

Syllabus of the Preliminary Screening Test for Assistant Professor in Physical Education:

- UNIT-I Philosophies of Physical Education – Idealism, Naturalism, Realism, Pragmatism, Existentialism and Humanism.
- Biological basis of physical activity - sex and age characteristics in different phases of life, stress and health, Fatigue, Body type, Postural deformities, and Growth and exercise.
- Sociological basis of Physical Education- Competition and Co-operation, social facilitation and reinforcement, socialisation through games and sports, social nature of man and physical activity.
- Psychological basis of physical Education- Play and play theories, Principles of motor- skill acquisition, Transfer of Training, Perceptual motor learning , General principles of growth and development.
- Olympic Movement- Historical development of Ancient and Modern Olympic games. Physical Education for national integration and international understanding . Physical Education in India .
- UNIT-II Criteria of an acceptable research problem, Types of research-fundamental, applied and action research, sampling- process and techniques, Data collection-tools and techniques; Indexing, Abstracting , Scanning, Note taking, Score cards and Records.
- Statistical techniques of data analysis and interpretation- Measures of Central tendency and variability, correlation, normal probability curve, t-test, F-test, chi-square test and z-test, type – I and type – II error, Null-Hypothesis.
- UNIT-III Physiology of muscular activity-gross and microscopic structure of skeletal muscles, Neurotransmission and movement mechanism physiology of respiration and blood circulation.
- Bioenergetics and recovery process, thermodynamics of muscle contraction, O₂ debt, Aerobic and Anaerobic muscular activities, work capacity under different conditions-hot, humid, cold and high altitude, factors influencing performance in sports.
- Ergogenic aids and doping, Effects of drugs, tobacco and alcohol on athletic performance

Athletic injuries – definition of different terms related to injury, Injury and their management-head and face, shoulder, arms and elbow joints, neck trunk and back, abdomen, thigh knee, ankle and foot.

Therapeutic modalities and their application. Rehabilitation program of ankle, knee, hip, lower back, shoulder, elbow and neck injuries.

UNIT-IV Joints and their movements- planes and axes. Body levers, Laws of motion, Principles of equilibrium, force, spin and elasticity, Acceleration, angular motion, projectile.

Work, power and energy, Centre of gravity, centripetal and centrifugal force, friction, co-efficient of friction, air and water resistance, law of impact and rebound.

Mechanical analysis of fundamental, daily-life and sports skills (walking, running, jumping, throwing and catching; track and field, football, cricket, basketball, volleyball gymnastics and Kabaddi).

Anthropometric measurements – Girths, circumference skin folds, body proportion, body composition. Lean Body Mass, Body density, % of Body Fat determination procedures, seldom's method and, Heath and carter's Methods of sowaototyping.

UNIT –V Learning process – theories and laws of learning personality, it's dimensions, theories, personality and sport performance.

Sensation and perception, Attention and Interest, Instinct and emotion – their role in learning physical Education ,Motivation – theories and dynamics of motivation in sports Psychological factors affecting sports performance – viz. Stress, anxiety, aggression, frustration, conflict and fear.

Psycho – regulative procedure – (autogenic and idiomotoric training , Autosuggestion).

UNIT – VI Characteristics and principles of sports training, Training load and periodisation – competitive, general and specific exercise Training Load adaptation – Overloading – reasons and remedies Training method for motor quality development – speed, strength endurance, flexibility ,agility and power.

Short term and long term training plans, Technical and tactical preparation of athletes, training cycles.

Preparation for competition – (built up competitions, main competition(s), competition frequency Psychological, preparation).

UNIT-VII Health related fitness, obesity and its management. Communicable diseases and their prevention various Teaching methods, Teaching Aid, Evaluation and follow up in physical Education.

Principles of planning of Physical Education Lessons. Concept of techniques of supervision.

Criteria of test evaluation. Concepts and assessment of Physical fitness, motor fitness, motor ability and motor educability.

Sports Skill Tests – Badminton, Basketball, Hockey, Soccer, Volleyball.

Testing Psychological variables – competitive anxiety, aggression, motivation, self- concept, team cohesion.

Qualities and qualifications of physical education personnel. Criteria of a profession. Forces and factors affect educational policies (social, political, economical, cultural).

Undergraduate and post – graduate professional preparation .

Signed by the Members of the Syllabus Committee