

# Physical Education

## DEGREE STANDARD

### UNIT I

#### PRINCIPLES AND PHILOSOPHY OF PHYSICAL EDUCATION

Meaning and definition of education, physical education physical culture, sports physical training and coaching, aims and objectives of education-physical education-growth and development - biological principles, sociological principles - body types (somatotyping) social, emotional, intellectual need of philosophy in physical education - schools of philosophy idealism, naturalism ,pragmatism.

### UNIT II

#### HISTORY OF PHYSICAL EDUCATION

History of physical education in India - and in other countries (greece, Italy, Germany, Sweden U.S.A. and Denmark - Ancient and morden Olymppics. (Olympic motto, Olympic flag, Olympic torch. Indian participation in Olypics, Indian Olympic Association, Events and Records. Sports authority of India - Y.M.C.A. and it's contribution - National and Inter-national competitions. (Santhosh trophy Ranji Trophy, Duleep Trophy, Wimbledon, Davis cup, world cup) - National awards.

### UNIT III

#### METHODS OF PHYSICAL EDUCATION

Meaning and importance of methods - factors influencing methods. Presentation Techniques - Class Management - Teaching aids - various methods of Teaching - types of Tournaments fixture - Intramurals and Extramurals.

### UNIT IV

#### ORGANISATION AND ADMINISTRATION OF PHYSICAL EDUCATION

Meaning - Different levels of Organisation schools, Colleges and Universities - Guiding principles of organisation - facilities for physical education - outdoor-indoor-Equipments -Care of equipments (general and specific - purchase - policies and procedures. Finance and Budget - Source of income, items of expenditure and Ruels of expenditures. Records and Registres - Layout of play fields, grounds and athletic track -care and maintenance - construction and maintenance of swimming pool and Gymnasisam. Types of physical educatiaon periods.

### UNIT V

#### ANOTOMY AND PHYSIOLOGY

Skeletal system - Types of Benes - Joints classification of joints - functions of skeletal system. Muscular systems - structure of Museles, classification of Muscles. Circulatory system - constituents of Blood and their functions - Types ofo blood group, structure of heart - circulation of blood - blood pressure, pluse, blood veseels - Digestive system - Respiratory system - Glandular system - Nervous system - sensory system.

### UNIT VI

#### HEALTH EDUCATION AND SAFETY EDUCATION AND FIRST AID

Health, Health Education definition - Need for health education for an Individual - world health organisation and its importance. School health programme - health services, health insturction and health supervision. Nutrition - Elements of good nutrition - blanced diet - Mainutrition. Communicable diseases and their causes symptoms - and prevention Health problems - Mental health and environmental health First aid - Meaning and definition- First aid for shock, posioning, drowning haemorrhage - Artificial respiration - type of fractured - bandages - slings aplients etc.

### UNIT VII

#### KINESIOLOGY

Nature and scope of kinesiology - muscular skeletal system and its movements structural classification of muscles - origion and insertion of muscles - Types of muscular contractors - kinesiological posture- Importance of posture Body deformities - Kyphhoosis-Lordosig - Scolicis 'S' curue, knocknees, bow legs, Flat foot.

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### UNIT VIII

#### CARE OF ATHLETIC INJURIES

Types of injuries, diagnosis and treatment (Sprain, strain, Laceration, Contusion and Abrasion) Fracture and Dislocation - Diagnosis and treatment Physiotherapy, Application and effect (Hydro therapy, cold compress, hot water bag, contrast bath (hot and cold) whirl-pool bath vapour bath - Electro therapy Infrared, Diathermy). Massage Manipulation and application, strapping and supports - Reconditioning the injured athletes.

### UNIT IX

#### RULES OF GAMES AND SPORTS AND OFFICIATING

History of the Game/Sport - World and Indian. Important Tournaments in India and International Rules of Games and Sports - Athletics, Badminton, Basketball, Cricket, Football, Hockey, Kabaddi, Kho-Kho, Handball, Volleyball, Tennis, Swimming measurements and equipments for above games and sports.

### UNIT X

#### CAMPING AND RECREATION

Meaning and importance of camping and recreation - Aims and objectives of camping - Camp leaders, types of camps - camp Activities - Campfire Programme - Layout of campsite - location, facilities - Camp games - Camp crafts - Recreation - Agencies providing recreation - Government and voluntary agencies. Aims and objectives of recreation.

## PAPER -II

### UNIT I

#### RESEARCH PROCESS AND ELEMENTARY STATISTICS

Nature and scope of Research in physical education - types of research - formation of Research Problem - Hypothesis - Sampling - Research designs - Methods of Research - Tools and techniques for data collection - Research report. Types of statistical process - application of statistics in physical education - Data, measures of central tendency and variability, correlation and normal probability curve - Graphic representation of data - reliability.

### UNIT II

#### SPORTS PSYCHOLOGY

Learning - types of learning (trial and error conditional, insight, imitation) - laws of learning - learning curve, - motivation, intrinsic and extrinsic motivation on learning and performance - personality and emotion of performance - Influence of sports on behavioural patterns - politics and sports.

### UNIT III

#### TEST, MEASUREMENT AND EVALUATION

Meaning and definition - Test, Measurement and Evaluation - Scientific authenticity of tests - Test administration - Tests for physical fitness, motor fitness, motor ability and motor educability - Games skill tests - soccer, basketball, badminton, hockey, volleyball and tennis.

### UNIT IV

#### SCIENTIFIC TRAINING METHODS AND COACHING

Specific training programme for the development of strength, speed, endurance, and flexibility - Technical and tactical preparation of sports persons - application of principles related to equilibrium factors affecting equilibrium leverage, mechanical advantage - work, power, energy - kinetic potential energy, load - critical analysis of circuit training, interval training, fartlek training - progressive resistance training - preparation of schedules - weekly, monthly schedules - planning and periodization of schedules - short and long term planning.

### UNIT V

#### EXERCISE PHYSIOLOGY

Skeletal muscles - structure and functions - chemical composition - muscular basis of contraction of

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skeletal muscle - fuel for muscular work. Energy for muscular contraction - Neuro muscular function and co-ordination of muscular activity - effect of exercise on heart, circulatory system, respiratory system and muscular system - oxygen debt - forced expiratory volume breathing capacity - Recovery aerobic and anaerobic muscular activity - second wind - physiological aspects of development of strength , endurance, speed agility and co-ordination - work capacity under different environmental conditions - hot, humid, cold and high altitude - effects of physical exercise on metabolism.

### **UNIT VI**

#### **BIO-MECHANICS**

Application of mechanical laws and principles - levers - types of levers - sports implements as levers - newton's laws of motion - equilibrium - friction, projectiles - mechanical analysis of running, jumping, and throwing - games skills - centre of gravity its applications in games and sports.

### **UNIT VII**

#### **SPORTS MEDICINE**

History of sports medicine - definitions, preventive, curative and rehabilitative - effects of smoking - alcohol, doping and their effects on the human body - fluid balance and athletic performance - heart disorders , heat exhaustion, heat cramps, heat stroke - preventive measures - ageing and exercise - rules and regulations in the prevention of sports injuries and treatment.

### **UNIT VIII**

#### **APPLIED KINESIOLOGY**

Nature and scope of sports kinesiology - the skeletal framework and its movements - the muscular-skeletal system and its movements. Types of muscular contraction, characteristics and functions of shoulder joint, elbow joint, hip joint, knee joint, anklejoint and spinal column - Neuro-muscular basis of human movements - the techniques of analysis of joints and the muscular movements - the techniques of analysis of conditioning exercises.

### **UNIT IX**

#### **SPORTS SOCIOLOGY**

Meaning and definition of sports Sociology 0 sports a social phenomene, sports and culture, basic concepts of culture, Impact of physical education and sports on social development. Social institutions: Family, Educational, Institution community. effects of commercialisation on sports status. - women in sports the sports-women in our society, participation patter among women.