

# M.P.Ed. (FINAL) - 2013

Any Four to be selected :

## Paper I Exercise and Sports Physiology

Unit-I : **Introduction** : Definition of Physiology and Exercise Physiology, Importance and Role of Exercise Physiology in the field of Physical Education and Sports.

**Muscle** : Structure and Function : A Comparative study of different types of muscles (Voluntary, Involuntary and Cardiac), chemical Composition of skeletal muscle, muscle fibre type (Red and White muscle).

Unit-II : **Bioenergetics** : Fuel for muscular work, (ATP), energy of Muscle contraction and contractile and biochemical changes during muscular contraction Heat Production and thermodynamics of muscle contraction. Aerobic and Anaerobic muscular activity.

**Neuro muscular junction and Co-ordination of Muscular activity** : Neuron and Motor unit, transmission and nerve impulse, bio-electric potentials, neuro-muscular junction and transmission of nerve impulse across it. Proprioception and Kinesthesia. Tone, posture and equilibrium.

Unit-III: **Physiological changes due to Exercise** : Immediate effect of exercise/work on various systems of body, Cardio-respiratory, muscular and thermo-regulatory Systems. Effect of Exercise and training on (i) heart and circulatory systems, (ii) Respiratory system (A) brief discussion on other system during rest, sub-maximal and maximal work. Oxygen debt, forced expiratory volume, Breathing capacity. Recovery rate, Blood Supply to Skeletal muscle and regulation of blood flow during exercise.

Other Physiological aspects of Exercise and Sports : Concept of Physical Fitness and Physical training, warming-up conditioning and fatigue, Physiological aspects of development of strength, endurance, skill, speed, agility and co-ordination.

Unit-IV: **Basic concept of a balanced diet.** Appropriate diet before, during and after athletic performance and the effect of alcohol, drugs and smoking on athletic performance.

**Energy cost of various sports activity** : Definition of Energy cost, Energy cost of various sports activity and various direct/indirect methods of assessing them.

Unit-V : Work and Environment, Obesity and Weight Control. Work

Capacity under different environmental conditions : Hot, humid, cold and high altitude. Definition of Obesity, measurement of body fat by various methods (under water weight and skinfold measurement) Body weight control, Positive and Negative energy balance.

**References:**

1. Guyton, Arthur C. : Test Book of Medical Physiology (Philadelphia : W.B. Saunder Company, 1976).
2. Morehouse, L.E. and Miller, A.T. : Physiology of Exercise(Saint Louis : The C.V. Mosby Company, 1976) 7<sup>th</sup> Edition.
3. Karpovich, P.V. and Sinning. Wayne E. : Physiology of Muscular Activity (Philadelphia : W.B. Saunders Company, 1971) 7<sup>th</sup> Ed.
4. Bourne, Geoffery H. : The Structure and Function of Muscles London: Academic Press, 1972.
5. Astrand, P.O. and Rodahl, Karre : Test Book of Work Physiology Tokyo : Megraw – Hill Kogakusha Ltd., 1970).
6. Mathew, D.K. and Fox E.L., Physiological Basis of Physical Education and Athletics. (Philadelphia : W.B. Saunders Company, 1976).

## **Paper II**

### **Management of Physical Education and Sports**

- Unit-I : Concept of Management, Philosophical and historical background and status, Terminology in modern Management, Applicable models of management, Competency based approaches and implementation in sports and Physical Education.
- Unit-II : Management of Sports in-Schools, Colleges and Universities : Inter-University, District, State and National Level, Indian and International Olympic Association, Sports Authority of India.
- Unit-III : Management of Physical Education Programmes.
- (i) Progressive concepts of Management/Administration, General Administration Theories, Personnel and material management, Programming for instruction and activities.
  - (ii) Hierarchy of education administration in General, State and Local authorities and individual institutions in India.
  - (iii) Responsibility of – General Administrator, Technical Expert, Educational Administrator, Professional Educator and Specialist.
  - (iv) Training of Administration – Liberal Education, Group Dynamics, Subject Specialisation.
- Unit-IV
- (i) Supervision Leadership :
    - (a) Responsibilities for Leadership-Inspection of Physical Education Specialists.
    - (b) Training of Supervision of Physical Education.
      - 1. Personal Traits of the Supervisors
      - 2. Relationship of the Supervision to
        - (i) Administrative Offers (ii) Teachers
    - (ii) Functions of the Supervision : Duties pertaining to – Administration Facilities and Equipment, Instruction, Special Services, Supervision and Professional Growth.
    - (iii) Evaluation of Supervision : Methods, Meaning and Need for evaluation Criteria of Evaluation, Follow-up.
- Unit – V
- (i) Changed process for the future- Theory and technique, System approach, marketing and sponsorship approach for competitive sports. Successful management in future.
  - (ii) Selected problems in Management Administration, Professional Preparation, Professional ethics class discipline and student teaching.
    - (i) Mass movement for health consciousness in the society.

#### **References :**

1. Earle F. Zeigler & Gary W. Bowie : Management Competency Development in Sports and (Physical Education. 9 Philadelphia : W. Lea and Febiger, 1993).
2. Joseph Bucher and Earnest Koenigeberg : Scientific Investory Management (New Delhi : Prentice Hall of India Pvt. Ltd. 1968).

3. Ashton D. : Administration of Physical Education for Women (New York : The Ronald Press C. 1968).
4. Bucher C.A. : Administration of Physical Education and Athletic Programme (St. Louis : The C.V. Mosby Co., 1979) 7<sup>th</sup> Ed.
5. Daughtrey G. and Woods J.B. : Physical Education and Inframural/Programmes : Organisation and Administration Philadelphia U.S.A. : W.B. Saunders Co., 1976. 11<sup>th</sup> Ed.
6. Fersythe G.E. and Duncan R.C. : Administration of Physical Education (New York : Prentice Hall Inc. 1951).

## **PAPER – III**

### **Health Education**

- Unit I (i) History of Health in India. Concept and various levels of Health Care in India. Medical care in rural and urban areas. Primary Health Centre Concept. Three tier system of Health Care, Health for all by 2000 A.D. Latest trends in Health Education.
- (ii) Health Education : Its contents and aims. Use of Audiovisual aids, methods of individual group mass approaches of Health Education.
- (iii) Inter-relationship between different components of Health and Spiritual Health : Role and responsibility of individual, community and state spectrum of Health, Role of Heredity and Genetics in achieving positive health.
- (iv) Nutrition : Proximate principles and their imbalance. Brief description of nutrients in various Food stuffs and their elements. Milk and food borne diseases.
- Unit II School Health services and School Health Programme in relation to the following :
- (i) Role of Physical Education Teacher, Principal, Class Teacher, Doctor.
- Health appraisal : Meaning aims, methods
  - Medical check-up/examination.
  - Common childhood diseases & their control.
  - First aid, accident & prevention.
  - Mental health, dental health, eye troubles.
  - Food for children at primary Middle and Secondary level.
  - School Health administration & maintenance of records.
  - Preparation of Health Card.
- (ii) Healthful school living under fine clinics and road to health.
- Unit III Community and Environmental Sanitation :
- Water-Impurities in water, purification of water and water borne diseases with reference to worm infestations and

- Amoebiasis, Detection of Chlorine in water.
- Ideal well and its maintenance Chlorination of water at camp side.
- Air pollution and its effects on health Occupational diseases.
- Housing and its problems and health aspects.
- Light, noise, temperature and radiation, their effects on health.

- Unit IV Communicable Diseases :
- Natural history of communicable disease.
  - Levels of Prevention : Brief description of following communicable diseases and their prevention.
  - Tetanus
  - Tuberculosis
  - Jaundice (Infections – Hepatitis)
  - Scabies and common skin infections
  - Chicken pox, mumps and Measles
  - Malaria and filarial
  - Rabies (Hydrophobia and animal bite)
  - Sexually transmitted diseases and Aids

- Unit V Non-communicable diseases an Evil of community.
- Brief description of important non-communicable diseases :
- Population policy, population dynamics, Population-explosion, national family welfare programme need of sex Education, Alcoholism, Drugs habituation-dependence and addition and their prevention and control.

**REFERENCE :-**

- J.E., Park K. Text Book of Preventive and Social Medicine. (Jabalpur : Messers Banarasids Bhaqnot, 1980), Edn. 8.
- C.E., The School Health and Health Education. (St. Louis: The C.V. Mosby Co., 1952), Edn.2.
- Yaspal. Social and preventive Medicine (Delhi : Atma Ram and Sons, 1983). Edn. 14.
- B.N. A Treatise of Hygiene and Public Health (Calcutta. Scientific Publishing Co.) Edn. 15.
- J. John. Principles of Public Health Administration (St. Louis : C.V. Mosbey Co., 1969) Edn.,5.
- A. Charles, Administration of Health and Physical Education and Programs (St. Louis : The C.V. Mosby Co., 1979) Edn.6.
- C.E. Personal and Community Health. (St. Louis : The C.V. Mosby Co., 1971). Edn. 14.

## Paper-IV

### Sports Medicine

Unit-I Introduction : Concept of sports medicine, its aim and objectives. Need and scope of Sports Medicine in Physical Education. Role of Sports Physician, Physical Educator/Athletic Trainer Coach and the player in Sports Medicine. Team Medical care. History of Sports Medicine in India and abroad.

Unit-II Sports Medicine Problems : Low back problems and management stretching and strengthening exercise for back problems, Mal-nutrition and Management. Concept of Health Club, Sauna-bath and massage, their use and misuse. Sex problems of athletics. Difference between the two sexes. Advantages and disadvantages of exercises before and after pregnancy. Common old age problems of athletics and rehabilitation.

Unit -III **Therapeutic Modalities and Procedure of Individual Modalities** : Hydrocollateral packs (Hot and Cold) Hydrotherphy (whirlpool) Diathermy, Ultrasound, Electrical Muscle Stimulation, Combination of ultrasound and Electrical Muscle stimulation, Cryotherapy and compression, Cryokinetics, cold spray. Contrast bath, paraffin bath infra red and ultra violet rays, dispulse and laser therapy.

Unit- IV **General and Regional Injuries and their Immediate Management (Brief Description)** : Visceral, soft tissue and musculo skeletal injuries. Tissue response to injuries, Inflammation, macro and microtrauma and stress related injuries. Injuries of head and face. Shoulder arm and elbow joints. Specific Injuries to the neck, trunk, abdominal region. Thigh and knee, lower leg ankle and foot. Important over-use problems and their management.

Unit-V **Specific game injuries, dopes and athletic nutrition. Brief account of injuries** : Football, Hockey, Track and Field, Swimming, Wrestling, Judo, Weight Lifting and Training, Tennis, Boxing, Gymnastic and Basketball. Dope : History, definition, Classification, Signs and symptoms, Procedure and sampling at National and International levels. Use and abuses of drugs. Net Protein Utilization : Planning & Justification of athletic diets for different categories of sports as per recommendations of National Sports Medical Advisory Body – Role of water for Indian athletics.

Practical : Sports Medicine :

1. Visit to Sauna Bath and its demonstration.
2. Demonstration and practices and measure and its different techniques.
3. Practical Demonstration and use of Therapeutic Modalities and use of individual.
4. Modalities available as Sports Medicine Companies at I.N.C.P.E., Gwalior.
5. Demonstration for assessing following Sports Medicine Problems :
  - i. Shin splint.
  - ii. Tennis elbow and related problem.

- iii. Back pain.
- iv. Joint injury evaluation.
- v. Skeletal and angulance differences between male and female.

**References :**

1. Ray, Steven and Irvin Richard : Sports Medicine, (New Jersey : Englewood Cliffs, Prentice Hall, 1982).
2. Armstrong and Tuckar : Injuries in Sports (London : Staples Press, 1964).
3. William J.G.P. : Sports Medicine, (London : Edward Arnold Publishers).
4. Pande P.K. : Kaew How Sports Medicine (Lalandhar : A.P. Publisher, 1989).

## **PAPER – V**

### **PSYCHOLOGY OF PHYSICAL EDUCATION & SPORTS**

Unit-I      Meaning, nature and scope of sport psychology, development of sport psychology, relationship of sport psychology with other Sport sciences.

Importance of Sport Psychology to Physical Educators and Coaches.

Unit-II      **Cognitive process in physical activities :**

Meaning of cognition, characteristics of cognitive process in sports. Role of sensation and perception, thinking, imagination and memory in physical activities.

Mental activity of athletics, mental activity and sports related goals.

Meaning of attention, Dimensions of attention, strategies to develop attention.

#### **MOTOR LERNING :**

Meaning of motor learning, factors affecting motor learning, motor development in various periods of childhood and adolescence.

Unit-III      **Psychological aspects of action regulation :**

Meaning of action regulation, Importance Psychological characteristics of physical activities, structure of action programme, action programme in different games and sports.

#### **PERSONALITY :**

Meaning of Personality, personality traits of sports person, relationship of personality to sport performance, personality differences among various sports.

Unit-IV      **MOTIVATION :**

Meaning of motive, need, drive, role of motives, attitudes and interest in physical activities.

Meaning of motivation, techniques of motivation, type of motivation, relationship between extrinsic and intrinsic motivation.

**EMOTIONS :**

Meaning and types of emotion, influence of emotions (Success and failure) on level of aspiration and achievement.

Anxiety, fear, frustration, conflict and its effect on sports performance.

Unit-V PSYCHOLOGICAL ASPECTS OF COMPETITION :

Defining competition< determinants of competitive behaviour, psychological Characteristics of Pre-competition, competition & post competition, selected psycho-regulative techniques for relaxation and activation.

Psychological aspects of long term and short term preparation for Competition, Psychological care of injured sports Person, Typical responses to injures, prevention and coping techniques.

**SOCIAL FACILITATION :**

Presence of others, co-action effect and audience effect in sports.

Factors mediating social facilitations.

**METHODS OF INVESTIGATION IN SPORTS PSYCHOLOGY:**

Various methods used in Sports psychology, different tests in Sports psychology.

**REFERENCES :**

Alderman, R.B. Psychological Behaviour in Sports. (Philadelphia : London, Saunders Company, 1974).

But Lusan Dorcas, Psychology of Sports (Network : Van Nostrand Reinhold Company) Edn.2.

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Cratty Bryant J., Psychology and Physical Activity. (New Jersey Englewood Cliffs, prentice Hall Inc., 1965).

Cratty Bryant J. Psychological preparation and Athletic Excellence. (New York : Movement Publications Inc., 1978).

Gold Stejn and Joffery H. (ed) Sport Games play Social and psychological View Points (Lowernce Erlbanm Associates, Publishers R.J.1979.).



- Kamlesh M.L. Psychology of Physical Education and Sports (New Delhi : Metropolitan Book Co. Pvt.Ltd., (1983).
- Kane J. E. Psychological Aspect of Physical Education and Sports (London, Boston : Routledge and Kegan Paul, 1972).
- Llewellyor Jack H. and Blucker Judy A. Psychology of Coaching Theory and Application (Delhi : Surjeet publication 1982).
- Martens Rainer, Social Psychology and Physical Activity (New York : Harper and Row Publishers, 1975).
- Robert Glyn C. Learning Experiences in Sport Psychology (Illinois : Human Kinetics Publisher Inc., 1987).
- Martens Rainer, Coaching Guide to Sports Psychology (Illinois : Human Kinetic publishers Inc., 1987).
- Linda K. Binket, Robert J. Ratella and Ann S. Really Sports Psychology. Psychology Consideration in Maximizing Sport Performance. (C Brown publishers Dubegne Jows.
- Gill Dianel, Psychological Dynamics of Sport (Illinois : Human Kinetic Publisher, 1986.).

## **PAPER VI**

### **FINAL - SPORT SOCIOLOGY**

#### Unit – I INTRODUCTION :

- (i) Nature, Scope & Method of Sport Sociology.
- (ii) Sport as a social phenomenon.
- (iii) Sociological analysis of sport and sport sociology as an academic discipline.
- (iv) Social factor (appearance, sociality, aspiration level and audience) inference on participation and performance in sport.

#### Unit-II SPORT AND MICRO SOCIAL SYSTEMS

- (i) Study of sport groups.
- (ii) Group interaction, competition & cooperation.
- (iii) Behaviour, characteristics, qualities and role of sport leaders.
- (iv) Sports and cultures.

#### Unit-III SPORT AND MACROSOCIAL SYSTEMS

- (i) Relationship between sport and socializing institutions (family, school and educational systems).

- (ii) Inter-relationship between and regulating institutions (politics and economy).
- (iii) Sport and cultural institutions (religion and art).
- (iii) Sociolization via games and sport.

#### Unit-IV SPORT AND CULTURE

- (i) Sport as a social institution.
- (ii) Sport an element of culture and a cultural product.
- (iii) Manipulative socialization & coerced conformity.
- (iv) Relationship between sport and culture.
- (v)

#### Unit-V SOCIAL GAMES CONCERNING SPORT IN SOCIETY

- (i) Social stratification in sport, sport as a stratificational system.
- (ii) Discrimination and democratization in sport with Special reference to socio-economic classes and women.
- (iii) Sport and aggression, violence in sport.
- (iv) Problem regarding professionalisation and children in sport.

#### REFERENCE :

Loy, John W., Kenyon, Gerald S. & Mepheron, Barry D.  
Sports Culture and Society (Philadelphia : Lea & Febiger, 1981).

Ball, Donald W. and Loy John W. Sport and Social order :  
 Contribution to the Sociology of Sport. (London : Addison Wesley Publishing Co.,  
 Inc., 1975).

Loy John W., Mepheron, Barry D., and Kenyon Gerald, Sport and Social System (London : Addison Wesley Publishing Company Inc., 1978).

Edward, Larry. Sociology of Sport (Illinois. The Dorsey press, 1973).

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 Englewood Cliffs, Prentice Hall, Inc., 1967).