

1MC1 - SPORTS PSYCHOLOGY AND SOCIOLOGY

UNIT – I – INTRODUCTION

Meaning, Definition, History, Need and Importance of Sports Psychology. Present Status of Sports Psychology in India. Motor Learning ; Basic Considerations in Motor Learning – Motor Perception – Factors Affecting Perception – Perceptual Mechanism. Personality: Meaning, Definition, Structure – Measuring Personality on sports Performance.

UNIT II – MOTIVATION

Meaning and Definition, Types of Motivation: Intrinsic, Extrinsic. Achievement Motivation; Meaning, Measuring of Achievement Motivation. Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance. Stress: Meaning and Definition, Method of Measurement, Aggression and Sports Performance. Self Concept: Meaning and Definition, Method of Measurement. Personality: Dimensions, theories, Personality and performance

UNIT III – GOAL SETTING

Meaning and Definition –Process of Goal Setting in Physical Education and Sports. Relaxation: Meaning and Definition, types and methods of psychological relaxation. Psychological Tests: Types of Psychological Test: Instrument based tests: Pass-along test – Tachistoscope – Reaction timer – Finger dexterity board – Depth perception box – Kinesthesiometer board. Questionnaire: Sports Achievement Motivation, Sports Competition Anxiety. Psychological factors, Stress, Anxiety, Tension and Aggression affecting Sports performance.

UNIT IV – SPORTS SOCIOLOGY

Meaning and Definition – Sports and Socialization of Individual Sports as Social Institution. National Integration through Sports. Fans and Spectators: Meaning and definition, Advantages and disadvantages on Sports Performance. Leadership: Meaning, Definition, types. Leadership and Sports Performance.

UNIT V – GROUP COHESION

Group: Definition and Meaning, Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics. Current Problems in Sports and Future Directions – Sports Social Crisis Management – Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.

Practicals: *Minimum of five experiments related to the topics listed in the Units above should be conducted by the students in laboratory. (Internal assessment)*

REFERENCES:

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

Jain.(2002), Sports Sociology, Heal Sahety Kendre Publishers.

Jay Coakley (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.

John D Lauther (2000) Psychology of Coaching. Ner Jersy: Prentice Hall Inc.

John D.Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.

Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete London: The Macmillan Co.

Richard, J. Crisp (2000). Essential Social Psychology. Sage Publications.

Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.

Robert N. Singer. (1989) The Psychology Domain Movement Behavior. Philadelphia: Lea and Fibiger.

Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic

Whiting, K. Karman... Hendry L.B & Jones M.G (1999) Personality and Performance in Physical Education and Sports. London:Hendry Kimpton Publishers.

1MC2 - YOGIC SCIENCES

UNIT - I INTRODUCTION

Meaning and Definition of Yoga. Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi, Concept of Yogic Practices; Principal- Breathing – Awareness – relaxation, Sequence – Counter pose – Time – Place – Clothes – bathing – emptying the bowels – Stomach – Diet – No Straining – Age – Contra – Indication – Inverted asana – Sunbathing.

UNIT - II - ASANAS AND PRANAYAM

Loosening exercise: techniques and benefits. Asanas; types – Techniques and Benefits, Surya namaskar: Methods and benefits. Pranayama: types – Methods and benefits. Nadis: Meaning, methods and benefits, Chakras: Major Chakras – benefits of clearing and balancing Chakras.

UNIT III - KRIYAS

Shat Kriyas – Meaning, Techniques and benefits of Neti – Dharti – Kapalabhati – Trataka – Nauli – Basti, bandhas: Meaning, techniques and benefits of Jalendra bandha, Jihva Bandha, Uddiyana bandha, Mula Bandha.

UNIT IV - MADRAS

Meaning, Techniques and Benefits of Hasta Mudras, Asamyukta hastam, Samyukta hastam, Mana muda, kaya Mudra, banda Mudra, Adhara Mudra. Meditation: meaning, Techniques and Benefits of Meditation – Passive and active, Saguna meditation and Nirguna meditation.

UNIT V - YOGA AND SPORTS

Yoga Supplemental Exercise – Yoga Compensation Exercise – Yoga Regeneration Exercise – Power Yoga Compensation Exercise – Yoga Regeneration Exercise – Power Yoga. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Depression Concentration, Self Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous Respiratory, Excretory System.

Note: laboratory Practical be designed and arranged internally.

REFERENCES:

George Feuerstein. (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.

Gore, (1990), Anatomy and Physiology of Yoga Practices. Lonavata: Kanchan Prkashan.

Helen Purperhart (2004). The Yoga Adventure for Children, Netherlands: A Hunter House book.

Iyengar, B.K.S (2000), Light on Yoga. New Delhi: Harper Collins Publishers.

Kenghe. C.T. (1976), Yoga as Depth – Psychology and para-Psychology (Vol-1)“ Historical Background, Varanasi: bharata manishai.

Kuvalyananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.

Moorthy A.M & Alagesan. S. (2004) Yoga Theraphy. Coimbatore: teachers Publication House.

Swami Kuvalayanda, (1998), Asanas. Lonavia: Kaivalyadama.

Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha, Munger: Bihar School of Yoga.

Swami Satyananada Saraswathi (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust.

Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication.

Thirumalai Kumar. S and Indira. S 92011) Yoga in Your Life, Chennai: the Parkar Publication.

Tiwari O.P. (1998), (Asanas-Why and How. Lonavala: Kaivalyadham

1MC3 - TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

UNIT I – INTRODUCTION

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. Criteria for Test Selection – Scientific Authenticity. Meaning, definition and establishing Validity, Reliability, Objectivity, Norms – Administrative Considerations.

UNIT II – MOTOR FITNESS TESTS

Meaning and Definition of Motor Fitness. Test for Motor Fitness; Indiana Motor Fitness Test (For Elementary and High school Boys, Girls, and College Men) Oregon Motor Fitness Test (Separately for boys and girls) JCR Test. Motor Ability; Barrow Motor Ability Test – Newton Motor Ability Test – Muscular Fitness – Kraus Weber Minimum Muscular Fitness Test.

UNIT III – PHYSICAL FITNESS TEST

Physical Fitness Test: AAHPERD Health Related Fitness Battery (revised in 1984)
ACSM Health Related Physical Fitness Test, Roger's physical index.
Cardiovascular Test: Harvard step Test, 12 minutes run / walk Test, Multi-stage Fitness Test (Beep test).

UNIT IV – AEROBIC – ANAEROBIC AND ANTHROPOMETRIC TESTS

Physiological Testing : Aerobic Capacity : The Bruce Treadmill Test Protocol, 1.5 Mile Run Test for college age males and females. Anaerobic Capacity; Margaria-Kalamen test, Wingate Anaerobic Test, Anthropometric Measurements: Method of measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, And Thigh. Method of measuring Skin Folds: Triceps, Sub scapular, Suprailiac.

UNIT V – SKILL TESTS

Specific Sports Skill Test: Badminton: Miller Wall Volley Test.
Basketball: Johnson Basketball Test, Harrison Basketball Ability Test,
Cricket: Sutcliff Cricket Test.
Hockey: FriedelField Hockey Test, Harban's Hockey Test.
Volleyball: Russel Lange Volleyball Test, Brady Volleyball Test.
Tennis: Dyer Tennis Test.
Football: Mor-Christan General Soccer Ability Skill Test Battery, Johnson Soccer Test, Mc-Donald Volley Soccer Test.

Note: Practical's of indoors and out – door tests be designed and arranged internally.

REFERENCES :

- Authors Guide (2013) ACSM'S Health – Related Physical Fitness Assessment Manual, USA: ACSM Publications.
- Baror, O (1987), "The Wingate Anaerobic Test: An Update on Methodology, Reliability and Validity".
Journal of Sports Medicine 4 : 381 – 394.
- Barrow, H.M. & McGee, R.A. (1979) A Practical Approach to Measurement in Physical Education,
Philadelphia: Lea and Febiger.
- Campbell, W.R. & Tucker, N. M. (1967) An Introduction in physical Education.
London: G.Bell and Sons Ltd.
- Clarke, H. Harrison & David H. Clarke. (1987) Application of Measurement in Physical Education,
New Jersey : Printice Hall Inc.
- Donald K. Mathews, "Measurement in Physical Education," London: W. B. Saunders Company, 1978.
- James S. Bosco and William F. Gustafson. "Measurement and Evaluation in Physical Education".
Philadelphia: Lea and Febiger. 1979.
- Jenson, Clayne .R & Cynt ha , C.Hirst. (1980). Measurement in Physical Education and Athletics.
New York: Macmillan Publishing Co., Inc.
- Johnson, Barry & Jack, K. Nelson (1982). Practical Measurement for Evaluation in Physical Education
New Delhi: Surjeet Publications.
- Kansal D.K.(1996) " Test and Measurement in Sports and Physical Education. New Delhi ;
DVS Publications,
- Krishnamurthy, (2007). Evaluation in Physical Education and Sports, New Delhi
Ajay Varma, publication.
- Meyers, C.R. & Belsh, E.T. (1962) Measurement in Physical Education, New York: The Ronald
press
Company.
- Sharma Sita Ram, (2005). Test and Measurement in Education. New Delhi: Shri Sai
Printographers.
- Veena Verma. (2003). "Evaluation in Physical Education," New Delhi: Sports publication.
- Vivian H. Heyward (2005) Advance Fitness Assessment & Exercise Prescription, 3rd Edition.
Champaign, IL: Human Kinetics.
- Wilgoose, C.E. (1967) "Evaluation in Health Education and Physical Education, New York:
McGraw Hill Book company, Inc.
- Yobu.A (2010), Test, Measurement and Evaluation in Physical Education and Sports, New
Delhi:
Friends Publications.

1MEA - HEALTH EDUCATION AND SPORTS NUTRITION (ELECTIVE)

UNIT – 1 HEALTH EDUCATION

Concept, Dimensions, Spectrum and Determinants of Health - Definition of Health, Health Education, Health Instruction, Health Supervision

Aim, objective and Principles of Health Education - Health Service and guidance instruction in personal hygiene

UNIT – II HEALTH PROBLEMS IN INDIA

Communicable and Non Communicable Diseases: Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive, Population.

Personal and Environmental Hygiene for Schools - Objective of school health service, Role of health education in schools.

Health Services – Care of skin, Nails, Eye health service, Nutritional service

Health appraisal, Health record, Healthful school environment first – aid and emergency carte etc.

UNIT III – HYGIENE AND HEALTH

Meaning of Hygiene, Type of Hygiene, dental Hygiee, Effect of Alcohol on Health, Effect of Tobacco on Health, Life Style Management, Management of Hypertension, Management of Obesity, Management of Stress.

UNIT -IV – INTRODUCTION OF SPORTS NUTRITION

Meaning and Definition of Sports Nutrition, Role of nutrition in sports, basic Nutrition guidelines, Nutrients: Ingestion to energy metabolism (Carbohydrate, Protein and Fat), Role of carbohydrates, Fat and protein during exercise

UNIT – V NUTRITION AND WEIGHT MANAGEMENT

Concept of BMI (Body mass index) Obesity and its hazard, Dieting versus exercise for weight control Maintaining a Healthy Lifestyle, Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss.

REFERENCES:

- Bucher A. Charles (1993) "Administration of Health and Physical Education Programme"
- Delbert, Oberteuffer, et. A.I "The School Health Education"
- Ghosh, B.N "Treaties of Hygiene and Public Health"
- Hanlon, John J. "Principles of Public Health Administration" 2003.
- Turner, C.E "The School Health and Health Education".
- Moss and et. At "Health Education" (Harber and Brothers, New York)
- Nemir A. ' The School Health Education" (Harber and Brothers, New York)
- Nutrition Encyclopedia, edited by Delores C.S James, The Gale Group, Inc.
- Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as nature Intended. Angus and Robertson.
- Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorsons.

1MEB – ADAPTED PHYSICAL EDUCATION (ELECTIVE)

UNIT I: INTRODUCTION TO ADAPTED PHYSICAL EDUCATION

Definition, aim and objectives of adapted physical education. Definition of disabling conditions – Physical Education for Persons with Disabilities – Benefits of Physical Education for Persons with Disabilities – Recreational Sports Opportunities, Competition Opportunities – Special Olympics, Paralympics and Deaflympics.

UNIT II : ADAPTED PHYSICAL EDUCATION PROGRAM :

Organisation and Administration – Guiding Principles of Adapted Physical Education – Interaction with Regular Physical Education Personnel – Communication with Parents – Nature of the Home Program, Parents as Teachers, Parent Involvement, Parent – Teacher Association, Parent Advisory Committee – Interpreting the Program, Unified Sports- models – recreation – player development and competition.

UNIT III: CLASSIFICATION OF DISABILITY:

Visual Impairment – Hearing Impairment – Neuromuscular Impairment – Orthopaedic Impairment – Cardiovascular Impairment and Respiratory Impairment – Intellectual Impairment and Emotional Impairment – Adapted Physical Education activities – Specific Guidelines – Visual Impairment, Hearing Impairment ,Intellectually Challenged, Orthopedically Handicapped.

UNIT IV: FACILITIES AND EQUIPMENTS:

Orientation on Facilities and Equipments – Facilities for Elementary Schools, Secondary Schools and Colleges – Types of Equipments – Minimum Equipment, Additional Equipment, Evaluation Equipment facilities – Leisure, Recreation and Sports Facilities for persons with Disabilities.

UNIT V: PHYSICAL FITNESS AND MOTOR DEVELOPMENT:

Definition – Physical fitness, motor fitness – Values of Physical Fitness- Physical Fitness through Life Long Activity – Factors Contributing to Poor Fitness – Evaluating Physical and Motor Fitness – Types of Physical Fitness

Tests – Modification of the Physical Fitness Training System – Selected Fitness Problems (Malnutrition and Obesity).

REFERENCES:

Auxter D (1993). Principles and Methods of Adapted Physical Education.
Mosby Publications.

Chapman. F.M 1960). Recreation Activities for the Handicapped, Newyork :
The Ronald Press Company

Daniel. R.C. (1982). Games Sports and Exercisesfor the Physically Handicapped.
Philadelphia.

Jain. A. (2003) Adapted Physical Education. Delhi Sports Publication.

Lau,D.S. (2001).Physical Education for the Physically Handicapped. Delhi:
Khel Sahitya Kendra.

Schiffer,M. (1971). The Therapeutic Play Group, London, George Allen
and Unwin ltd.

Sharma D. (2006). Adapted Physical Education. New Delhi: Friends Publication.

Sullivan, G.M. (1982), Teaching Physical Activities to Impaired Youth An
Approach to Mainstreaming. USA John Wilkey and Sons.

Thind. M.N. (2010) : Special Olympics Bharat Trainer Manual, New Delhi;
Special Olympics Bharat.

2MC1 - RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

UNIT - I INTRODUCTION

Meaning and Definition of Research – need, nature and Scope of research in Physical Education. Classification of Research, Location of Research Problem, Criteria for selection of a problem, Qualities of a good researcher.

UNIT - II - METHODS OF RESEARCH

Descriptive Methods of Research; Survey Study, Case study, Introduction of Historical Research, Steps in Historical Research, Sources of Historical Research: Primary Data and Secondary Data, Historical Criticism: Internal Criticism and External Criticism.

UNIT - III - EXPERIMENTAL RESEARCH

Experimental Research – Meaning, Nature and Importance, Meaning of variable, Types of Variables. Experimental Design – Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

UNIT IV - SAMPLING

Meaning and Definition of Sample and Population. Types of Sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified Sampling. Area Sampling – Multistage Sampling. Non-Probability Methods; Convenience Sample, Judgment Sampling, Quota Sampling.

UNIT V - RESEARCH PROPOSAL AND REPORT

Chapterization of Thesis/Dissertation, Front Materials, Body of Thesis – Back materials. Method of Writing Research proposal, Thesis/Dissertation; Method of writing abstract and full paper for presenting in a conferences and to publish journals, Mechanics of writing Research Report, Footnote and Bibliography writing.

REFERENCES:

- Best J.W (1971) Research in Education New jersey; Prentice Hall. Inc.
- Clarke David. H & Clarke H. Harrison (1984) Research Processes in Physical Education, New Jersey; Prentice Hall Inc.
- Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, London; Routledge Press
- Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities, Illinois; Human Kinetics;
- Kamlesh, M.L. (1999) Research Methodology in Physical Education and Sports. New Delhi.
- Moses, A.K (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam
- Rothstein, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc.
- Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research methods in Health, Physical Education and Sports, New Delhi; Friends Publication
- Moorthy A.M Research Processes in Physical Education (2010); Friend Publication, New Delhi.

2MC2 - APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

UNIT - 1 - INTRODUCTION

Meaning and Definition of Statistics. Function, need and importance of Statistics. Types of Statistics. Meaning of the terms, Population, Sample, Data, Types of data. Variables: Discrete, Continuous. Parametric and non parametric statistics.

UNIT II - DATA CLASSIFICATION, TABULATION AND MEASURES OF CENTRAL TENDENCY

Meaning, uses and construction of frequency table. Meaning, Purpose Calculation and advantages of Measures of central tendency – mean, median and mode.

UNIT - III - MEASURES OF DISPERSIONS AND SCALES

Meaning, Purpose, Calculation and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation, Probable Error. Meaning, Purpose, Calculation and advantages of Scoring scales; Sigma scale, Z Scale, Hull scale.

UNIT - IV - PROBABILITY DISTRIBUTIONS AND GRAPHS

Normal Curve. Meaning of probability – Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis. Graphical representation in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve.

UNIT V - INFERENCE AND COMPARATIVE STATISTICS

Tests of significance: Independent “t” test, Dependent “t” test – chi – square test, level of confidence and interpretation of data. Meaning of correlation – co – efficient of correlation – calculation of co-efficient of correlation by the product moment method and rank difference method. Concept of ANOVA and ANCOVA.

Note: It is recommended that the theory topics be accompanied with practical based on computer software of statistics.

REFERENCES:

Best J.W (1971) research in Education, new jersey: Prentice Hall, Inc

Clark D.H (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.

Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities. Illonosis; Human Kinetics;

Kamlesh,M.L. (1999) Research Methodology in Physical Education and Sports. New Delhi.

Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc.

Sivaramakrishnan S (2006) Statistics for Physical Education, Delhi; Friends Publication

Thiurumalaisamy (1998), Statistics in Physical Education, Karaikkudi, Senthilkumar Publications.

2MC3 - INFORMATION & COMMUNICATION TECHNOLOGY (ICT)

IN PHYSICAL EDUCATION

UNIT – I – COMMUNICATION & CLASSROOM INTERACTION

Concept, Elements, Process & Types of Communication

Communication Barriers & Facilitators of communication

Communicative skills of English – Listening, Speaking, Reading & Writing

Concept & Importance of ICT Need of

ICT in Education

Scope of ICT: Teaching Learning Process, Publication Evaluation, Research and Administration

Challenges in Integrating ICT in Physical Education

UNIT II – FUNDAMENTALS OF COMPUTERS

Characteristics, Types & Applications of Computers Hardware of Computer:

Input, Output & Storage Devices Software of Computer: Concept & Types

Computer Memory: Concept & Types

Viruses & its Management

Concept, Types & Functions of Computer Networks Internet and its Applications

Web browsers & Search Engines Legal & Ethical Issues

UNIT III – MS OFFICE APPLICATIONS

Ms Word: Main Features & its Uses in Physical Education

Ms Excel: Main Features & its Applications in Physical Education

Ms Access: Creating a Database, Creating a Table, Queries, Forms & Reports on Tables and its Uses in Physical Education

Ms Power Point: Preparation of Slides with Multimedia Effects

Ms Publisher: News letter & Brochure.

Need and scope of computer education in sports.

UNIT IV – ICT INTEGRATION IN TEACHING LEARNING PROCESS

Approaches to Integrating ICT in Teaching Learning Process

Project Based Learning (PBL)

Co-operative Learning

Collaborative Learning

ICT and Constructivism: A Pedagogical Dimension

UNIT V – E-LEARNING & WEB BASED LEARNING

E – Learning – Professional communication and sports information through Internet.

Web Based Learning – Sports Websites

Visual Classrooms – Use of current software for class room presentation.

Sports multimedia packages – Role of Computer Education in Sports.

REFERENCES:

B. Ram, New Age international Publication, Computer Fundamental, Third Edition 2006

Brain Unders IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition- 2001

Douglas E.Comer, The Internet Book, Purdue University, West Lofayette in 2005

Heidi Steel Low price Edition, Microsoft Office Word 2003-2004

ITL Education Solution Ltd. Introduction to information Technology, Research and Development Wing- 2006

Pradeep K. Sinha & Priti; Sinha, Foundations computing BPB Publications – 2006

Rebecca Bridges Altman Peachpit Press, Power point for window, 1999

Sanjay Saxena, Vikas Publication House, Pvt, Ltd. Microsoft Office for ever one, Second Edition – 2006.

2MEA - FITNESS AND WELLNESS (ELECTIVE)

UNIT - I - INTRODUCTION

Meaning and Definition” of Physical Fitness, Physical Fitness Concepts and Techniques, Principles of physical fitness, Physiological principles involved in human movement, Components of Physical Fitness. Leisure time physical activity and identify opportunities in the community to participate in this activity. Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness.

UNIT II NUTRITION

Nutrients; Nutrition labelling information, Food Choices, Food Guide Pyramid, influences on food choices – social, economic, cultural, food sources, Comparison of food values. Weight Management – proper practices to maintain lose and gain. Eating disorders, Proper hydration, and the effects of performance enhancement drugs.

UNIT III – AEROBIC EXERCISE

Cardio respiratory Endurance Training, Safety techniques (including modifications for health conditions, i.e., asthma, obesity; breathing techniques; proper movement forms, i.e., correct stride, arm movements, body alignment; proper warm-up, cool down, and stretching), monitoring heart rates during activity. Assess cardio respiratory fitness and set goals to maintain or improve fitness levels. Cardio respiratory activities including i.e. power walking, pacer test, interval training, incline running, distance running, aerobics and circuits. Awareness of cardio respiratory fitness opportunities in the community.

UNIT IV – ANAEROBIC EXERCISE

Resistance Training for Muscular Strength and Endurance; principles of resistance training, Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness and proper breathing techniques). Weight training principles and concepts; basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing, medicine balls, fit balls) Advanced techniques of weight training.

UNIT V – FLEXIBILITY EXERCISE

Flexibility Training, Relaxation Techniques and Core Training. Safety techniques (stretching protocol; breathing and relaxation techniques) types of flexibility exercises (i.e dynamic, static), Develop basic competency in relaxation and breathing techniques. Pilates, Yoga.

REFERENCES:

David K.Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.

Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London (1998)

Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992. Warner W.K Oeger & Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.

Elizabeth & Ken day, Sports fitness for women, B.T Batsford Ltd, London, 1986.

Emily R.Foster, Karyn Hartiger & Katherine A Smith, Fitness Fun, Human Kinetics Publishers 2002.

Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd 37, Sohe Square, London 1999. Robert Malt. 90 day fitness plan, D.K. Publishing Inc. 95. Madison Avenue, New York 2001.

2MEB – EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION (ELECTIVE)

UNIT – I NATURE AND SCOPE

Educational technology – concept, Nature and Scope. Forms of educational technology teaching technology, instructional technology, and behaviour technology; Transactional usage of educational technology; integrated, complementary, supplementary stand-alone (independent); Historical development – programmed learning stage; media application stage and computer application stage.

UNIT II – SYSTEMS APPROACH TO PHYSICAL EDUCATION AND COMMUNICATION

Systems Approach to Education and its Components: Goal Setting, Task Analysis, Content Analysis, Context Analysis and Evaluation Strategies; Instructional Strategies and Media for Instruction. Effectiveness of Communication in instructional system; Communication - Modes, Barriers and Process of Communication.

UNIT III – INSTRUCTION DESIGN

Instructional Design: Concept, Views, Process and stages of Development of Instructional Design. Overview of Models of Instructional Design; Instructional Design for Competency Based Teaching: Models for Development of Self Learning Material.

UNIT IV – AUDIO VISUAL MEDIA IN PHYSICAL EDUCATION

Audio-visual media – meaning, importance and various forms Audio/Radio; Broadcast and audio recordings – strengths and Limitations, Criteria for selection of instructional units, script writing, pre-production, post – production process and practices, Audio Conferencing and Interactive Radio Conference. Video/Educational Television: Telecast and Video recordings Strengths and limitations, Use of Television and CCTV in instruction and Training, Video Conferencing, SITE experiment, countrywide classroom project and Satellite based instructions. Use of animation films in Teaching Physical Activities.

UNIT V – NEW HORIZONS OF EDUCATIONAL TECHNOLOGY

Recent innovations in the area of ET interactive video – Hypertext, video – texts, optical fibre technology – laser disk, computer conferencing. Procedure and organization of Teleconferencing/Interactive video-experiences of institutions, schools and universities. Computer Assisted Instruction / Teaching in Physical Education and Sports.

REFERENCES:

Amita Bhardwaj, New Media of Educational Planning.” Sarup of Sons, New Delhi 2003

Bhatia and Bhatia. The Principles and Methods of Teaching (New Delhi Doabab House) 1959.

Communication and Education, D.N. Dasgupta, Pointer Publishers

Education and Communication for development, O.P Dahama, O.P Bhatnagar Oxfordb & Page 68 of 711BH Publishing company, New Delhi

Essentials of Educational Technology, Madan Lal, Anmol Publications

K.Sampath, A. Pannirselvam and S.Santhanam. Introduction to Educational Technology (New Delhi: Sterling Publishers Pvt.Ltd):1981.

Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling Publishers Pvt.Ltd)1982.

Kozman, Cassidy and kJackson. Methods in Physical Education

(W.B. Saunders Company, Philadelphia and London), 1952.

PESC 301 - EXERCISE PHYSIOLOGY & SPORTS MEDICINE

MODULE – I

Structure and Function of the Skeletal Muscle: Structure of the Skeletal Muscle – Chemical Composition – Microscopic structure of the myofibril contractile mechanism – Molecular basis of muscular contraction – Sliding filament theory. Fuel / Energy for muscular contraction.

MODULE – II

Neuron – Muscular Junction and Co-ordination of Muscular Activity: Neuron and Motor Unit – Bio-Electrical Potential – Neuro – muscular junction and transmission of nerve impulse – Effect of exercise on different systems of the body : Effect of Exercise on Circulatory system – Respiratory system – Oxygen debt, forced expiratory volume, Breathing capacity, Vital Capacity, Recovery and second wind, Endocrine system (Insulin).

MODULE – III

Work Capacity under Different Environmental Conditions : Hot – Humid – Cold – High Altitude. Competitive sports and sex. Exercise and Ageing – Correction of obesity – Arteriosclerosis and Atherosclerosis.

MODULE – IV

Sports Medicine – Meaning – Importance – The case for Exercise : Childhood and Adolescence – Pregnancy – Obesity – Exercise and Coronary Heart Disease – Exercise and Chronic Disease – Old Age – Cardiac Risk Factors – Risks of Exercise.

MODULE – V

Sports Injury – Safety in Sports – Muscle Injury – Muscle Tears: Partial and Central Muscle Tear – Treatment – Rehabilitation – Cramp – Stiffness – Tendon Injuries – Tendinitis – Total and Partial Rupture – Treatment.

REFERENCE BOOKS:

1. Edward Far, Richard Bowers and Merle Foss, The Physiological Basis for Exercise and Sports, New York : Brown & Benchmark, 1993.
2. Jack H. Wilmore and David L. Costill, Physiology of Sports and Exercise, USA : Human Kinetics, 1994.
3. Thibodean and Patton, “Structure and Function of the Body”, St. Louis Philadelphia: Lea & Febiger.
4. Peter N Sperry, “Sports and Medicine”, New Jersey : Prentice Hall Inc.,

PESC 302 - COMPUTER APPLICATIONS

MODULE – I

Introduction – Generations – Block diagram of a Computer – Hardware & Software - Input and Output devices - Memory : Read Only Memory (ROM) – Random Access Memory (RAM) – Sources of Memory – Floppy Disk – Hard Disk – CPU (Central Processing Unit) – Importance Characteristics of a Computer – Define : Data, Information - Need for Programming Languages and Packages.

MODULE – II

Introduction to Windows – Working with Windows – Advantages of Working in Windows – Desktop – Start Menu – Control Panel – Find – Run - Starting an Application – Moving a window – Changing the Size – Task bars – Control Panel – Clock – Mouse – Shut Down.

MODULE – III

MS-Word: Working with Document – Page setup – Formatting Paragraphs – Creating Bulleted and Numbered Lists – Fonts – Editing (Cut, Copy & Paste) – Layouts – Language, Grammar & Spelling Checkers – Find & Replace – Tables – Printing – Mail Merge - Address Book.

Internet: Introduction to Internet – Service Provided through Internet – Search Engines – E-Mail (Sending and Receiving mail) – Web Pages.

MODULE – IV

Using Computers in Various Areas in Physical Education (Research – Biomechanics, Exercise Physiology, Motor Learning and Sports Psychology) – Analyzing the Data Using statistics. (Mean, Median, Mode, SD, Correlation)

MODULE – V

SPSS Package: Introduction – Feeding Data – Naming the Variables – Grouping the Data – Computation of Descriptive Statistics – T.Ratio – Correlated and UnCorrelated Methods – Analysis of Variance. Coefficient of Correlation.

REFERENCE BOOKS :

1. Annie L. Rothstein, “Research Design & Statistics for Physical Education Englewood Cliffs : Prentice Hall Inc., 1985.
2. Maria Langer, “ Word for Windows “ : Peachpit Press, Berkeley.

PESC 303 - SPORTS TRAINING METHODS

MODULE – I

Basic Principles of Training – Specificity, Overload, Reversibility. Basic Physical fitness components – Strength, Speed, Endurance, Mobility. Types of Strength, Strength development training – General exercises, special exercises, competition specific exercises. Training for the development of maximum strength. Elastic Strength, Strength Endurance. Unit Construction for strength development.

MODULE – II

Speed – Definition, factors influencing speed, Training for speed development, Unit construction – Activity other than running, Speed barrier, Speed endurance. Endurance: Types of Endurance – Types of Endurance Training – Duration, Repetition, Competition and Testing. Short term, Medium Term and Long Term Endurance Training. Factors to be considered for Endurance Training.

MODULE – III

Mobility – Definition, Classification, Factors Influencing Mobility – Role of Mobility – Training to develop Mobility – Mobility unit Construction, Periodization – Meaning, Single Periodization, Double Periodization. Different seasons – preparatory, pre competition. Competition and Transitional Period.

MODULE – IV

Meaning of the terms Unit, Session, Micro Cycle, Meso Cycle and Macro Cycle. Warming up – General and Specific – Limbering down – Special type of training – Plyometric Training – Parcourse Training, Mass Practice, Distributed Practice.

MODULE – V

Ergogenic Aids – Meaning, Effect of Drugs – Alcohol, Caffeine- and Smoking on performance. Blood doping, anabolic steroid, Drug abuses in athletics. Effect of climatic Changes – High altitude Training for Long Distance runner. Effect of aerobic endurance training on Heart rate, Heart size, Blood Pressure, Blood Distribution, Lung Volume, Respiratory Rate, Maximal Oxygen uptake and Lactic Acid.

REFERENCE BOOKS :

1. Frank W.Dick, Sports Training Principles, London, Lepus Book Co.,1980.
2. Hardayal Singh, Science of Sports Training, D.V.S Publication, New Delhi. 1995
3. Dietrich Harre, Principles of Sports Training, Berlin Sportverlag, 1982.

PESC 401 - APPLIED KINESIOLOGY AND SPORTS BIOMECHANICS

APPLIED KINESIOLOGY

MODULE – I

Meaning and definition of Kinesiology. Role of Kinesiology in physical education and sports. Functions of the Skeleton - Bones of the Body – Classification of Joints and Its structure – Kinds of joint movement and range of motion.

MODULE - II

Muscles: Types of Muscles – Role of Muscles – Kinds of Muscle Actions – Mechanics of muscles- Co-ordinated action of Muscles – Muscles function in relation to Posture.

MODULE – III

Origin, Insertion and action of the following muscles ; Trapezius – Deltoid – Biceps – Triceps – Pectoralis major – Pectoralis minor – Rectus abdominis – Rectus femoris – Sartorius – Quadriceps group of muscles – Latissimus dorsi – Gluteus maximus – Hamstring group of muscles – Gastrocnemius.

SPORTS BIOMECHANICS

MODULE – IV

Biomechanics : Meaning – Definition – function. Linear Kinematics – Distance and Displacement – Speed and Velocity – Acceleration – Angular Kinematics – Angular Speed and Velocity – Linear and Angular Kinematics. Need and Importance of Biomechanics in Sports.

MODULE – V

Linear Kinetics : Meaning and Definition – Inertia – Mass force – Internal and External factors of force – Newton's law of motion – Law of Gravitation – Momentum – Work – Power – Energy – Stability – Various Degrees of Stability – Angular Kinetics – Levers – Centre of Gravity. Special factors affecting Sports Performance. Analysis of Skills and Techniques.

REFERENCE BOOKS:

1. Luttgens and Wells. Kinesiology, "Scientific Basis of Human Motion", Philadelphia: Saunders College Publishing Co., 1991.
2. Jenson, R. "Applied Kinesiology and Biomechanics" New York : McGraw Hill Book Co. 1987.
3. Johnson R. and Schulky, W. "Applied Kinesiology". Philadelphia: Saunders College Publication Co., 1989.
4. James G Hay. The Biomechanics of Sports Techniques. New Jersey : Prentice Hall Inc. 1985.
5. John W Bunn, Scientific Principles of Coaching. New Jersey : Prentice Hall Inc., 1985.
6. Kreighbawn, E and Barthels, K.M. Biomechanics : "A Quantitative Approach for Studying Human Movement", Minneapolis : Burgess Publishing Co., 1981.

PESC 402 - RULES OF SPORTS AND GAMES AND OFFICIATING - II

MODULE – I

Specifications and Markings of Hurdles (low & High) – Relay Races – Triple Jump – Pole Vault and throwing Hammer.

MODULE – II

Rules and their interpretations of Hurdle Races, Relay Races – Triple Jump – Pole Vault – Throwing the Hammer and Decathlon.

MODULE – III

Duties and Responsibilities of the Officials – Management Officials – Competition Officials and Additional Officials – Combined event officials.

MODULE – IV

History, Origin and Development of the Game at National and International level – Organisational set up at national and International level for the below mentioned games – Rules Measurement and Marking of the following Games - Rules and their interpretations – Duties of Officials – Mechanism of officiating and official signals and Organisational setup at National and International level for the below mentioned games.

MODULE – V

Measurement and marking of the following games: Badminton, Ball Badminton, Basketball, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Tennis, Weight Lifting, Netball and Volleyball – Advantages of different surface of play field for the above games – Clay Court, Natural Grass, Cinder, Synthetic, Turf and Wooden surfaces.

REFERENCE BOOKS:

1. George Immanuel, “Track and Field Event Layout and Marking”.
2. AAFI Rules Book.
3. R.L. Anand, Play Field Manual, Patiala, NIS Publication, 1990.
4. H.C. Buck, Rules of Games and Sports, Madras, YMCA Publications, 1992.

PESC 403 - EXERCISE AND DISEASE MANAGEMENT (OPTIONAL)/PROJECT

MODULE – I

Heart Diseases : Definition of Coronary artery disease, Congestive Heart disease, Valvular Disease – Background – Management – Exercise Issues – Exercise Prescription for Heart Diseases – Weight Training guidelines for Heart Diseases.

Chronic Lung disease and Asthma – Definition. Background – Management – Exercise Prescription for chronic lung Diseases and Asthma – Weight Training guidelines for Lung Diseases.

MODULE – II

Meaning and Definition of Blood Pressure – Background Hypertension and Cardiovascular Diseases – Cerebro Vascular Diseases – Hypertensive Renal Diseases – Coronary Artery Disease – Classification of Hypertension – Complications of Hypertension – Evaluation of Hypertension – Management and Exercise Guidelines of High Blood Pressure.

MODULE – III

Meaning and Definition of Diabetic: Classification of Diabetic – Diagnosis – Symptoms – Complications of Diabetic – Diet Therapy – Exercise issues for Type 1 and 2 - Glucose Monitoring and Exercise.

Meaning and Definition of Obesity – Improved Food Guide Pyramid – Management – Exercise Issues – Exercise Prescription for Obesity.

MODULE – IV

Meaning and Definition for Arthritis – Background – Management – Exercise Issues.

Meaning and Definition of AIDS and Cancer – Exercise Prescription for AIDS and Cancer – Weight Training Guidelines.

Exercise Recommendations for Physically Inactive Individuals – Training Guidelines for Physically inactive individuals.

MODULE – V

Need and Importance of Exercise in Healthy Elderly – Healthy Child .

Pregnancy: Background – Exercise Issues – Weight Training Guidelines for Healthy Elderly.

Background – Exercise Issues – Weight Training Guidelines for Healthy Child.

Background – Exercise Issues – Weight Training Guidelines for Pregnancy.

REFERENCE BOOKS :

1. Brain C. Leutholtz and Ignacio Ripoll, “Exercise and Disease Management”, New York : CRC Press, 1999.
2. Jackson Gardon, “Fitness and Exercise”. London : Salamander Books Limited, 1985.
3. Guyton, “Test Book of Medical Physiology”. W.B Saunders Company.
4. Larry G Shaver, “Essentials of Exercise Physiology” : Delhi : Surjeet Publications 1982.

ELECTIVE COURSE

PESE – 305 (III SEMESTER)

HEALTH EDUCATION, SAFETY EDUCATION AND FIRST AID

MODULE – I

Meaning of Health – Definitions, Need for health education for an individual. World Organization and its importance – National and state level health organizations – Voluntary health organizations and facilities – Need for health personnel and facilities.

MODULE – II

Nutrition and Health – Elements of good nutrition – Balance diet – Food handling – Food poisoning – Causes of overweight – Effects of overweight – Effects of diet – Exercise.

MODULE – III

Meaning of Mental Health – Emotional Health – Adolescent Problems – Adjustment – Prevention of Adolescent – Mental Problems – Psychological well being, Protected drinking water – Sewage and Garbage disposal – Communicable diseases and their causes – symptoms and prevention of Health problems – Alcohol, smoking narcotics and drugs.

MODULE – IV

Factors affecting safety at home – Environment - furniture and fixtures – Electrical Connections – Bathroom and lavatory – Kitchen – Principles of movements in daily life. Safety by roads – Camps – Picnics – Tours. Safety in water – Fire, floods – Hurricane – lightning.

MODULE – IV

First Aid – Definition, Meaning – Treatment for shock, poisoning – drowning – Bleeding – Fractures – Sprain: Strain – Dislocation – Artificial respiration.

REFERENCE BOOK

1. Diehl Harold, "Health and Living", London: Mc Graw Hills Book Company, 1977.
2. Thygerson Alton L, "Essentials of Safety (3rd Edn)", New Jersey : Prentice Hall Inc., 1972.
3. St. John Ambulance and St. Andrew's Ambulance, "First Aid Manual", London : Dorling Kindersley, 1990.
4. Stanley Miles, (ed), "First Aid – An Elementary and Advanced Course of Training", (6th edn), London : Bailliere, Tindall & Cassell, 1970.

ELECTIVE COURSE

PESE – 405 (IV SEMETER)

THEORY AND PRACTICE OF VOLLEY BALL & KABADDI

MODULE – I

History and development of the game in India and abroad, court dimension, laying, marking maintenance of grounds.

MODULE – II

Fundamental skill, teaching and coaching with lead up games.

MODULE – III

Team tactics – offensive and defensive formation individual attack, group attack; Individual defense, Group defense; New trends and formation.

MODULE – IV

Selection of teams, teaching, coaching, competitions, drawing fixtures, scouting, clinics – results.

MODULE – V

Rules and regulation of the game, latest changes in rules, interpretation, officiating techniques, score sheet.

Reference Books:

1. Gurubakhah S Sandhu, "Volleyball – Basic Advanced, Chandigarh – The Sports People Publisher's of Sports Literature, 1982.
2. Ashok Kumar, "Volleyball", New Delhi: Discovery Publishing House, 1999.
3. C.V. Rao, "Kabaddi – Native Indian Sport", Patiala: NIS Publications, 1983.

