

BASIC PHYSIOLOGY AND PHYSIOLOGY OF EXERCISE

Unit I

Introduction

- (a) Meaning and concept of physiology.
- (b) Need and importance of physiology for the students of physical education.
- (c) Meaning and concept of exercise physiology.
- (d) Need and importance of exercise physiology in physical education and sports.

Unit II

Cardio Pulmonary System

1. The Cardio-vascular system and Blood.

- (a) Cardiac - cycle.
 - Definition of cardiac cycle
 - Concept of cardiac cycle with the help of diagram.
- (b) Blood pressure, its maintenance and regulation
 - Definition of blood pressure.
 - Types of blood pressure.
 - Measurement of blood pressure.
 - Regulation of blood pressure.
- (c) The cardiac output and its regulation
 - Concept of cardiac output.

2. The respiratory System

1. Mechanism of Respiration.
2. Pulmonary ventilation and its regulation.
3. Second - wind, Oxygen debt.

Unit III

Digestive, nervous and sensory system

(a) Digestive System

1. Absorption of Food and Digestion in mouth.
2. General metabolism, metabolism of carbohydrates fats and proteins.
3. Temperature - Regulation

(b) Nervous System

1. Functions of the important parts of the nervous system, cerebrum, medulla oblongata, thalamus, cerebellum and spinal cord.
2. Functions of autonomic nervous system.

(c) Sensory System

1. General sensations (cutaneous and kinesthetic)
2. Brief knowledge about various forms of senses with special reference to vision and hearing.

Unit IV

Excretory, Endocrine and Reproductive Systems

(a) The excretory System -

Excretion of water from the body through skin, lungs, kidney and GI Tract.

(b) The Endocrine System -

1. Secretion of endocrine glands (Pituitary, Thyroid, Adrenal, Pancreas, parathyroid gonado glands, Thymes)
2. Role of their secretion in growth. Development and body functions.

(c) Reproductive System -

1. Physiology of human reproduction.
2. Basic knowledge of transmission of hereditary characteristics.

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Unit V

Physiology of Exercise

- (a). Effect of exercise on respiratory, circulatory and muscular system.
- (b). Changes during muscular contraction.
- (c). Nerve control of muscular activity.
- (d). Warming-up, conditioning and training.
- (e). Stitch and cramps.

References:

- i. Anthony, C. Parher and Kolthoff N. Jane, Text Book of Anatomy and Physiology, St. Louis : The C.V.: Mosby Company.
- ii. Chatterjee, C.C. Human Physiology, Calcutta, Medical Allied Agency.
- iii. Clarke, David, H. Exercise Physiology, New Jersey : Prentice Hall Inc., Englewood Cliffs.
- iv. Translated by Myshne, David, A. Text Book for Nurses Training Schools, Moscow, NIR Publishers.
- v. Pearce, Evelyn, C. Anatomy and Physiology for Nurses. Calcutta, Oxford University Press.

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B.P.E.S--IInd year
PAPER-II
EDUCATIONAL AND SPORTS PSYCHOLOGY

Unit I :

- (a) Meaning, Definition and Nature of Psychology
- (b) Scope of psychology
- (c) Psychology as Science
- (d) Branches of Psychology
- (e) Importance of Psychology in Education with special reference to Physical Education.

Unit II:

HUMAN GROWTH & DEVELOPMENT

- (a) Meaning and definition of Growth and Development
- (b) Principles of Growth and Development
- (c) Stages of Growth and Development (Infancy, Childhood, Adolescence) physical, mental, social and emotional characteristic.
- (d) Individual differences: Meaning of the terms individual differences.
- (e) Heredity and environment is cause of individual differences.

Unit III :

LEARNING

- (a) Meaning and Definition of Learning
- (b) Effective methods of learning.
- (c) Laws of Learning (Readiness, Exercise & Effect)
- (d) Theories of learning:- (Trial and error ,Conditioned reflex ,Insight theory)
- (e) Transfer of learning (Positive, Negative, Zero)
- (f) Conditions of transfer of training & Learning
- (g) learning curve, How to overcome plateau.

Unit IV :

PERSONALITY

- (a) Meaning and Definition of personality.
- (b) Characteristic of personality.
- (c) Traits of personality
- (d) Types of personality
- (e) Measurement of personality.

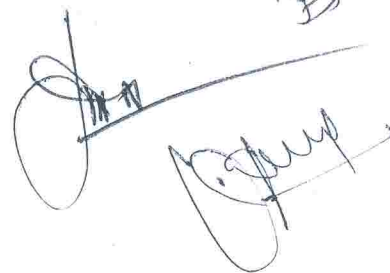
Motivation

- (a) Meaning and definition of motivation.
- (b) Source of motivation, need, drive, incentive.
- (c) Types of Motivation
- (d) Theories of motivation.
- (e) Importance of motivation in the field of Physical Education & Sports.

Unit V :

COMPETITION, HUMAN BEHAVIOUR AND MENTAL HYGIENE

- (a) Characteristic Sportsmen Pre-during , Post-competition.
- (b) Play and its theories – Play - way in Education and Physical Education.
- (c) Teaching methods based on Play - way .
- (d) Emotion: Definition importance to coach and Physical Education Teachers.
- (e) Short discussion (Imitation , Attention , Interest, Memory ,Anxiety , stress, conflict , Frustration).



References :

- i. Boaz, G.D General psychology , Madras: Boaz institute of Psychological Service,1957
- ii. Skinner, C. E. Educational Psychology ,New Delhi : Prentice Hall of India Pvt. Ltd.
- iii. Lindren, H. E. Educational Psychology in classroom ,New York :John Wiley & Sons Inc. 1963.
- iv. Kamlesh ,M.L. Psychology of Physical Education and Sports , New Delhi Metropolitan Bros.
- v. Snum, Richar M. Psychology in Sports ,Surjeet Publication ,1982
- vi. Silva ,J.M. and Weinberg R.S Psychology of foundations of Sports , Illinois , Human Kinetics Publishers Inc.
- vii. Bhatia, H.R. Elementary Educational Psychology, 1965

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