

**YVUCET-2020: SYLLABUS**  
**Test 113: PHYSICAL EDUCATION**  
**SECTION-A (Marks-25)**

### **Introduction**

Meaning, Definition and Scope of Physical Education, Aims and Objectives of Physical Education, Importance of Physical Education in present era, Concepts and misconceptions about Physical Education, Relationship of Physical Education with General Education, Physical Education as Arts and Science.

### **Historical Development of Physical Education**

Indus Valley Civilization Period. (3250 BC - 2500 BC), Vedic Period (2500 BC - 600 BC), Early Hindu Period (600 BC - 320 AD) and Later Hindu Period (320 AD - 1000 AD), Medieval Period (1000 AD - 1757 AD), British Period (Before 1947), Physical Education in India (After 1947), Physical Education in Greece, Germany, Sweden Contribution of Akhadas and Vyayamsalas, H.V.P.Mandals, Institutions / Bodies in Physical Educations and Sports: YMCA, LNIPE, NSNIS, IOA, AIU, SAI,SAF, SGF, PYKKA, RGKA, SAAP, Physical Education & Sports Universities.

### **Foundations of Physical Education**

Philosophical foundation: Idealism, Pragmatism, Naturalism, Realism, Humanism, Existentialism and Indian Philosophy of Physical Education. Fitness and wellness movement in the contemporary perspectives, Sports in the maintenance and promotion of fitness.

### **Principles of Physical Education**

**Biological** : Growth and development, Gender Difference: Physical, Physiological & Anthropometric (Sheldon and Kretchmer). **Psychological**: Types of Learning, learning curve, Laws and principles of learning, Attitude, interest, cognition, emotions and sentiments. **Sociological**: Society and culture, Social acceptance and recognition, Leadership, Social integration and cohesiveness.

Meaning and Definition of Anatomy, Physiology and their importance in Physical Education. Structure & functions of cell. Tissues: Types & Functions. Skeletal System : Bones of Axial and Appendicular Skeletal system, Types of Bones.

Blood and circulatory system: Constituents of blood and their functions, Blood groups, structure of the heart, circulation of blood: Pulmonary, Systemic and General circulation. Blood pressure. Respiratory system: Structure of respiratory system – Mechanism of Respiration (Internal and External). Digestive system: structure and process of Digestion.

Structure, properties and functions of skeletal muscles. Oxygen Debt, Second wind, Lung capacity, Vital capacity, Tidal Volume, Residual volume. Nervous system: Organs of Nervous System, Structure and functions of Brain and Spinal cord. Endocrine system:

Functions of glands, Pituitary, Thyroid, Parathyroid, Adrenal and Pancreas.

Effects of training on cardiovascular system, Effects of training on digestive system, Effects of training on respiratory system, Effects of training on muscular system, Fatigue and performance in sports.

Meaning and Definition of Education, Technology and Educational Technology, Objectives of Educational Technology and importance of Educational technology. Types of Education:- Formal, Informal and Non-Formal education, Educative Process, Devices and their importance in Teaching.

### **Teaching Techniques and teaching aids**

Teaching Technique, Lecture method, Command method, Demonstration method, Imitation method, part method, whole method and whole part - whole method. Presentation Technique: Personal and technical preparation. Command: Meaning of command, types of command : Rhythmic and response command, uses of command in different situations. Teaching Aids : Meaning and Importance of teaching aids. Types of Teaching aids:- Audio, Visual, Audio - visual aids, Chalk board, Digital boards, Pin boards, Charts, Model, Slide projector, Motion picture. Team Teaching: Meaning, Principles and advantage of team teaching.

### **Tournaments:**

Meaning of tournament and types of tournaments – Knock-out (Elimination), League (Round Robin), Knock-out cum league, League cum knock-out, Double league, Double knockout, Challenge. Method of drawing Fixtures: Seeding, Special Seeding. Rotation Method, Stair case method. Intramural and Extramural and their importance, Sports Day/ Play Day

### **Lesson Planning and Teaching Innovations**

Lesson Planning: Meaning, Types and principles and lesson plan. General, particular and coaching lesson plan. Micro Teaching: Meaning, Types and steps of micro teaching. Simulation Teaching: Meaning, Types and steps of simulation teaching.

## **SECTION –B (Marks-25)**

### **Introduction to Kinesiology and Biomechanics**

Meaning and Definition of Kinesiology and Biomechanics, Importance of Kinesiology and Biomechanics in Physical Education and Sports, Terminology of Fundamental Movements, Planes and Axes, Gravity, Base, Centre of Gravity, Line of Gravity, Equilibrium and its types.

### **Concepts of Anatomy and Physiology**

Definition of Joints and types. Structural and functional classification of muscles. Types of Muscle Contractions, Posture: Meaning, Deformities and Importance of good posture. Fundamental concepts: Angle of Pull, All or None Law, Reciprocal Innervations

## **Mechanical Concepts**

Force: Meaning, definition, types and its application in sports. Lever: Meaning, definition, types and its application in sports. Newton's Laws of Motion and their application in sports. Projectile: Factors influencing projectile trajectory.

## **Kinematics and Kinetics of Human Movement**

Linear Kinematics: Distance and Displacement, speed and velocity, Acceleration. Angular kinematics: Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration. Linear Kinetics: Inertia, Mass, Momentum, Friction. Angular Kinetics: Moment of Inertia, Couple, Stability.

## **Health Education**

Definition of Health, Health Education. Aims, objectives and Principles of Health Education. Concepts of health: Biomedical, ecological and holistic concepts. Dimensions of Health: physical, mental and social dimensions. Factors effecting Health, School Health Programme : Health Instructions, Health Supervision, Health Service. Balanced diet, constituents of balanced diet.

## **Health Problems in India**

Communicable diseases: Chickenpox, Measles, Mumps, Influenza, Whooping cough, Typhoid, Malaria, Aids. Non-Communicable Diseases: Obesity, Hypertension, Stroke, Diabetes. Malnutrition. Other problems: Explosive Population, Personal and Environmental Hygiene for schools, Nutritional service, Health appraisal, Health record, Healthful school environment, first-aid and emergency care.

## **Environmental Studies**

Definition, Scope, Need and Importance of environmental studies, Concept of environmental education, Historical background of environmental education, Celebration of various days in relation with environment, Pollution of Plastic bags / covers, Role of school in environmental conservation and sustainable development.

## **Natural Resources and related environmental issues:**

Water resources, food resources and Land resources, Definition, effects and control measures of Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution, Role of pollution control board.

## **Introduction to Test, Measurement Evaluation**

Meaning of Test, Measurement & Evaluation in Physical Education, Need & Importance of Test, Measurement & Evaluation in Physical Education, Principles of Evaluation, Criteria of good Test.

## **Classification and Administration of test**

Classification of Tests, Administration of test: Pre, During and post test, Methods of Scoring test.

## **Physical Fitness Tests**

AAHPER youth fitness test, JCR test, Cooper's 12 minute run/ walk test, Harvard Step test, Indiana Motor Fitness Test, Barrow motor ability test.

## **Sports Skill Tests**

Lockhart and McPherson badminton test, Johnson basketball test, McDonald soccer test, Russell - Lange Volleyball test, Schmithals French Field Hockey test

## **SECTION –C (Marks-50)**

### **Introduction to Sports Training**

Meaning and Definition of Sports Training, Aims and Objective of Sports Training, Principles of Sports Training. Methods of Sports Training: Continuous training, Interval training, Repetition training, Fartlek training, Resistance training, Circuit training, Plyometric training. Warm-up and warm-down, Athletic diet: Pre competition, during competition and post competition.

### **Training Components**

Strength: Meaning and Definition, Methods of Strength Development. Speed: Meaning and Definition, Methods of Speed Development. Endurance: Meaning and Definition, Methods of Endurance Development. Coordination: Meaning and Definition, Methods of coordination Development. Flexibility: Meaning and Definition, Methods of Flexibility Development.

### **Training Process**

Load: Definition and Types of Load. Principles of Intensity and Volume of stimulus. Technical Training: Meaning and Methods of Technical Training. Tactical Training: Meaning and Methods of Tactical Training

### **Training program and planning**

Periodization: Meaning and types of Periodization. Aims and Content of Periods: Preparatory, Competition, Transitional. Planning: Training session, Talent Identification and Development

Definition and scope of wellness- Wellness continuum and health - Dimensions of wellness - Physical Wellness - Emotional Wellness - Social Wellness - Spiritual wellness - Intellectual wellness and Environmental wellness

## **EXERCISE AND WELLNESS**

Physical wellness, exercise on functional, physical health of different systems of human body, lifestyle diseases in relation to inactivity, Nutrition and exercise to physical wellness.

## **STRESS MANAGEMENT**

Stress : Definition of Stress, Stress and Emotional health, Stress and physical health- Mechanism of stress and related degenerative diseases- Inter dependence of Spiritual

wellness, Social wellness and Emotional wellness- Stress management techniques

## **FITNESS AND BODY COMPOSITION**

Health fitness components, body composition, muscular endurance, strength, Cardiovascular fitness and flexibility, importance of cardio respiratory endurance .Obesity and health risk factors, childhood obesity and problems. Body composition indicators and measurement

### **Introduction**

Meaning, Definition, Importance and scope of Sports Psychology. Characteristics of Various Stages of growth and development. Individual differences. Heredity and environment. Dynamics of Human behaviour, Play and theories of Play.

### **Learning , Personality, Motivation,**

Learning: Theories of learning, Transfer of Learning. Personality: Meaning and definition of personality, characteristics of personality, Dimension of personality, Personality and Sports performance. Motivation: Meaning, Definition and importance of Motivation. Types of Motivation : Intrinsic & Extrinsic, Motivation techniques and their impact on sports performance. Aggression, Anxiety and their effects on Sports performance. Mental Preparation Strategies: Attention, focus, Self- talk, Relaxation, Imaginary.

### **Relation between Social Sciences & Physical Education**

Meaning, Definition and Importance of Sociology, Orthodoxy, customs, Tradition and Physical Education. Festivals and Physical Education, Socialization through Physical Education, Social group, Primary group and Remote group.

### **Culture**

Meaning and Importance of culture, features of culture, effects of culture on people life style. Different methods of studying: Observation / Inspection method, Questionnaire method and Interview method.

### **Concept of Management**

Meaning, Definition, Scope, concept and importance of Sports Management. Functions of management: Planning, organising, staffing, directing and controlling

### **Leadership**

Meaning , Definition & Elements of Good leadership. Leadership styles, methods. Forms of Leadership: Autocratic, Laissez-faire, Democratic, Benevolent and Dictator. Qualities of administrative leader, Preparation of administrative leader & Effects of Good Leadership on Organizational performance.

### **Financial Management**

Financial management in Physical Education & sports in schools, Colleges and Universities. Criteria of good budget, Steps of Budget making. Model budget for a school. Procedures for purchases and constructions. Records and Registers

### **Sports Management**

Sports Management in Schools, colleges and Universities. Planning, Directing and Controlling school, college and university sports programmes. Factors effecting the

planning. Developing performance standards, Establishing a reporting system, Evaluation, reward and punishment system. Event management: Organisation of major sports event.

Meaning , Definition & Scope of Yoga, Aims, Objectives and functions of Yoga, Yoga practices in Upanishads and yoga sutra, Modern Trends in Yoga, Place and importance of Yoga in Physical Education and Sports.

### **Early Yoga Practices**

Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. Streams of Yoga, Karma Yoga, Bhakti Yoga, Raja Yoga, Jnana Yoga.

### **Basic Yogic Methods**

Asana: Classification of Asanas, Sitting, Standing, Lying, Inverted asanas. Benefits of Asanas : Effects of Asanas on general health. Pranayama: Importance & impact on Muscular, Cardio Respiratory and Nervous System. Relaxation and meditation: Importance & impact on body at work and at rest.. Bandhas: Jalandhara, Mula, Udyana. Mudras: Chin,Yoga,Aswini, Anjali, Brahma Mudra. Kriyas: Neti ,Nauli, Kapalabhati, Trataka, Dhauthi, Bhastrika.

### **Yoga Education**

Yoga Education for Youth Empowerment and human resource development. Difference between yogic practices and physical exercises, Yoga education centers in India and abroad, Competitions in Yoga asanas.

### **Introduction of Officiating and coaching**

Definition of officiating and coaching, Importance and principles of officiating, Relationship of official and coach with management, players and spectators, Measures of improving the standards of officiating and coaching.

### **Coach as a Mentor**

Duties of coach in general, pre, during and post game. Philosophy of coaching, responsibilities of a coach on and off the field, Psychology of coach in competition and coaching.

### **Duties of Official**

Duties of official in general, pre, during and post game in (Hockey, Football, Handball, Badminton, Ball Badminton, Basketball, Cricket , Kabaddi, Kho-Kho, Table Tennis, Tennis, , Softball and Tennikoit, Volleyball ). Philosophy of officiating, Mechanism of officiating, position, Signals and movement, Ethics of officiating. **Qualities and Qualifications of**

### **Coach and Official**

Qualities and qualifications of good coach and good official, Layout of courts / fields and Rules of games, Layout of standard Track & Field and Rules, Eligibility rules of intercollegiate and inter-university tournaments.



