

Paper-I Sports Management in Physical Education

Unit-I Principles of Good Management

Scope and concept of Sports Management. Element or Function of sports management and its advantages organizing insports, statting in sports, controlling in sports, importance and philosophy, sports management as a system and profession. Scope and concept of administration, relation between administration and sports management, importance of sports administration, planning for sports organizations.

Unit-II Principal of Organisation, Nature and Purpose

Organizational elements, rules and regulations, procedure and attributes of an organization, delegation of authority and division of power, destination and characteristics of delegation, organization dynamics, open and closed system, advantages and disadvantages, type of organizations. Line and staff organization structure, their functional pattern manpower planning and features of human resources, controlling and development organizational structures and practices.

Unit-III Leadership and Public Relation in Sports

Designation, meaning of leadership and types of leadership its personality traits, leadership style, the managerial grid, qualities of leader, leadership and management, the behaviour approach, co-ordination its determination principal and techniques of co-ordination. Motivation for sports enhancement of motivation, task as motivation, motivation in sports organizations and participation, incentive as motivator in sports public relation.

Direct and indirect public relation, importance of public relation, electronic media, press relations, qualities of good pro correspondence advertising and public relation establishment community involvement and public relations.

Unit-IV Finance and Budget for Sports

Infrastructure, equipment, salaries, rewards raising of funds, funds collection, drives budget functional budget, works expenses budget performance budgeting, management of resources.

Unit-V

Physical education programmes, teaching methods, class management, intramural, recreational and leisure services, planning, construction and maintenance of facilities, use of computer. Inter scholastic and inter collegiate athletics and competitions school health education.

Unit-I

- 1- Meaning and definition research, need of research, in Health and physical education, Applied, basic and action research, scope of research in physical education, Characteristics of good research and qualities of a good worker.
- 2- The problem definition, criteria for the selection of problem, sources of research problem in health physical education and sports, various steps in formulation of the research proposal of synopsis.

Unit-II

- 1- Research literature, location of the research material, indexes, books, bibliographic, reviews and abstracts, critical literature and allied literature.
- 2- Steps in reviewing literature (note taking, scanning and skimming) reference and foot notes.

Unit-III

- 1- Tools of research, questionnaires, schedule, check score, score card, opinion ire, of attitudes scale, aptitude test, personality test, observation interviews, sociometry, physical fitness and skill tests photography and cinematography.
- 2- Sampling: Concept of population and sample probability sampling (Random, stratified) random cluster and multi-stage, non probability (judgment and quota).
- 3- Hypothesis: Meaning, importance, sources, types (Declarative, probable and questions) from characteristics of good hypothesis)

Unit-IV

- 1- Historical research: Meaning, values, scope, characteristics, steps, primary and secondary sources, internal and external critics, pitfalls and, reports.
- 2- Normative/Survey research and case study, meaning, kinds, scope, steps and criteria of good survey. Case study: meaning, steps, precautions and recommendation.
- 3- Genetic Research: Meaning, need importance, steps in conducting Genetic research.
- 4- Experimental research: Meaning uses, characteristics, field versus laboratory, general principles, steps and experimental design (Single, parallel, repeated and rotation.

Unit-V

Research Report

Format preliminary section, main body (introduction, statement, significance, hypothesis and technical terms) review of related literature, design of the study. Presentation of data interpretation of data discussion. Conclusion, summary bibliography and appendices.

Paper-III Test, Measurement and Evaluation in Physical Education

Unit-I

- 1- Meaning and Importance of Test, Measurement and Evaluation in Physical Education.
- 2- Criteria and need for selecting an appropriate test in physical education and sports.
- 3- Consideration for construction/formulation of physical fitness/Efficiency Test.
- 4- Johnson Basket ball Test.
- 5- Scimitars test of field hockey.
- 6- French short serve Badminton Test.

Unit-II

- 1- Meaning of strength and administration of Kraus Weber strength test.
- 2- Meaning of Motor Ability and administration of barrow motor ability test.
- 3- Petry volleyball test.
- 4- Broer Miller Tennis Test.
- 5- General considerations for administration of test.

Unit-III

- 1- Tuttle pulse Ratio test.
- 2- Harvard step test.
- 3- Rules for graphic presentation; plotting of frequency polygon, Histogram and cumulative frequency graph.
- 4- Warner test of soccer skill.

Unit-IV

- 1- Arranging data into frequency distribution table.
- 2- Meaning of Measures of central tendency.
 - a- Calculation of mean.
 - b- Calculation of median.
 - c- Calculation of mode.
- 3- Meaning of measures of variability
 - a- Calculation of range.
 - b- Calculation of Quartile.
 - c- Calculation of Average Deviation (AD).
 - d- Calculation of Standard Deviation (SD)
- 4- Meaning of NPC and calculation of various combination of head and tail Occurrences of the coins.

Unit-V

- 1- Meaning of percentile and percentile ranks.
- 2- Calculation of percentile and percentile ranks.
- 3- Meaning of co-efficient of correlation.
- 4- Calculation of co-efficient of correlation by rank order method.
- 5- Calculation Karl Pearson Product Movement Method of co-efficient of correlation.

Paper-VI Exercise Physiology

Unit-I Introduction

- 1- Definition of physiology and exercise physiology.
- 2- Importance and Role of exercise physiology in the field of physical education and sports.

Muscles: Structure and Function

Comparative study of different types of muscles (voluntary involuntary and cardiac.)

Theories of muscular contraction

- 1- Sliding filament theory.
- 2- Molecular mechanism of muscular contraction.
- 3- Chemical composition of skeletal muscle.
- 4- Muscle fibre type (red and white muscles.)

Unit-II Bioenergetics

- 1- Fuel for muscular work (ATP).
- 2- Energy of muscular contraction.
- 3- Various changes during muscular contraction.
- 4- Heat production and the thermodynamics of muscle contraction.
- 5- Aerobic and anaerobic muscular activity: Neuro muscular junction and coordination of muscular activity.
- 6- Neurone and motor units.
- 7- Transmission of nerve impulse.
- 8- Bio-electric potentials.
- 9- Neuro muscular junction and transmission of nerve impulse across N.L.J.
- 10- Proprioception and kinesthesia tone, posture & equilibrium.

Unit-III Physiological changes due to exercise:

- 1- Immediate effect of exercise work on various systems of body.
- 2- Cardio-respiratory, muscular and thermo regulatory system.

Effect of conditioning and training:

- 1- Heart and circulatory systems
- 2- Respiratory system.
- 3- Brief discussion on other systems during rest, sub maximal and maximal work.
- 4- Oxygen debt forced expiratory volume, breathing capacity, recovery rate.
- 5- Blood supply to skeletal muscle and regulations of blood flow during exercise

Other physiological aspects of exercise and sports

- 1- Concept of physical fitness and physical training warning up, conditioning and fatigue.
- 2- Physiological aspects of development of strength-duration, skill, speed, ability and coordination.

Unit-IV Sports and Nutrition:

- 1- Basic concept of a balanced diet.
- 2- Appropriate diet before during and after athletic performance.
- 3- The effect of Alcohol, haling and smoking on athletic performance.

Energy cost of various sports activity:

- 1- Definition of Energy cost.
- 2- Energy cost of various sports activities assessment.

Unit-V Work and Environment

- 1- Work capacity under different environment, conditions (Hot, humid, cold & high attitude)

Obesity and weight control

- 1- Definition of obesity.
- 2- Measurement of body fat by various methods (Under water weight and skinfold measurement)
- 3- Body weight control.
- 4- Positive and negative energy balance.

Paper V Sports Bio-Mechanics and Kinesiology

Unit-I

- 1- *Meaning of Biomechanics.*
- 2- *Biomechanics in physical education sports and Research.*
- 3- *Distance and Displacement (Linear and angular)*
- 4- *Speed and velocity (Linear and Angular)*
- 5- *Acceleration (Linear and Angular uniform motion)*
- 6- *Relationship of linear and Angular motion.*
- 7- *Centrifugal and centripetal forces.*
- 8- *Newton's laws of motion as applicable to linear and angular motion.*

Unit-II

- 1- *Force: Meaning units of force, effects of force sources of force, components and resultant, friction pressure.*
- 2- *Work, power and Energy.*
- 3- *Moment of force.*
- 4- *Moment of inertia.*
- 5- *Levers.*
- 6- *Freely falling bodies, projectiles, momentum and impulse.*
- 7- *Stability (static and dynamic), initiating rotation in the Air.*
- 8- *Spin impact and Elasticity.*
- 9- *Fluid mechanics, air resistance and water Resistance.*

Unit-III

Definition, scope and importance of kinesiology. Terminology of various types of various joint and their movements, characteristics of movements, body plants, body axis, characteristics of skillful performance, basic concept of mechanical analysis of walking and running.

Unit-IV

Concept of balanced posture, common postural deformities, corrective exercises, different injuries and their treatment, sprain, strain, contusion, basic concept of force, motion, newton's laws, equilibrium, and centre of gravity, wounds, their types and correction.

Unit-V

- 1- *Analysis of fundamentals skills: walking, running, throwing, lifting, pulling, pushing, catching, climbing.*
- 2- *Analysis of skills of the following games/sports: Athletics, gymnastics swimming, football, hockey basketball, cricket, volleyball.*

Paper-VI Opt. (I) Health Education

Unit-I

- 1- *Meaning of health importance of health, factors influencing health, characteristics of healthy Individual.*
- 2- *Health and various components of physical fitness.*
- 3- *Health education*

Unit-II.

Light and ventilation, sanitation, school canteen first aid and safety measures, school health examination, academic programme and health.

Unit-III

- 1- *Methods of education in health, health instruction, audio visual methods.*
- 2- *Health organization: world health organization, red cross, government health agencies, mental or emotional health and their importance*

Unit-IV

Communicable diseases, modes of transmission, control and prevention of the following diseases: cholera, small-pox, typhoid, malaria, influenza and dysentery.

Unit-V

Nutrition, balanced diet, caloric value of food for competitive sports, environmental hazards, doping and erogogenic aids.

Paper VI Opt. (ii): Yoga

Unit-I

- 1- Meaning and philosophy of yoga.
- 2- Aim and objective of yoga.
- 3- Role of yoga in physical education and sports.
- 4- Importance of yoga in modern world.
- 5- Difference between yogic and non yogic exercise.
- 6- Types of yoga: Hatha yoga, karma yoga, bhakti yoga, laya yoga, dhyana yoga and gyana yoga.

Unit-II Hatha yoga (eight fold path). Meaning and its constituents

Yamas (abstinences), niyamas (observation), asanas (partwa), pranayama (Breathing processes), pratihara, dharana, dhyana, Samadhi.

Unit-III

- 1- Assans and their major classifications: culture, meditative and relaxative.
- 2- Yogic techniques and benefits of following assans: Bhujanga asana, dhanaur asana, hala asana, matsa asana, ardh matsyndra asana, pachimottan asana, ustra asana, vajrasana, makarasana.

Unit-IV

Yogic methods of personal hygiene/cleansing process and the effects:

- 1- Neti (sutra, jal grit and dugad).
- 2- Dhanti (Jal dhunti, virdan dhuti, dand dhuti, bhaghi).
- 3- Nauli (Daxshin, paschim, and madyam).
- 4- Tarntak.

Unit-V Bandhas, mudras, pranayama, their meaning and benefits

- 1- Bandhas: Mul bandha, Jalandhar bandha, uddyana bandha.
- 2- Mudras: Ashwani mudras, viprit karni and yoga mudra.
- 3- Pranayama: Ujjai, bhastrika, shitali, sitkarli and bharamari.

Paper-III Recreation

Unit-I

- 1- Definition of Recreation.
- 2- Objectives of recreation.
- 3- Need and importance of Recreation.
- 4- Factors influencing recreational programme.
- 5- Types of activities in recreation.

Unit-II

- 1- Development of recreational activities in India since 1947.
- 2- Agencies providing recreation of India.
- 3- Recreation and social problems.
- 4- Psychological aspects of recreation.
- 5- Physiological aspect of-recreation.

Unit-III Camps

- 1- Origin of camping.
- 2- Aims of modern camping.
- 3- Organisation and administration of the campus.
- 4- Ceremoials in campus.
- 5- Camp fire programme, activities in camp, health and safty in campus.
- 6- Evaluation of camp work.

Unit-IV Gardening/Park

- 1- Lay our and planning.
- 2- Preparation of soil and preparation of lawns.
- 3- Principal features of garden.
- 4- Names of flowers, ornamental plants, trees shrubs.
- 5- Maintenance of garden

Unit VI Hiding

- 1- Types of hiking.
- 2- Planning of hikes.
- 3- Hiking activities.
- 4- Hostelling (YMCA and youth hostel association of India).
- 5- Folk dances of India: Names and types of dancing in different states.