

Tamil Nadu Public Service Commission
Syllabus
Physical Education
(PG Degree Standard)

Code: 602

Unit I: Principles and Biological Basis of Physical Education (15 Questions)

Definition, Aim and Objectives of Physical Education - Meaning of the terms Physical Training, Physical Culture - Philosophies of Education as applied to Physical Education: Idealism, Naturalism, Realism, Pragmatism, Existentialism, Humanism. Biological basis of Physical activity - Benefit of exercises, Growth and Development, exercise and well-being, sex and age characteristics of adolescent - Body types, Hereditary traits, Muscle tone, Athletic heart, Unsynchronized development, Reciprocal innervation, Reflex arc.

Unit II: History and Modern Technology in Physical Education (15 Questions)

Physical Education in ancient Greece, Rome and contemporary Germany, Sweden Denmark and Russia - Olympic movement - Historical development of ancient and modern Olympic Games – Common Wealth Games and Asian Games - Physical Education in India. Meaning, Scope and Importance of Technology in Physical Education and Sports, Role of Information and Communication Technology (ICT), Evaluation and application of technology in Sports (Equipment and Surfaces), Sports wearable, Virtual reality.

Unit III: Exercise Physiology, Athletic Injuries and Rehabilitation (20 Questions)

Meaning and significance of Exercise Physiology – Effect of exercise to Physiological adaptation (Muscular, Respiratory, Cardiovascular, Endocrine and Nervous Systems) - Metabolic and energy system – Mechanism of Thermo-regulations in rest and exercise - Factors influencing performance and recovery process – Athletic: Injuries, Management and Rehabilitation - Therapeutic modalities. Ergogenic aids and doping - Massage manipulation and Therapeutic exercises.

Unit IV: Bio-Mechanical, Kinesiology and Movement Analysis (15 Questions)

Biomechanics: Meaning and Definition. Joints and movements - Planes and Axis. Kinetics, Kinematics analysis in Sports movements – Principles of levers - Laws of motion - Principles of Equilibrium and Force, Spin and Elasticity. Posture, Postural Deformities and corrections. Kinesiological analysis of Muscular movement. Bio-Mechanical analysis of various sports activities. Bio-Mechanical analysis of fundamental movements (Walking, Running, Jumping, Throwing, Pulling and Pushing).

Unit V: Sports Psychology and Sociology (15 Questions)

Psychological basis of Physical Education - Play and play theories, general principles of growth and development, Principles of Motor-Skill acquisitions transfer of training effects. Learning process-theories and laws of learning. Motivation, theories and dynamic of motivation in sports. Psychological factors affecting sport performance: Stress, Anxiety, and Aggression. Personality: Meaning, dimensions, theories of personality. Group dynamics, team decision and leadership in sports. Socio metric. Media and Sports. Sociological basis of Physical Education -Socialization process, social nature of human and physical activity, sports as cultural heritage of mankind, custom traditions and sport, competition and cooperation. Impact of Sports Tourism.

Unit VI: Organisation and Administration of Sports Management (15 Questions)

Meaning and Functions of Sports Management – Roles and responsibilities of Manager - Human Resource Management – Leadership in Sports Management – Professional Ethics - Facility and

Equipment Management – Maintenance of Records and Registers - Age characteristics of pupils and selection of activities. Construction of class Physical Education time table. Types of Tournaments, Preparation of Fixtures for Knock out, League and Combination Tournaments. Organization set-up for Sport Associations Bodies (International Olympic Committee, Indian Olympic Association, International, National and State). Association of Indian University (AIU) Tournaments, Khelo India Inter-University Games, Sports Authority of India (SAI), Department of Sports and Youth Affairs (Central and State), Sports Development Authority of Tamil Nadu (SDAT).

Unit VII: Health Education, Recreation and Yoga (15 Questions)

Health-Guiding principles of Health Education. Nutrition and dietary manipulation. Sports Nutrition: Pre and Post exercise, Nutrition recovery and muscle repairing nutrition - Adulteration, Mal-nutrition, Health-related fitness- Skill related fitness - Obesity and its management, Body Mass Index (BMI). Environmental and occupational hazards and first aid. Communicable diseases: preventive and therapeutic aspect. Personnel hygiene. Theories and Principles of recreation. Recreation Programmes for various categories of people. Elements of yoga, effect of yoga on Human System, Asana, Pranayama, Chakras, Kriyas and Bhandas.

Unit VIII: Sports Training (20 Questions)

Characteristics and principles of sport training. Training plan and periodization (Linear and Undulation). Training peak. Training, means, method and specific training programmes for the development of various qualities. Training load and adaptation process, over load principals and Supercompensation - Technical and tactical preparation for sports. Preparation of Macro, Meso and Micro training plans. Process and procedure of Talent Identification. Preparing for competition- (build up competition, main competition, competition frequency, psychological preparation).

Unit IX: Research and Statistics (20 Questions)

Nature, scope and types of research. Formulation and selection of research problems. Sampling-process and techniques. Methods of research. Types: Survey, Historical, Meta Analysis and Experimental research. Types of errors, Various research designs, Data collection-tools and techniques. Statistical techniques of data analysis-measure of central tendency and variability, correlation, normal probability curve, t-test, and f-test, chi square, z-test. Hypothesis formulation. Writing research report. Descriptive statistics, Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA), Descriptive and inferential statistics in Statistical Package for the Social Sciences (SPSS).

Unit X: Tests, Measurement and Rules of Games & Sports (50 Questions)

Meaning of the terms: test, measurement and evaluation. Construction and classification of tests. Criteria of test evaluation. Aerobic and Anaerobic and Anthropometric Tests - Assessment of physical fitness, motor fitness and motor educability. Skill test for Badminton, Basketball, Hockey, Lawn Tennis, Soccer, Volleyball. Testing psychological variables-Competitive Anxiety, Aggression, Team Cohesion, Motivation, Self Concept. Rules, Officiating and Measurements in the following games: Track and field, Basketball, Ball Badminton, Badminton, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Tennis, Table Tennis, Volleyball.

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