

PHYSICAL TRAINING INSTRUCTOR (PTI)

SI No.	Topics	No. of Questions
1.	Physical Education in India Objectives, Principles and Components of Physical Education; Indian Olympic Association and International Olympic Committee; Role of Different Agencies in Promoting Health (WHO, UNICEF, Local Bodies); Concepts of Incentive, Achievement; Organisation of other Physical Education and Sports Event (Seminar, Clinic, Lecture); Use of Audio-Visual Aids in Physical Education.	10 to 12
2.	Anatomy, Physiology, Exercise, Nutrition Diet & Hygiene Physical Activity -Concept, Benefits of Participation in Physical Activities with Specific Reference to Health; concept, need, components and Significance of total fitness. Principles of Physical Fitness, Warming Up, Conditioning, and cooling down, Methods to Develop; and Measure Health and Skill related components of Physical fitness. Wellness -Concept components, Significance with reference to positive lifestyle. Concept of nutrition, balanced diet, Dietary Aids. Energy and Activity - Calorie Intake and expenditure, energy balance equation, role of personal hygiene, mental hygiene, sleep hygienic, occupational hygiene in physical education and sports.	15 to 17
3.	Sports Injuries, Prevention & Health Education, Sports Medicine Basic Concept, need and importance of anatomy and physiology in physical education. Definition and description of cell, tissue, organ and system Brief introduction to skeletal system, muscular system, circulatory system, respiratory system, digestive system, excretory system, nervous system and endocrine system. Physiological factors affecting development of physical fitness components. Concepts of fatigue, stitch, cramp, oxygen debt, second wind. Markers for training effects – Maximum heart rate, vital capacity, stroke volume, temperature regulation. Postural Deformities – Types and causes (hypnosis, scoliosis, lordosis, knock knees, bow knees, flat foot) Corrective exercises. Sports medicine and athletic care – Concept and significance, factors causing injuries. General principles of prevention of injuries - Common sport injuries (strain and muscle and ligament sprain, frozen shoulder, lower back strain, Tennis and Golfer's elbow, Runner's knee, shin pain, blister, concussion, laceration, abrasion, hematoma, fracture, dislocation). Management of injuries (strain and muscle and ligament sprain, frozen shoulder, lower back strain, Tennis and Golfer's elbow, Runner's knee, shin pain, blister, concussion, laceration, abrasion, fracture, dislocation). Sport injuries and first aid. Rehabilitation – Aim and objective, recovery (ice bath, contrast bath, hot fomentation) Therapeutic modalities (therapeutic ultrasound, Inferential Therapy Unit, TENS infrared lamp, wax bath, short wave diathermy). Definition, scope and importance of sports psychology Learning – Concept and principles of learning, learning curve. Emotion, anxiety and stress management in Sports.	16 to 20
4.	Camping for Recreation	2 to 3
5.	Important games and sports	4 to 6
Total		50