Fetal Transplantation*

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 *Fetal Tissue Transplant*

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 *Results*

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 *Brain Scans*

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 *Significance of Fetal Tissue Transplant*

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