

**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--IIInd 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**

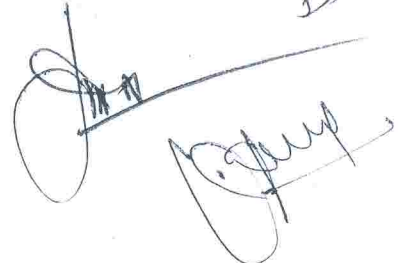


- (a) Meaning and definition of motivation.
- (b) Source of motivation, need, drive, incentive.
- (c) Types of Motivation
- (d) Theories of motivation.
- (e) Importance of motivation in the field of Physical Education & Sports.

**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 ).

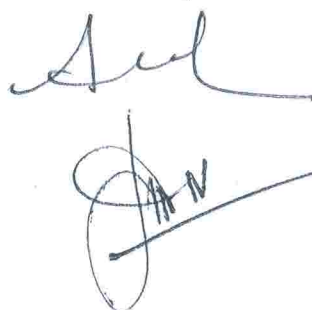
 



### References :

- 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



**B.P.E.S. – II<sup>nd</sup> year**  
**PAPER III**  
**MANAGEMENT OF PHYSICAL EDUCATION**

**Unit I**

**Introduction**

- (a) Meaning and definition of planning, organisation, administration and management and their nature and scope.
- (b) Importance of planning and management in educational institutions.
- (c) Principles of planning and management, organization structure:
  - (i). Working out an effective scheme of organization.
  - (ii). Scheme of organization in school, college and university.
  - (iii). Scheme of organization in the district and state education.

**Unit II**

**Facilities and equipments**

- (a) Layout of the school building and other facilities.
- (b) Types of buildings, laboratories, other built-up facilities.
- (c) Layout of physical education facilities- common and special.
- (d) Need and importance of equipments for physical education and recreation
- (e) An ideal of equipment or physical education and recreational activities.
- (f) Realistic approach in purchases, procedures.
- (g) Development of improvised equipments
- (h) Storing, store keeping.
- (i) Care, maintenance, repairs and disposal of equipments.

**Unit III**

**Staff and Leadership**

- (a) Head of the Institute, his role in imbibing the spirit of discipline in sports and education.
- (b) Importance of qualified teachers of physical education and recreational leaders
- (c) Qualities of good teachers /teachers of physical education
- (d) Development of voluntary services of other teachers.
- (e) Student leadership & it's importance and limitations.
- (f) Staff cooperation
- (g) Selection of training of students leaders.
- (h) Recognition of staff and student leaders.

**Unit IV**

**Intramurals, extramural and Public Relations**

**(A) Intramural and Extramural**

- (a) Meaning and Need.
- (b).Planning of Organisation .
- (c). Events
- (d) Points
- (e) Outcomes of Participation(educational)
- (f) Limitations in participation.
- (g) Selection and training of teams.
- (h) Participation, finances and other aspects.

**(B). Public Relations**

- (a). Definition and need.
- (b). Principles of public relations in physical educations.
- (c). Techniques, sue of media
- (d). Relations with parents, public and other bodies.
- (e). Demonstration, displays on special occasions

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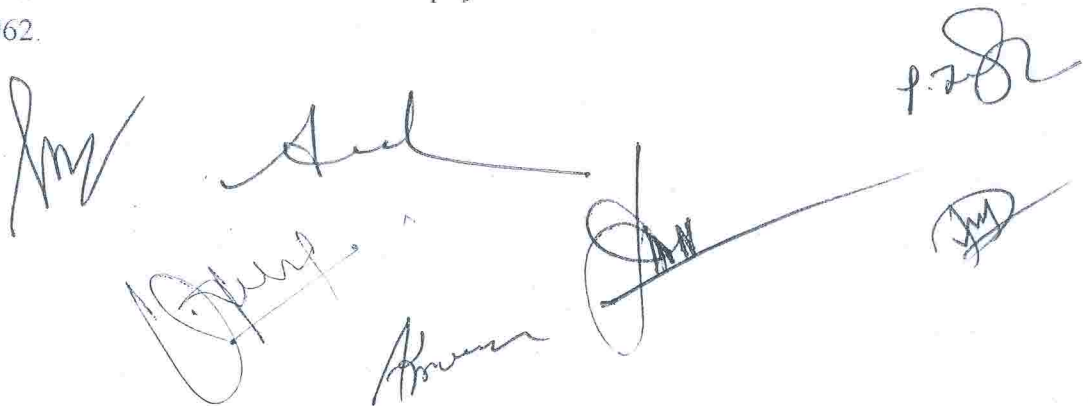
## Unit V

### Office management and budget

- (a). Maintenance of records
- (b). Office Correspondence, filing and reports.
- (c). Physical education budget and it's preparation
- (d). Income & expenditure (sources)
- (e). Maintenance of accounts.
- (f). Petty cash.

### References:

- i. Joseph, P.M. Organisation of physical education, The old students association ,TIPE Kandivali (bombay). 1963.
- ii. Voltmer, E.F. et al The organisation and administration of physical education , prentice hall inc., New Jersey , 1979.
- iii. Bucher, C.A. Administration of Physical Education and atheletic programmes , The C.V. Mosby Co. London 1983.
- iv. Zeigler, E.R. and Bowie G.W Management Competency Development in Sports and Physical Education , Lea and Febiger, Philadelphia , 1983.
- v. Maheshwari ,B.L. Managaement by Objective , Tata Mc.Graw -Hill. Publishing Co. Ltd. New Delhi 1982.
- vi. ALen L.A. Management and Organisation , McGraw -Hill Book Co. Inc. London 1958.
- vii. Newman W.H. Administrative Action, Prentice Hall Inc. New Jersey , 1963.
- viii. Huges, W.L. etal Administration and physical Education. The Ronald Press Co. New York, 1962.

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**B.P.E.S. –II<sup>nd</sup> year**  
**PAPER-IV**  
**KINESIOLOGY**

**Unit I:**

**Introduction**

(a) Meaning & Definition, Brief history and contributions of different – Scientist to the subject. Leonardo da Vinchi, Alfonso Borelli, Weger Brothers, Benjamin Duchene.

(b) Aims and objectives of Kinesiology.

(c) Role of Kinesiology in Physical Education.

(d) Fundamental concepts:

Definition and brief explanation of the following terms and their application to the human body.

Axis and Planes, Centre of Gravity, Line of Gravity, Base, Starting Positions.

**Unit II:**

**Anatomical Concepts**

(a) Review of classification of joints and muscles, Terminology of fundamental movements.

(b) Types of Muscle-Contraction (Isometric, Isotonic – concentric, & Isokynatic. Eccentric), All or None Law, Reciprocal innervations and inhibition group action of muscles and Muscular Co-ordination.

(c) Major characteristics location and action of major joints of the human body. Location and actions of major muscles at these joints.

**Unit III:**

**Mechanical Concepts**

(a) Concept of mechanical basic of Kinesiology and its application in physical education and Sports.

(b) Definition and brief explanation of following basic terms : Mass, weight, force, motion, equilibrium, friction, speed, velocity, Momentum & stability.

**Unit IV:**

**(a) Kinesiological fundamental of Mechanism**

(1) Simple Mechanics found in the Musculo- skeletal system (Leverage and its application to human body)

(2) Laws of motion and their application to sports activities.

(3) Forces :

a. Moving one's own body.

b. Giving impetus to external objectives,

c. Receiving impetus.

(4) Equilibrium: Role of equilibrium in sports and games.

**Unit V:**

**Application**

(a) Application of basic mechanical principles to walking, running and jumping.

(b) Motor skills of daily living.

(c) Application of mechanics for prevention of injury.

**Reference:**

- i. Brower, Marion, R. Efficiency of Human Movement. Philadelphia : W. B. Saunders Co. 1966-Dollar.
- ii. Cooper, John, M. and R.B. Glassgow . Kinesiology . St Louis : C.V. Mosby Company ,1963.
- iii. Scott M. Gladys. Analysis of Human Motion, New York .
- iv. Wells, Katherine P. Kinesiology . Philadelphia. W.B. Saunders Co., 1966.
- v. James, G. Hay, J. Gavin Reid. The Anatomical and mechanical Bases of Human Motion. Prentice Hall Inc. New Jersey.
- vi. Rasch Philip J. and P.K. Burke. Kinesiology and Applied Anatomy. Philadelphia. : LEA and Febiger, 1967.
- vii. Duan, John W. Scientific Principles of Coaching . Englewood cliffs, N.J. Prentice Hall Inc. 1966.
- viii. Duvall Elien Neal. Kinesiology . Englewood Cliffs , N.J. Prentice Hall Inc. 1956.

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## PRACTICAL

### B.P.E.S. –II<sup>nd</sup> year GAMES (PRACTICAL) KABADDI

#### Syllabus for game

- Unit- I. History of game, Federations and Competitions.
- Unit- II. Officiating of the game.
- Unit- III. Fundamental and Advance skills.
- Unit- IV. Equipments and their specification and maintenance.
- Unit- V. Layout and maintenance of playfields
- Unit- VI. Rules and their interpretation

### B.P.E.S. –II<sup>nd</sup> year GAMES (PRACTICAL) GYMNASTIC

#### Syllabus for game

- Unit- I. History of game, Federations and Competitions.
- Unit- II. Officiating of the game.
- Unit- III. Fundamental and Advance skills.
- Unit- IV. Equipments and their specification and maintenance.
- Unit- V. Layout and maintenance of playfields
- Unit- VI. Rules and their interpretation.

### B.P.E. S.–II<sup>nd</sup> year GAMES (PRACTICAL) BASKETBALL

#### Syllabus for game

- Unit- I. History of game, Federations and Competitions.
- Unit- II. Officiating of the game.
- Unit- III. Fundamental and Advance skills.
- Unit- IV. Equipments and their specification and maintenance.
- Unit- V. Layout and maintenance of playfields
- Unit- VI. Rules and their interpretation.

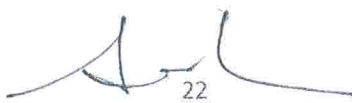
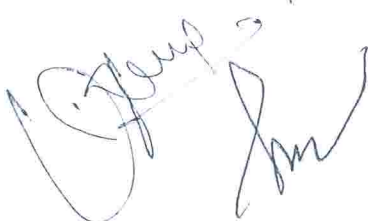
### B.P.E.S.—II<sup>nd</sup> year GAMES (PRACTICAL) KHO-KHO

#### Syllabus for game

- Unit- I. History of game, Federations and Competitions.
- Unit- II. Officiating of the game.
- Unit- III. Fundamental and Advance skills.
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- Unit- V. Layout and maintenance of playfields
- Unit- VI. Rules and their interpretation.

### B.P.E.S. –II<sup>nd</sup> year EDUCATIONAL TOUR

- I. Educational Tour – Camping , Picnic, Adventure, Tracking, River Rafting



22

