

**JYOTI NIVAS COLLEGE AUTONOMOUS  
SYLLABUS FOR 2019 BATCH AND THEREAFTER**

**Programme: INT BSc. MSc**

**Semester: IV**

**PAPER II  
PHYSIOLOGICAL PSYCHOLOGY**

**Course Code: 18IV IS403**

**No. of Hours: 60**

**COURSE OBJECTIVES:**

- To learn and understand basic processes and applications of the physiology involved in cognitive processes and motivation
- To learn the physiological systems involved in psychiatric disorders.
- To encourage and develop a research background and understanding of the scientific foundation of physiological psychology.

**LEARNING OUTCOMES:**

By the time they graduate, students will:

- Have a better understanding of psychiatric disorders
- Critically assess information related to the study of biological basis of behaviour and mental processes, and use critical assessment in forming conclusions and arguments
- Become aware of the applications of psychology in the professions associated with physiological psychology.

**UNIT I**

**CHAPTER 1 - ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY OF LEARNING AND MEMORY**

**12 HRS**

Nature of memory, perceptual learning; stimulus response learning; relational learning. Consolidation process; the physiology of long term memory. Effects of neurotransmitters and neuromodulators.

**UNIT II**

**CHAPTER 2 - HUMAN COMMUNICATION**

**12HRS**

Speech production and comprehension ; Brain mechanisms ; Reading and writing disorders; Communication of emotions.

**UNIT III**

**CHAPTER 3 - BIOPSYCHOLOGY OF MOTIVATION**

**12 HRS**

Hunger - Eating and health; Set Point theories of hunger and eating, Positive incentive perspective. Sleep, dreaming and role of circadian rhythms; Stages of sleep, areas of the brain involved in sleep

**UNIT IV**

**CHAPTER 4 - REINFORCEMENT AND ADDICTION**

**12 HRS**

Reinforcement: Anatomy of reinforcement, Nature of brain stimulation which reinforces behaviour. Addiction: Characteristics of addictive substances; Genetics of addiction.

**UNIT V**

**CHAPTER 5- BIOLOGICAL BASIS OF PSYCHIATRIC DISORDERS**

**12 HRS**

Schizophrenia: Description; Heritability; The dopamine hypothesis; schizophrenia as a neurological disorder. Major affective disorders: Description; Heritability; Physiological treatments; Role of monoamines; Anxiety Disorders: Panic Disorders; Obsessive compulsive disorders.

**REFERENCE:**

1. John T Cacioppo, Laura A Freberg (2019) Discovering Psychology: The science of the mind.3<sup>rd</sup>edition.e Bookwww.cengage.com
2. Neil R Carlson (2017) Foundations of Behavioural Neuroscience, 9<sup>th</sup> edition, Pearson Education Inc.
3. Neil R Carlson (2017) Foundations of Physiological Psychology 6<sup>th</sup> edition, Pearson Education Inc.
4. N R Carlson (2017) Physiology of Behaviour12<sup>th</sup> edition, Pearson Education Inc.
5. John R J Pinel (2016) An Introduction to Biopsychology.9<sup>th</sup> edition.
6. Francis Leukel (2005) Introduction to Physiological Psychology, 3<sup>rd</sup> edition. Indian edition CBS Publishers and Distributors, Delhi.
7. Charles F Levinthal (1999) Introduction to Physiological Psychology 3<sup>rd</sup> edition, Prentice Hall of India Pvt. Ltd., New Delhi.

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