Title: Applied Statistics in Physical Education and Sports

Max. Marks: 100
Sessional Marks: 30
Examination Marks: 70
Paper Code: PEM-2001
Duration: 2:30 Hours

Objectives:
1. To orient the students in various aspects of statistics along with imparting them the knowledge of their utility.
2. To make them able to understand the various statistical techniques with their applicability in sports sciences.
3. To empower the learner for testing and evaluating the effectiveness of his training and coaching programme.

Unit-I
1.1 Statistics, its need in the field of physical education and sports
1.2 Planning of statistical investigation and its stages
1.3 Limitations of statistics
1.4 Statistical processes
1.5 Statistical unit its characteristics and types

Unit-II
2.1 Organization of data
2.2 Assumption in calculating statistics from grouped data
2.3 Properties, uses and limitations of mean, median and mode
2.4 Properties, uses and limitations of Standard deviation, Quartile deviation and Mean deviation.
2.5 Variance, standard error, coefficient of variation, absolute and relative variability

Unit-III
3.1 Normal curve Its characteristics and uses
3.2 Standard score and its properties
3.3 Calculation and purpose of percentile, T scale, 6 sigma scale and 7 sigma scale
3.4 Problems based on Normal distribution
3.5 Normality of Data: Skewness and kurtosis

Unit-IV
4.1 Testing of hypotheses, Null hypotheses, one tail and two tail test
4.2 Level of significance and power of test, Degrees of freedom, critical region
4.3 Parametric Test of significance: independent and dependent t-test, z test, ANOVA
4.4 Correlation
   - Product moment Correlation coefficient
   - Partial correlation
   - Multiple correlation
4.5 Non parametric test: rank order correlation, Man -whitney U-test

References:
3) Dr. K. L. Gupta, 2014-15, Business Statistics,
Title: Sports Biomechanics and Kinesiology

Objectives: To Develop the Understanding of Biomechanics and its Application and to Provide Overview of Learning about the Mechanical Concepts and Its Application.

Unit - I

Introduction
1.1 Meaning, Definitions, Role, Scope of Sports Biomechanics in Physical Education.
1.2 Meaning and Definition of Motion, Types of Motion.
1.3 Meaning of Kinematics, Kinetics, Statics, Dynamics, Scalar and Vector quantities, Axis and Planes,
1.4 To describe the nature of vector quantities and resolution of vectors.

Unit - II

Muscle Action and Force:
2.1 Meaning, Definitions, Role, Scope of Kinesiology in Physical Education.
2.2 To determine the mechanical factors basic to the performance of an observed movement, and to evaluate the performer's technique
2.4 Meaning and Definition of Friction, Types of Friction, Application of Friction, Spin.

Unit - III

Projectile and Lever:
3.1 Freely Falling Bodies- Projectile, Equation of Projectiles,
3.2 Stability, Factors Influencing Equilibrium, Guiding Principles for Stability - Static and Dynamic Stability.
3.3 Leverage - Classes of Lever, Practical Application.
3.4 Water Resistance (Floating Force, Buoyant Force & Specific gravity), Air Resistance.

Unit - IV

Movement Analysis:
4.1 Analysis of Movement,
4.2 Types of Analysis- Kinesiological, Biomechanical, Cinematographic.
4.3 Methods of Analysis - Qualitative, Quantitative, Predictive

Note: Laboratory practicals should be designed and arranged for students internally.
References:

2. By Peter M. (2013), Biomechanics of Sport and Exercise: Human Kinetics
6. Uppal A.K. Lawrence Manta MP Kinesiology(Friends Publication India 2004)

Updated on 04.10.2018
DEPARTMENT OF PHYSICAL EDUCATION
SYLLABUS (SESSION: 2018-2019)
MASTER OF PHYSICAL EDUCATION (M.P.ED.)
Semester-II

TITLE: Athletic Care and Rehabilitation

Objectives: To provide understanding that includes the prevention, treatment and rehabilitation of athletic injuries and knowledge of athletic therapy education.

Unit – I

Corrective Physical Education:
1.1 Definition and Objectives of Corrective Physical Education.
1.2 Posture and Body Mechanics, Standards of Standing Posture.
1.3 Value of Good Posture, Drawbacks and Causes of Bad Posture.
1.4 Posture Test – Examination of the Spine.

Unit – II

Posture and Rehabilitation Exercises:
2.2 Deviations in Posture: Kyphosis, Lordosis, Flat Back, Scoliosis, Round Shoulders, Knock Knee, Bow Leg, Flat Foot.
2.3 Causes for Deviations and Treatment Including Exercises.
2.4 Passive, Active, Assisted, Resisted Exercise for Rehabilitation.

Unit – III

Massage:
3.1 Brief History of Massage, Massage as an Aid for Relaxation, Points to be Considered in giving Massage.
3.2 Physiological, Chemical, Psychological Effects of Massage, Indication/Contra Indication of Massage.
3.3 Classification of the Manipulation used Massage and their Specific Uses in the Human Body.
3.4 Stroking Manipulation, Effleurage, Pressure Manipulation, Percussion Manipulation, Cupping, Poking, Shaking Manipulation, Deep Massage.

Unit – IV

Sports Injuries Care, Treatment and Support:
4.1 Principles Pertaining to the Prevention of Sports Injuries.
4.2 Care and Treatment of Exposed and Unexposed Injuries in Sports.
4.3 Principles of apply Cold and Heat, Infrared Rays, Ultrasonic Therapy, Short-wave Diathermy Therapy.
4.4 Principles and Techniques of Strapping and Bandages.

Note: Each student shall submit Physiotherapy record of attending the Clinic and observing the cases of athletic injuries and their treatment procedure. (To be assessed internally)

References:
2) Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.
DEPARTMENT OF PHYSICAL EDUCATION
SYLLABUS (SESSION: 2018-2019)
MASTER OF PHYSICAL EDUCATION (M.P.ED.)
Semester-II

Title: Sports Management and Curriculum Design in Physical Education

Credits: 04
Max. Marks: 100
Sessional Marks: 30
Exam. Marks: 70
Paper Code: PEM-2012
Duration: 2:30 Hours

Objectives: At the end of this course, the student will be able to-

1. Identify and explain the elements that uniquely categorize Sport, and Sport Management.
2. Recognize the different organizational patterns and leadership styles applicable in the domain of sport management.
3. Develop and display the Marketing, Communication and Financial skills, unique to sport industry.
4. Interpret consumer behaviour in sport
5. Display entrepreneurial disposition in the domain of sport business.

Unit – I

1.1 Introduction of sport as a product (from business perspective) and sport industry
1.2 Definition and Scope of sport management (Professional Sport, Intercollegiate Athletics, Interscholastic Athletics, Youth and Community Sport, Sport Tourism, Sport Marketing Agencies)
1.3 Identification of the unique aspect of sport management
1.4 Introduction to sport management competencies
1.5 Introduction of Indian sport Industry

Unit – II

2.1 Structure and Design of sport organization
2.2 Influences on the structure of the sport organization
2.3 Comparing the organizational structures of Indian public and private sport organizations
2.4 Management- Management functions, Identification of managerial roles
2.5 Unique characteristics of human resource management in sport

Unit – III

3.1 Strategic sport communication model
3.2 Revenues and expenses sources for sport organization
3.3 Development of sport marketing plan
3.4 Facility and Event management in sport
3.5 Issues and their solutions in sport event management
Unit - IV

4.1 Sport Consumer- Understanding an individual
4.2 Consumer decision making in sport
4.3 Leadership Models
4.4 Sport Entrepreneurship
4.5 Identifying the government policies and sport business opportunities in contemporary India

Suggested Readings:


Updated on 04.10.2018