

# **Swami Rama Himalayan University**

## **Ph.D. Syllabus for Entrance Examination**

### **Neuroscience**

#### **Unit I**

Basics of brain and nervous system, Human Brain and its main part's and important functions of partial lobe, Occipital lobe, Temporal lobe, Frontal lobe, cerebellum, prefrontal cortex, Brain stem, Different types of neurons.

#### **Unit II**

Neurotransmitters, neuronal communications, peptides, stress hormones, fundamental anatomy and Physiology of neural network, information and learning process, brain plasticity.

#### **Unit III**

Cognitive senses and information processing, different states of consciousness, environmental and socioeconomic impact on human stress.

#### **Unit IV**

Psychosomatic disorders, physiology of different relaxations techniques [Ex- Meditation and Breathing techniques] Physical exercises and effect on stress hormones.

#### **Unit V**

Basic principles of different diagnostic instrumentation and software's for the study of brain dynamics 1] EEG 2] CT-SCAN 3] MRI 4] fMRI.