

## **SYLLABUS FOR PHYSICAL EDUCATION (XI- XII)**

### **1. Physical Education, Olympics, Recreation and Outdoor Education**

Definition, meaning, aim, objectives, need, importance and scope of Physical Education, Modern concept of Physical Education, Play, Games and Sports, Body Types.

History of Physical Education in India, Contribution of important institutions and personalities, Sports awards of India, Sports organizations in India; Contribution of Akhara, Bratachari and Vyamshala, Olympic Games, Asian Games, Commonwealth Games.

Recreation in Physical Education and Modern Society, Outdoor education: Camp, Adventure Sports, Excursion, Picnic, Play Day; Folk Games culture of West Bengal.

### **2. Anatomy, Physiology and Exercise Physiology**

Structure and functions of skeletal system including joint types and their movements, Structures and functions of muscular, circulatory and respiratory system.

Effect of exercise and training on muscular system, circulatory system and respiratory system. Tidal Volume, Residual Volume, Second wind, Minute ventilation, Vital capacity, Respiratory rate, Lung Volume; Athletic Heart, Stroke Volume, Cardiac output, Oxygen Debt, Blood Pressure, Pulse pressure, Heart rate. Blood: Composition, Group and Functions.

### **3. Psychology and Sociology of Physical Education and Sports.**

Psychology and Sports Psychology, Learning, Motor learning, Transfer of training and learning, Personality, Attention, interest, instinct and emotion in Physical Education & Sports, Growth and development, Anxiety, Stress, Motivation, Aggression in Physical Education and Sports.

Sociology and Sports Sociology, Social values of Sports; Group dynamics; Leadership quality, Play theory; Social service and Social Agencies.

Meaning and concept of Gender studies; Sex differences; Gender inequalities in Sports; Women in Sports, Barrier of Women participation in Sports in our society.

### **4. Kinesiology and Biomechanics**

Definition, Importance and Need; Different types of joint movements; Types of Muscle Contractions; Posture; Force, Lever, Laws of Motion, Friction, Projectile, Axes, Planes, Center of Gravity, Equilibrium; Analysis of Human Fundamental Movements.

### **5. Sports Training and Sports Medicine**

Definitions, Aims, Objectives and Principles of Sports Training. Warm-up, Cooling down, Conditioning, De-conditioning; Different physical fitness components and its development; Training Load; Planning and Periodisation; Different Methods of Sports Training. Talent identification.

Meaning, definition and concept of sports medicine and rehabilitation; Aims, Objectives and principles of rehabilitation. Different rehabilitative exercises. Sports injury and its management. Postural deformities and corrective exercises; Massage. Doping.

#### 6. **Health Education, Fitness and Wellness**

Definition, meaning and concept of Health, Health Education, Health Instruction and Health Supervision; Dimensions, Spectrum and determination of health; Health Service and personal hygiene; Communicable and non-communicable diseases; First Aid.

Meaning and modern concept of fitness; Physical fitness (Skill-related and health-related); Definition, meaning and concept of Wellness; Component of Wellness, Dimensions of wellness; Factors affecting wellness; Modern lifestyle; Effect of Smoking, Alcohol & Drugs; Hypokinetic diseases and its management; Stress management.

Physical activity and health benefits; Concept of Aerobic and anaerobic exercises; Different types of exercises for fitness development; Weight management; Obesity, BMI, Body composition, Balance diet, Food and nutrition and Sports nutrition, Types of nutrients (Macro and Micro); Role of Carbohydrate, Protein, Fat and Minerals for Sports performance.

#### 7. **Educational Technology, Methods of Teaching and ICT**

Definition, Factors of teaching; Types of Education; Various methods (Indoor & Outdoor) of teaching used in Physical Education; Presentation Technique; Teaching Aid; Learning Design (Different types of Lesson Plans); Classification of students.

Need and Importance of ICT in Physical Education and Sports; Components and use of Computer in Physical Education and Sports; Software and their uses in Physical Education and Sports; MS Word; MS Excel; MS Power Point; Computer Memory; Types and Functions of Computer Network; Computer Virus.

#### 8. **Test, Measurement and Evaluation**

Definition of test, measurement and evaluation; Criteria of a good test, need and importance of test, measurement and evaluation.

Measurement of strength, endurance, agility, flexibility, speed, reaction time, balance, coordination, body composition, strength endurance and power.

Skill Test: - Soccer, Basketball, Volleyball, Hockey, Tennis and Badminton.

Harvard Step Test, Queen's College Test, Beep Test, Margaria-Kalamen Test, Barrow Motor Ability Test, Youth Fitness Test and Health Related Physical Fitness Test.

Anthropometric Measurement, Measurement- Skin fold and Waist Hip Ratio.

9. **Management and Officiating in Physical Education and Sports**

Definition, Importance, Purpose, Principles, Scope of Sports Management and Officiating. Importance and Functions of Office Management; Care of equipments; Public Relations in Sports; Sports Journalism and Mass Media; Budget, Purchase, Duties and responsibilities of Officials, Qualities of an Official; Tournaments, Intramural and Extramural Competitions; Layout of Play fields, Grounds and Courts. Rules, Regulations and Officiating of Games & Sports.

10. **Yoga Education and Inclusive Education**

Definition of Yoga; Classical approach to Yoga Practices; Chakras, Nadis, Astanga Yoga, Karma Yoga, Kriya Yoga, Hatha Yoga; Yoga Therapy; Pancha Kosa; Patanjali Yoga Sutra; Effect of Asana and Pranayama on Human Body. Bandha, Mudra and Kriya.

Concept of Special Education: Integrated Education, Inclusive Education and their Relationship to Physical Education; Factors Affecting Inclusion; Advantages of Inclusive Education for the individual and society.