

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 0522]

MAY 2022

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. What is Reticular formation? Describe the connections and functions of Reticular formation.
2. What are the types of synapses? List the properties of synaptic transmission. Explain the excitatory and inhibitory post synaptic potential.

II. Short notes:

(10 x 5 = 50)

1. Role of Hypothalamus in the regulation of appetite.
2. Describe the Dorsal Column medial lemniscal pathway.
3. Connections and functions of temporal lobe.
4. Righting reflexes.
5. Brain waves in the normal electroencephalogram (EEG).
6. Ocular dominance columns.
7. Young-Helmholtz-Theory.
8. Transmission of sound waves in cochlea.
9. Membrane potential and action potentials in olfactory cells.
10. Denervation hypersensitivity.

III. Reasoning Out:

(4 x 5 = 20)

1. Dendrites have voltage gated ion channels.
2. Angular acceleration is detected by semicircular canal.
3. Prolonged use of corticosteroids can cause Glaucoma.
4. Habituation versus Reinforcement in Reward and punishment learning.
