

TEST: HIGHER CENTER FUNCTION

INSTRUCTIONS
1- All objective questions are to be attempted on the paper and returned to the invigilator within 20mins.
2- Any cutting and overwriting in objective part will not be accepted.

The basic functions of Parieto-occipital Association area includes all of the following except:

Broca's area

Gives the general orientation of body in space by computing visual, auditory and other sensations
Wernicke's area 22 is important in language comprehension

Angular gyrus area feeds read words from book to Wernicke's area

Lateral portions of anterior occipital lobe & post temporal lobe is specified for moving the objects

Broca's area 44 for sensory *Broca's area*

The prefrontal lobotomy results in all of the following except:

- Loss of ability to solve complex problems
- Loss of ability to do many parallel tasks together
- Loss of aggressiveness & ambition
- Loss of speech & language comprehension ✓
- Inappropriate social behavior

Regarding Wernicke's area, following is true only:

- Sensory speech area as it receives visual and auditory information ✓
- Responsible for the movement of tongue, lips and larynx
- Movement of muscles for speech
- Important for Memory storage
- An area for learning

Regarding Global aphasia, following is true

- Occur due to damage of frontal lobe of cerebral cortex
- Occur due to damage of left temporal lobe
- Due to widespread damage of speech areas of brain ✓
- Due to damage of posterior temporal lobe
- Due to the damage in the visual association area

The motor aphasia occurs due to damage of:

- Visual association area 18
- Primary motor area 4
- Broca's area 44 ✓
- Wernicke's area 22
- All of the above

Broca's area
no foot print
are fog
44

Q6. Correct statements regarding rapid eye movement (REM) sleep include which of the following?

- A. It is the first stage of sleep entered when a person falls asleep
- B. It is accompanied by loss of skeletal muscle tone ✓
- C. It is characterized by a slow but steady heart rate
- D. It occurs more often in adults than in children
- E. It lasts longer than periods of slow-wave sleep

Q7. The motor cortex of cerebral cortex receives motor signals for speech from:

- A. Visual association area 18
- B. primary motor area 4
- C. Broca's area 44 ✓ *Broca's area 44*
- D. Wernicke's area 22
- E. All of the above

Q8. A patient seems to be able to comprehend the spoken language. Which of the following terms best describes this patient's condition?

- A. Broca's aphasia
- B. Wernick's aphasia ✓
- C. Global aphasia
- D. None of the above
- E. All of the above

Q9. Which of the following statements concerning memory processing in the brain is correct?

- A. The brain forms positive memory by ignoring the information of no consequence
- B. Short-term memory is considered to be a list of 7 to 10 discrete facts that can be recalled within a period of several hours
- C. It appears that rehearsal and repetition of information are not advantageous in converting short-term memory to long-term memory
- D. Lesions involving the hippocampus cause a profound deficit in short-term memory ✓
- E. No morphological or structural changes occur in the process of long-term memory formation

97 is a 010 paired by the words

Q11. Correct statements regarding rapid eye movement (REM) sleep include which of the following?

REM is skeletal

- A. It is the first stage of sleep entered when a person falls asleep
- B. It is accompanied by loss of skeletal muscle tone**
- C. It is characterized by a slow but steady heart rate
- D. It occurs more often in adults than in children
- E. It lasts longer than periods of slow-wave sleep

Q12. Spike and dome pattern of EEG waves is seen in:

Retinell epilepsy

- A. Slow wave sleep
- B. Grandmal epilepsy
- C. Petitmal epilepsy**
- D. Rapid eye movement sleep
- E. Focal epilepsy

Q13. A patient seems to be able to comprehend spoken language but is unable to speak the appropriate words or form sounds into words. Which of the following terms best describes the patient's condition?

Brock's aphasia

- A. Brock's aphasia**
- B. Wernick's aphasia
- C. Global aphasia
- D. None of the above
- E. All of the above

Q14. Cause of dysarthria is:

- A. Trauma of vocal cord
- B. Paralysis of vocal cord
- C. Lumps on vocal cord
- D. Inflammation of larynx
- E. All of the above**

Q15. Very high voltage EEG wave is:

delta wave (delta waves)

- A. Alpha wave
- B. Beta wave
- C. Theta wave
- D. Delta wave**
- E. Gamma wave

Q16. Which of the following statements about memory processing in the brain is correct?

- A. The brain forms positive memory
- B. Short-term memory is considered to be 10 discrete facts that can be recalled over a period of several hours
- C. It appears that rehearsal and repetition of information are not advantageous in moving short-term memory to long-term memory
- D. Lesions involving the hippocampus cause a profound deficit in short-term memory**
- E. No morphological or structural changes occur in the process of long-term memory formation

Q17. Schizophrenia is thought to be caused by excessive production and release of which following neurotransmitter agents?

- A. Norepinephrine
- B. Serotonin
- C. Acetylcholine
- D. Substance P
- E. Dopamine**

Q18. Retrograde Amnesia is:

- A. Inability to recall recent events
- B. May be present in hippocampal lesions
- C. Present in damage of some areas of thalamus
- D. All of the above**
- E. None of the above

Q19. Long term memory occurs due to:

- A. Reverbrating circuits
- B. Structural changes at synapse**
- C. Presynaptic facilitation
- D. All of the above
- E. None of the above

Q20. Which of the following diseases is characterized by accumulation of Brain Beta-Amyloid Peptide?

- A. Alzheimer's disease**
- B. Psychoses
- C. Spinocerebellar ataxia
- D. Huntington's disease
- E. Schizophrenia

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MULTIPLE CHOICE QUESTIONS (MCQs)
Select Single best answer, all questions carry equal marks.

Total Marks: 20

Dated: 18-05-2014

ROLL #:

INSTRUCTIONS

- 1- All objective questions are to be attempted on the paper and returned to the invigilator within 20 minutes.
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SECTION TEST: HIGHER BRAIN FUNCTION

1. Which one of the following hypothalamic nuclei responsible for the detection of the core body temperature?

- The lateral hypothalamus
- The arcuate nucleus
- The posterior nucleus
- The paraventricular nucleus
- The anterior hypothalamus

Anterior hypothalamic nuclei

2. The reward center is present in hypothalamus

- Lateral and ventromedial hypothalamic nuclei
- Periventricular hypothalamus and midbrain central gray
- Supraoptic nuclei of the hypothalamus
- Anterior hypothalamus nucleus
- None of the above

Lateral and ventromedial hypothalamic nuclei

3. Which of the following cell groups is considered punishment center?

- Lateral and ventromedial hypothalamic nuclei
- Periventricular hypothalamus and midbrain central gray
- Supraoptic nuclei of the hypothalamus
- Anterior hypothalamic nucleus
- None of the above

Lateral and ventromedial hypothalamic nuclei

4. Bilateral lesions involving the ventromedial thalamus lead to which of the following?

- Increased eating and drinking
- Loss of sexual drive
- Excessive eating, rage and aggression, and hyperactivity
- Decreased uterine contractility and mammary gland development
- Obsessive-compulsive disorder

5. In a healthy adult sitting with eyes closed the rhythm observed with electrodes on occipital

alpha - alpha

Q6. Functions of limbic system are all EXCEPT:

- A. Olfaction
- B. Gestation (taste sensing) regulation
- C. Feeding behaviour.
- D. Sexual behaviour
- E. Body temperature

Q7. Stimulation in lateral hypothalamus can cause which effects:

- A. Drinking
- B. Eating
- C. Hyper-activity
- D. Overt rage and fighting
- E. All of the above

Q8. Effect initiated from amygdala and sent through the hypothalamus includes:

- A. Changes in arterial pressure
- B. Changes in gastrointestinal motility and secretion
- C. Defaecation and micturition
- D. Secretion of various anterior pituitary hormones
- E. All of the above

Q9. Global aphasia is a:

- A. Occur due to damage of frontal lobe of cerebral cortex
- B. Occur due to damage of left temporal lobe
- C. Due to widespread damage of speech areas of brain
- D. Due to damage of posterior temporal and inferior
- E. Due to the damage in the visual association area

Q10. Which of the following statements concerning electroencephalogram activity is correct?

- A. Beta waves occur in normal adults who are awake but in a quiet, resting state.
- B. Alpha waves occur at 14 to 80 cycles per second during periods of heightened, excited activity or high tension
- C. Theta waves are commonly seen in children but also occur in adults during emotional disappointment or in degenerative brain states.
- D. Delta waves are characteristic of slow-wave sleep
- E. None of the above