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UGC NET/JRF/SET
PHYSICAL EDUCATION
(Paper-II)

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SYLLABUS

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- ➡ Philosophies of education as applied to physical education.
- ➡ Development of Physical education in Greece, Rome, Sweden, Russia, England, Denmark, Germany, USA, Australia and China.
- ➡ Growth and development of physical education in India :
- ➡ Recreation : its principles, characteristics and importance. Modern trends in recreation. Indoor and outdoor recreational programmes. Recreational programmes for various categories of people.
- ➡ Wellness : its importance, benefits and challenges. Development and maintenance of wellness.
- ➡ Teaching Aptitude : nature, objectives, characteristics of teaching, learner characteristics and teaching methods.
- ➡ Social aspects of sports : sports as a socializing agency, social values, sports leadership, sports as cultural heritage and social aspects of competition.
- ➡ Ancient & Modern Olympics games, Asian and Commonwealth games.
- ➡ Structure and functions of international and national bodies controlling various games and sports,. Prominent honours and awards in games and sports.

Unit-II

- ➡ Exercise physiology its scope and importance in the field of physical education and sports.
- ➡ Cardio respiratory adaptations to long and short term physical activities.
- ➡ Muscle : its types, characteristics and functions. Microscopic structure of muscle fibre. Sliding filament theory of muscular contraction. Types of muscle fibres and sports performance. Muscular adaptations to exercise.
- ➡ Neuro-muscular junction and transmission of nerve impulse, kinesthetic Sense organs and neural control of motor skills.
- ➡ Bio-chemical aspects of exercise : Metabolism of food products. Aerobic and anaerobic systems during rest and exercise. Direct and indirect methods of measuring energy cost of exercise.
- ➡ Recovery process : Physiological aspects of fatigue. Restoration of energy stores. Recovery oxygen. Nutritional aspects of performance.
- ➡ Environmental influence on human physiology under exercise.
- ➡ Women in sports : trainability. Physiological gender differences and special problems of women athletes.
- ➡ Aging : Physiological consequences, life style management and healthful aging.
- ➡ Physiological responses of various therapeutic modalities and rehabilitation.

- ➡ Physiological aspects of various Ergogenic aids. Massage manipulations and their physiological responses.

Unit-III

- ➡ Kinesiology and biomechanics. Modern trends in biomechanics. Planes and Axes of human body. Joints and their movements.
- ➡ Muscle attachments : Origin, insertion, action and leverage of the principal muscles used in sports.
- ➡ Motion : its laws and their application in sports. Projectile and principles of projections.
- ➡ Linear and angular kinematics and kinetics.
- ➡ Friction, Spin, impact and elasticity.
- ➡ Air and water dynamics.
- ➡ Mechanical advantage and applications of Levers in sports.
- ➡ Posture and its deformities with their corrective exercises.
- ➡ Kinesiological, Muscular and mechanical analyses of fundamental movements :
- ➡ Mechanical analyses of major sports skills.

Unit-IV

- ➡ Sports psychology : its importance in the field of physical education and sports.
- ➡ Motivation in sports : types, theories and dynamics.
- ➡ Psychological factors affecting sports performance- Emotions, Anxiety aggression, stress, self confidence, concentration, mental practice and goal setting.
- ➡ Personality : Theories of personality, measurement of personality.
- ➡ Group dynamics, Group cohesion and leadership in sports.
- ➡ Cognitive process : memory and thinking. Principles of Motor skill learning.
- ➡ Transfer of training and its types with its implication in sports.
- ➡ Long and short term psychological preparation for performance/competition.
- ➡ Psychological skill training for activation and relaxation.
- ➡ Spectators and sports performance.

Unit-V

- ➡ Development of teacher education for physical education in India. Comparative study of professional preparation in physical education of India with those of USA, Russia, Germany, Australia and UK.
- ➡ Professional and other courses of physical education in India. Role of Government agencies monitoring professional courses in physical education.
- ➡ Qualities, qualifications and responsibilities of physical education personnel at primary, secondary and higher education levels. Scope of physical education personnel in the promotion of health, fitness and wellness.
- ➡ Recent Government policies for promoting physical education and sports in India.

- ➡ Hierarchy of organizational set-up in physical education at schools, colleges and university level.
- ➡ Role of public & private sectors in the promotion of physical education and sports in the country.
- ➡ Curriculum development : Concepts and principles of curriculum planning. Subject matter for different levels of education - primary, secondary and higher education.
- ➡ Curriculum design and content : importance, selection and classification of subject matter with reference to age, sex and differently abled pupils. Integrated programme for boys and girls.
- ➡ Teaching aids : Time-table, Concepts, credit system for various subject courses- theory and practical, Impact of technology in physical education and sports,
- ➡ Curriculum evaluation : Concepts and purpose; procedure and appraisal.

Unit-VI

- ➡ Health : its objectives and spectrum. Health education, its importance and principles. Role of genetics and environment in achieving health. Health-related physical fitness.
- ➡ Community health programme : Health appraisal & health instructions. International and national health promoting government & private agencies.
- ➡ School Health programme and personal hygiene.
- ➡ Communicable diseases : causes, symptoms, prevention through other means and Immunization.
- ➡ Psychosomatic disorders/sedentary life style diseases : causes, symptoms and prevention.
- ➡ Obesity related health problems. Body weight control and its significance on health. Role of exercise, dieting and combination of exercise & dieting on weight control.
- ➡ First-aid-objectives and principles. First-aid for Shock, poisoning, burns, drowning, bleeding, electric shock and common sports injuries.
- ➡ Pollution : Air, water, sound and radiation. Effects of pollution on health, Preventive and safety measures from pollution.
- ➡ Nutrition : Balanced diet and its components. Nutritional Deficiencies. Understanding of malnutrition and nutritional supplements.
- ➡ Effects of smoking, alcohol, & drugs on health; prevention and rehabilitation.

Unit-VII

- ➡ Sports training : its characteristics and principles. Training load, its features, principles and adaptation process. Means and methods of executing training load. Overload, its Causes, symptoms and remedial measures.
- ➡ Strength : its characteristics, types of strength, factors determining strength and strength development.
- ➡ Endurance : its characteristics, types of endurance, factors determining endurance and endurance development.
- ➡ Speed-its characteristics, types of Speed, factors determining Speed and speed development.

- ➡ Flexibility : its characteristics, types of flexibility, factors determining flexibility and flexibility development.
- ➡ Coordinative abilities : its characteristics, types of coordinative abilities, factors determining coordinative abilities and development of coordinative abilities.
- ➡ Technique and skill : its characteristics and importance. Different stages of technique development and technique training. Tactics and strategy.
- ➡ Planning : its importance and principles. Types of planning.
- ➡ Periodization : its importance, objectives and types of periodization. Concept of different periods - Preparatory, competition and transitional. Types of Competition :
- ➡ Talent identification : process and procedure.

Unit-VIII

- ➡ Research in physical education : its importance and classification. Ethical issues in research.
- ➡ Methods of research : Descriptive, historical and experimental. Experimental research designs.
- ➡ Identification and formulation of research problem. Types of research hypotheses and their formulation. Hypotheses testing.
- ➡ Tools of research : Questionnaires, opinion-naires, interviews and observation.
- ➡ Sources and steps of literature search-library, research data bases, internet-search engines, on-line journals. Note taking and critical reading.
- ➡ Sampling Techniques : Probability and non probability.
- ➡ Data, its types and collecting measures.
- ➡ Normal probability curve and grading scales.
- ➡ Statistical processes, their importance and uses in research.
- ➡ Application of parametric and non parametric statistical techniques in research.
- ➡ Computer applications : statistical packages for data analyses-SPSS, e-mail, search engines and Microsoft office.
- ➡ Preparation of research proposal, report, abstract, paper for publication and paper for presentation.

Unit-IX

- ➡ Test, measurement and evaluation-their types and importance in physical education and sports. Principles and processes of evaluation in physical education.
- ➡ Criteria of selecting an appropriate test and administration of testing programme.
- ➡ Types of tests and construction of standard knowledge and skill tests.
- ➡ Tests for fitness : Physical fitness, motor fitness, motor ability and motor educability. Health related fitness tests.
- ➡ Test for fitness components : strength, endurance, speed, flexibility and coordinative abilities.
- ➡ Sports skill tests : Badminton, Basketball, Football, Hockey, Tennis, and Volleyball.

- ➡ Anthropometric Measurements-land marks and measurement of various body segments, height, sitting-height, weight, diameters, circumferences, skinfolds, body mass index, ponderal index.
- ➡ Somatotype and Posture evaluating techniques.
- ➡ Testing of physiological phenomenon : Blood pressure, breathing frequency vital capacity, heart rate, pulse rate, body temperature and body composition.
- ➡ Tests for psychological variables : Anxiety, aggression, team cohesion, achievement motivation, mental-toughness, and self-efficacy.

Unit-X

- ➡ Management : its principles and theories. Scope of management in physical education and sports. Guiding principles for organizing physical education & sports programmes in institutions.
 - ➡ Personnel management : objectives and principles. Self-appraisal, communication skills and time management. Essential skills of administration.
 - ➡ Financial management : objectives, purposes, principles and scope. Planning and preparation of budget. Mechanics of purchase and auditing.
 - ➡ Supervision : objectives, principles and importance of supervision. Techniques of supervision. Duties and responsibilities of a supervisor.
 - ➡ Facility management : planning, procuring and maintenance of facilities-indoor and outdoor facilities. Planning and management of sports infrastructure. Management of records.
 - ➡ Role of sports manager : interpersonal, informational and decision making. Managerial skills – technical, human and conceptual. Qualities and qualification of sports manager.
 - ➡ Event management : its principles, planning, check list, rehearsal, itinerary, execution, reporting and follow-up procedures of an event.
 - ➡ Public relation : principles of public relations in physical education and sports. Mass Media - communication and publicity, qualifications of Public relation officer.
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