

**AD1**

**4-0-0-4**

AD803

**PHYSIOLOGY OF MEDITATION**

4-0-0-4

Unit 1

The Nervous System: Importance and Organisation of Nervous System, The Central Nervous System, The Peripheral Nervous System, Autonomic Nervous System. Limbic System, Association Areas, Sleep, Arousal, Emotions, Learning, Memory, Cognition, Speech. Endocrine System- glands, secretions and actions

Unit 2

Neurotransmitters: Types of Neurotransmitters, Functions of Neurotransmitters, Pathology involving Neurotransmitters

Unit 3

Physiology of Stress: Stress Models, Stress and Changes in Physiology, Stress and changes in Behaviour

Unit 4

Physiology of Meditation: Types of Meditation, Action of the Prefrontal and Cingulate Cortex, Thalamic Activation, Hypothalamic and Autonomic Nervous System Changes, Hippocampus and Amygdala Activation, Autonomic -Cortical Activity, Neurotransmitter Activity

Unit 5

Meditation and Neuroscience of Consciousness: The Intersection of Neuroscience and Meditation, Mechanisms of Mind-Body Interaction, Meditation and Physiological Baselines, Neuroelectric and Neuroimaging Correlates of Meditation, Brain imaging Techniques used in Meditation Research

**TEXT BOOKS/ REFERENCES:**

1. Jane Ogden (2000). Health Psychology. Second Edition. Open University Press, Philadelphia.
2. Brain Facts- A Primer on the Brain and Nervous System (2002). The Society for Neuroscience. Everbest Printing Company.
3. Antoine Lutz, John D. Dunne and Richard J. Davidson (2006). Meditation and the Neuroscience of Consciousness: An Introduction. The Cambridge Handbook of Consciousness.
4. Fadel Zeidan (2014). The Neurobiology of Mindfulness Meditation. The Basic Science of Mindfulness.
5. Swami Sivananda (1997). The Science of Pranayama. A Divine Life Society Publication.
6. Arthur M Hurton & Danny Wedding (2008). The Neuropsychology Handbook. Third

Edition. Springer Publishing Company

7. Jeffrey M. Schwartz MD & Sharon Begley (2003). The Mind and the Brain: Neuroplasticity and the Power of Mental Force. Harper Collins Publishers.
8. Bryan Kolb (1995). Brain Plasticity and Behaviour. Psychology Press.
9. K. R. Srikantha Murthy (2014). Astanga Hridayam of Vagbhata – 3. Chaukhamba Krishnadas Academy Publication
10. Yogesh Chandra Mishra (2013). Ayurvediya Kriya Sarira- A Textbook of Ayurvediya Physiology. Chaukhambha Publication.