1. Describe the major domains of neuropsychological functioning.

Ans: The Neuropsychological Domains

Attention/Concentration: This domain deals with the ability to focus awareness on a given stimulus or task, to concentrate on that stimulus or task long enough to accomplish a goal, and to shift awareness if appropriate. These abilities vary by individual, and may be impaired to the point of becoming a formal attention deficit disorder. Problems in this domain can make focused searching and interaction difficult.

Language: Language skills of various types are covered by this domain. They are typically associated with the left (dominant) cerebral hemisphere. Both oral, written, the consist of one’s abilities to comprehend repeat and express in these modes, in addition to finding words and names quickly by category or sound. Problems here can affect a client’s ability to conceptualize complex ideas and relationships, and lead to an over-reliance on verbal expression.

Motor Skills: Gross, manual fine-motor, and facial fine-motor abilities are covered here. Difficulties can make one’s facial expressions or gestures difficult to read, or affect one’s self-esteem.

Executive Functions: This domain deals with a variety of higher-order functions—planning, conceptualizing, organizing, evaluating—largely concerned with the working of the frontal lobes, the last to evolve and develop in the human brain. Variations in frontal function vary widely in individuals and are implicated in ADHD, impulse control disorders of various kinds, antisocial behaviors, and the ability to achieve insight. Difficulties in this domain can be of many kinds, and can make inner searching and insight particularly difficult.

Memory: Visual, verbal, and motor memory are the usual foci here, with olfactory and gustatory memory usually not having strong psychological implications (although they may be associated with dementia). Memory can be very brief, short-term, or long-term. Learning is another dimension here, and can be measured in terms of free or cued recall, as well as by various forms of recognition (yes/no, multiple choice, forced-choice) or cueing (semantic and phonemic). Problems in this domain can affect recall from session to session in the verbal mode, or even within the session, forcing the therapist to adjust approaches accordingly (e.g., from insight to behavioral interventions).

2. Explain parietal lobe with a focus on its location, anatomy and functions. Describe the effect of damage to Parietal lobe.

Ans: The parietal lobes are one of the four main lobes or regions of the cerebral cortex. The parietal lobes are positioned behind the frontal lobes and above the temporal lobes. The parietal lobes are important to the function and processing of sensory information, understanding spatial orientation and body awareness.

Location

Directionally, the parietal lobes are superior to the occipital lobes and posterior to the central sulcus and frontal lobes. The central sulcus is the large deep groove or indentation that separates the parietal and frontal lobes.

Function

The parietal lobes are involved in a number of important functions in the body. One of the main functions is to receive and process sensory information from all over the body. The somatosensory cortex is found within the parietal lobes and is essential for processing touch sensations. For instance, the somatosensory cortex helps us to identify the location of a touch sensation and to discriminate between sensations such as temperature and pain. Neurons in the parietal lobes receive touch, visual and other sensory information from a part of the brain called the thalamus. The thalamus relays nerve signals and sensory information between the peripheral nervous system and the cerebral cortex. The parietal lobes process the information and help us to identify objects by touch. The parietal lobes work in concert with other areas of the brain, such as the motor cortex and visual cortex, to perform certain tasks. Opening a door, combing your hair, and placing your lips and tongue in the proper position to speak all involve the parietal lobes. These lobes are also important for understanding spatial orientation and for proper navigation. Being able to identify the position, location and movement of the body and its parts is an important function of the parietal lobes.

Parietal lobe functions include:

- Cognition
- Information Processing
- Touch Sensation (Pain, Temperature, etc.)
- Understanding Spatial Orientation
- Movement Coordination
- Speech
- Visual Perception
- Reading and Writing
- Mathematical Computation

Damage

Damage or injury to the parietal lobe can cause a number of difficulties. Some of the difficulties as it relates to language include the inability to recall the correct names of everyday items, inability to write or spell, impaired reading, and the inability to position the lips or tongue properly in order to speak. Other problems that may result from damage to the parietal lobes include difficulty in performing