[LN 123] OCTOBER 2018 **Sub. Code: 2020**

M.D. DEGREE EXAMINATION

BRANCH V – PHYSIOLOGY

PAPER III – NERVOUS SYSTEM AND SPECIAL SENSES

Q.P. Code: 202020

Time : Three Hours **Maximum : 100 Marks**

I. Essay Questions: **(2 x 15 = 30)**

1. a) Describe the connections and
   b) Functions of Basal ganglia.
   c) Explain the reason for reduction in the psychic drive for motor activity in Paralysis agitans.
2. a) Describe the pathway for fast pain.
   b) Pathway for slow pain.
   c) Explain the Analgesia system in the brain.

II. Short notes: **(10 x 5 = 50)**

1. Reflex arc for myotactic reflex.
2. Functions of ascending reticular activating system.
3. Wernicke's area.
4. Molecular mechanism for intermediate memory.
5. Aphasia.
6. Functions of primary and secondary visual areas of cortex.
7. Transmission of sound waves in the cochlea.
8. Vestibular reflexes.
9. Young-Helmholtz theory of colour vision.
10. Cerebral cortical reflexes for maintaining body posture.

III. Reasoning Out: **(4 x 5 = 20)**

1. Signals from both ears are transmitted to both sides of auditory pathways.
2. Decerebrate rigidity is spasticity due to facilitation of myotactic reflex.
3. The membrane potential of glial cell is more negative than neurons.
4. Most of the retinal neurons conduct their visual signals by electro tonic conduction.

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