

BHARATHIDASAN UNIVERSITY, TIRUCHIRAPALLI - 620 024

B.Sc. PHYSICAL EDUCATION - Course Structure under CBCS

(For the candidates admitted from the year 2005 – 2006 onwards)

Sem	COURSE	COURSE TITLE	Ins tru. Ho urs	Cre dit	Exam Hours	Marks		TOT AL
						Int.	Extn.	
I	Language Course – I (LC)		6	4	3	25	75	100
	English Language Course – I (ELC)		6	4	3	25	75	100
	Core Course – I (CC)	Foundations of Physical Education and Sports	6	4	3	25	75	100
	Core Course – II (CC)	Practical – I Major Games-I and Track &Field-I	3	--	*	--	--	--
	First Allied Course – I (AC)	Anatomy and Physiology	5	3	3	25	75	100
	First Allied Course – II (AC)	Practical – II Yoga and Gymnastics	2	--	*	--	--	--
	General Interest Course (GIC)		2	2	3	25	75	100
II	Language Course - II (LC)		6	4	3	25	75	100
	English Language Course - II (ELC)		6	4	3	25	75	100
	Core Course – II (CC)	Practical – I Major Games-I and Track &Field-I	3	4	3	25	75	100
	Core Course – III (CC)	Theories of Major Games-I and Track &Field-I	6	4	3	25	75	100
	First Allied Course – II (AC) Theory	Practical – II Yoga and Gymnastics	3	3	3	25	75	100
	First Allied Course – III (AC) Theory	Theories of Yoga and Gymnastics	5	3	3	25	75	100
III	Language Course – III (LC)		6	4	3	25	75	100
	English Language Course– III (ELC)		6	4	3	25	75	100
	Core Course – IV (CC)	Organization administration and Methods in Physical Education	6	4	3	25	75	100
	Core Course – V (CC)	Practical-III Major Games - II	4	--	*	--	--	--
	Second Allied Course – I (AC)	Health Education, Safety Education and First Aid	5	3	3	25	75	100
	Second Allied Course – II (AC)	Exercise Physiology	3	--	*	--	--	--
IV	Language Course – IV (LC)		6	4	3	25	75	100
	English Language Course - IV (ELC)		6	4	3	25	75	100

	Core Course – V (CC)	Practical-III Major Games - II	2	4	3	25	75	100
	Core Course – VI (CC)	Practical-IV Track and Field -II	6	4	3	25	75	100
	Core Course – VII (CC)	Theories of Major Games-II	3	..	**
	Second Allied Course – II (AC)	Exercise Physiology	2	3	3	25	75	100
	Second Allied Course – III (AC)	Sports Psychology and Sociology	5	3	3	25	75	100
V	Core Course – VII (CC)	Theories of Major Games – II	3	4	3	25	75	100
	Core Course – VIII (CC)	Test, Measurement and Evaluation in Physical Education	6	4	3	25	75	100
	Core Course – IX (CC)	Theories of Track and Field – II	6	4	3	25	75	100
	Core Course – X (CC)	Practical – V Specialization Major Games	3	--	*	--	--	--
	Elective Course – I (EC)	-----	4	3	3	25	75	100
	Elective Course – II (EC)	-----	4	3	3	25	75	100
	Elective Course – III (EC)	-----	4	3	3	25	75	100
VI	Core Course – X (CC)	Practical – V Specialization Major Games	3	4	3	25	75	100
	Core Course – XI (CC)	Science of Sports Training	6	4	3	25	75	100
	Core Course – XII (CC)	Theories of Track and Field – III	6	4	3	25	75	100
	Core Course – XIII (CC)	Theories of Specialization Major Games	6	4	3	25	75	100
	Core Course – XIV (CC)	Practical - VI Track and Field – III	6	4	3	25	75	100
	Elective Course – IV	-----	4	3	3	25	75	100

* Examination at the end of even semester

** Examination at the end of fifth semester

The Department of Physical Education will offer the following Elective Courses :

1. Sport Bio-Mechanics
2. Kinesiology
3. Sport Management
4. Modern Trends in Physical Education

FOUNDATIONS OF PHYSICAL EDUCATION AND SPORTS**UNIT : I**

Meaning and Definition of Education and Physical Education – Need, Nature and Scope of Physical Education – Physical Training and Physical Culture

UNIT : II

Aim and Objectives of Physical education – Development of Physical, Cognitive, Neuro-muscular, Affective, Social, Emotional, Spiritual and Recreational – Theories of Learning – Laws of Learning

UNIT : III

Scientific basis of Physical Education – Contribution of Allied Sciences – Anatomy, Physiology, Biomechanics, Kinesiology, Sports Medicine, Psychology, Sociology and Computer Science

UNIT : IV

History of Physical Education in Sparta and Athens – Olympic Games: Ancient, Modern – Origin – Organisation and conduct of the game – Olympic Flag, Torch, Oath, emblem and Motto

UNIT : V

Recent developments in India: SAI, NSNIS, SNIPES, LNIPE, Sports Academics – Awards and Scholarships: Arjuna Award, Dhronochariya Award, Rajiv Gandhi Khela Ratna Award – International and National Competitions: Asian Games, SAF, SGF, RDS, and BDS

Books for References :

1. Bucher Charles A., Foundations of Physical Education, St. Louis the C.V. Mosby Company, 1983.
2. Kamalesh M.L., Physical Education : Facts and Foundation, New Delhi, P.B. Publications, 1988.
3. Thirunarayanan, C. and Hariharan, S., Analytical History of Physical Education, Karaikudi, C.T. & S.H., Publications, 1990.
4. Sharma, O.P., History of Physical Education, New Delhi, Khel Shitya Kendra, 1998.
5. Wakharkar D.G., Manual of Physical Education in India, Pearl Publications Pvt. Ltd., Bombay, 1967.

PRACTICAL – I MAJOR GAMES – I and TRACK & FIELD – I**(Major Games : Football, Kabaddi & Volleyball****Track & Field : Sprint and Middle Distance Race)****Testing on :**

- Fundamental Skills
- Finer Skills
- Playing Ability / Performance
- Officiating Technique

Books for Reference :

1. Conling David, Athletics, London, Robert Hale, 1980.
2. Prabhakar Eric, The way to Athletic Gold, Madras East–West Press Pvt. Ltd, 1995.
3. Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.
4. Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.
5. Dr. P. Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.
6. Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.
7. Thompson William, Teaching Soccer, Delhi, Surjeet Publications, 1996.
8. Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company, 1972.
9. Dhanaraj V. Hubert, Volleyball – A Modren Approach, Patiala, Sainsoris, 1991.

Scheme of Assessment:

Fundamental Skills & Defensive and OffensiveSkills	:	35
Playing ability / Performance	:	20
Officiating Technique	:	10
Record note	:	10
TOTA	:	75

ANATOMY AND PHYSIOLOGY**UNIT : I**

Meaning of Anatomy and Physiology – Need and Scope of Anatomy and Physiology in Physical Education – Cell – Structure and Functions – Tissues – Types and Function

Muscular System – Types of Muscles: Skeletal Muscle, Cardiac Muscle, and Smooth Muscle.

UNIT : II

Skeleton : Meaning and Functions – Bones : Classification and Functions - General Features of Various Bones: Vertebral Column, Pelvic Bone, Radius and Ulna, Scapula, Femur and Bones of Skull – Joints: Definition and Classification of Joints

UNIT : III

Nervous System : Neuron – Central Nervous System (CNS): Brain and Spinal Cord – Peripheral Nervous System (PNS): Cranial Nerves and Spinal Nerves – Digestive System : Structure & Functions – Digestive Process – Liver, Pancreas – Functions

UNIT : IV

Respiratory System – Respiration – Respiratory Track – Alveoli – Lungs: Structure & Functions – Gas Exchange – Vital Capacity

Circulatory System – Heart: Structure & Functions – Cardiac Cycle, Cardiac Output, Stroke Volume

UNIT : V

Endocrine Glands – Functions of Endocrine Glands: Pituitary, Thyroid, Parathyroid, Thymus, Pancreas, Adrenal, & Sex – their role, in growth, development and regulations of body functions

Books for References :

1. Guyton A.C., Functions of the Human Body, London, W.B. Saunders Company, 1969
2. Dr.V. Selvam “ Anatomy and Physiology” Bodinayakanur.
3. Dr. N.M. MUTHAYYA “Physiology” J.J. Publications, Madurai.
4. SEELEY et. all Anatomy and Physiology Mc Graw Hill.
5. Srivastava et. all, Text Book of Practical Physiology, Calcutta Scientific Book Agency, 1976

PRACTICAL – II YOGA AND GYMNASTICS**YOGA :**

Testing the Listed Asanas, Pranayamas and Kriyas in the THEORY Paper.

GYMNASTICS :

Testing the Elementary Skills on :

- Floor
- Parallel Bars
- Horizontal Bar
- Roman Rings
- Vaulting Horse
- Spring Board

Books for Reference :

1. SWAMI KUALAYANANDA, Asanas, Kaivalyadhama, Lonavala, Pune.
2. B.K.S. IYANKAR, Light on Yoga Harper Collins Publications, Delhi.
3. Dr. P. MARIAYYAH, Asanas, Sports Publishers, Raja Street, Coimbatore-1
4. Dr.P.MARIAYYAH, Suriyanamaskar Jaya Publishing House, Perunthurai, Erode.
5. Dr. K. CHANDRASEKARAN, Sound Health Through Yoga, Prem Kalyan Publications, Sedapatti, Madurai, 1999.
6. Modak Pintu, Gymnastics: A Scientific Approach, Pilani, Runthala Publishers, 1996.
7. CoopnPhyllis and Milan Trnka, Teaching Gymnastic Skills to Men and Women, Surjeet Publications, Delhi, 1982

Scheme of Assessment:

Fundamental Skills & Defensive and OffensiveSkills	:	35
Playing ability / Performance	:	20
Officiating Technique		10
Record note	:	10
TOTAL	:	75

THEORIES OF MAJOR GAMES – I and TRACK & FIELD – I
(Major Games : Football, Kabaddi & Volleyball
Track & Field : Sprint and Middle Distance Race)

UNIT : I

Origin, History and Development of the Game – International, National and State Level Organizations

UNIT : II

Fundamental Skills – Lead-Up Games, Various System of play – Selection of Players

UNIT : III

Training : Warm-Up Technical Training – Tactical Training – Coaching Programme

UNIT : IV

Layout of Playfield – Rules and Their Interpretations – Methods of Officiating Duties of Officials – Important Tournaments and Cups

UNIT : IV

Athletics : Sprint and Middle Distance Race

Books for References :

1. Conling David, Athletics, London, Robert Hale, 1980.
2. Prabhakar Eric, The way to Athletic Gold, Madras East – West Press Pvt. Ltd, 1995.
3. Dr. P. Mariayyah, Football, Sports Publications, Raja Street, Coimbatore.
4. Dr. P. Mariayyah, Kabaddi, Sports Publications, Raja Street, Coimbatore.
5. Dr. P. Mariayyah, Volleyball, Sports Publications, Raja Street, Coimbatore.
6. Dr. P. Mariayyah, Track and Field, Sports Publications, Raja Street, Coimbatore.
7. Thompson William, Teaching Soccer, Delhi, Surjeet Publications, 1996.
8. Carting Ganagon, Play Better Soccer in All Colour, W.B. Saubders Company, 1972.
9. Dhanaraj V. Hubert, Volleyball–A Modren Approach, Patiala, Sainsoris, 1991.

THEORIES OF YOGA AND GYMNASTICS**UNIT : I**

History of Yoga – Aims and Objectives of Yoga – Ashtanga Yoga: Patanjali Eight Limbs of Yoga – Principles of Practising Asana and Pranayama.

Yogic Techniques : Methods & Benefits **Asanas** : *Relaxative Asanas* – Shanthiasana / Savasana, Makarasana. *Meditative Asanas* – Padmasana, Vajrasana, Sukhasana

UNIT : II

Yogic Techniques : Methods & Benefits **Asanas** : *Cultural Asanas* – Bhujangasana, Salabhasana, Dhanurasana, Pascimottanasana, Vakrasana, Ardha Matsyendrasana, Yogamudra, Viparita Karani, Sarvangasana, Halasana, Mayurasana, Sirshasana, Chakrasana, Parvatasana, Bakasana & Suryanamaskar

UNIT : III

Yogic Techniques : Methods & Benefits: **Pranayama** : Naddi Suddhi, Nadi Shodhana, Kaphalabhathi, Ujjiayi, Sitali, Sitkari.

Meaning of Kriya – Types of Kriyas: Kaphalabhathi, Trataka, Neti, Dhauthi, Nauli, Basti.

Trataka : Practicing Method – Benefits.

Neti : Jala Neti, Sutra Neti – Methods of Practicing Neti and its benefits.

Dhauthi: Vamana Dhauthi, Vastra Dhauthi – Methods of Practicing Dhauthi and its benefits.

UNIT : IV

History of Gymnastics – Meaning of Gymnastics

Types of Gymnastics: Basic, Auxiliary and Sportive – Importance of Gymnastics

UNIT : IV

Safety Measures in Gymnastics

Measurements of Apparatus and Basic Skills on: Parallel Bars, Horizontal Bar, Roman Rings, Vaulting Horse, Floor, Spring Board

Books for Reference :

1. SWAMI KUNVALAYANANDA, Asanas, Kaivalyadhama, Lonavala, Pune.
2. B.K.S. IYANKAR, Light on Yoga Harper Collins Publications, Delhi.
3. Dr. P. MARIAYYAH, Asanas, Sports Publishers, Raja Street, Coimbatore-1
4. Dr.P.MARIAYYAH, Suriyanamaskar Jaya Publishing House, Perunthurai, Erode.
5. Dr. K. CHANDRASEKARAN, Sound Health Through Yoga, Prem Kalyan Publications, Sedapatti, Madurai, 1999.
6. Modak Pintu, Gymnastics: A Scientific Approach, Pilani, Runthala Publishers, 1996.
7. CoopnPhyllis and Milan Trnka, Teaching Gymnastic Skills to Men and Women, Surjeet Publications, Delhi, 1982

ORGANIZATION, ADMINISTRATION AND METHODS IN PHYSICAL EDUCATION

Unit – I

Meaning and Importance of Organization and administration – Scheme of Physical Education in: Schools, Colleges, Universities, Districts.

Unit – II

Facilities - Track, Play Grounds, Gymnasium, Swimming Pool – Layout of play fields (Basketball, Kabaddi, Hockey, Volleyball, Cricket) Care and Maintenance of play fields.

Unit – III

Method in Physical Education – Meaning - Factors influencing Method – Presentation Technique – Teaching Aids – Principles of Class Management.

Unit – IV

Teaching of activities: Marching, Calisthenics, light apparatus (Wands, hooks, Poles), Lezium, folk dance – Minor Games – Lead up activities.

Unit – V

Organizing Tournaments and sports Meets (closed and open)- Fixtures: Knock out, League, Combination – Intramurals - Extra murals.

Books for Reference

1. Kamlesh M.L. Scientific “Art of teaching physical Education” New Delhi Metropolitan 1994.
2. Thiru. Narayanan C and & Harihara Sharma “Methods in Physical Education “ Karaikudi CJ and S.H. 1989.
3. Joseph. P.M. “Organization of Physical Education”.

**PRACTICAL – III
MAJOR GAMES – II**

**(Major Games: Ball Badminton, Badminton, Basketball,
Cricket, Hockey, Kh0-Kh0)**

Testing on

- ❑ Fundamental skills
- ❑ Defence and Offence Skills
- ❑ Playing ability / performance
- ❑ Officiating Technique

Books for reference

- 1) Ballon B. Ralph Teaching Badminton Delhi subject publication 1982.
- 2) KHO-KHO Federation rules.
- 3) Dr. Anil Sharma, O.P.Sharma Rules of games, Sports Publications
4264/3 Ansari Road New delhe-2
- 4) Dr.P.Mariayyah Sports & Games, sports Publication Raja Street
coimbatour.

Scheme of Assessment:

Fundamental Skills & Defensive and OffensiveSkills	:	35
Playing ability / Performance	:	20
Officiating Technique	:	10
Record note	:	10
TOTAL	:	75

HEALTH EDUCATION SAFETY EDUCATION AND FIRST AID

UNIT – I

Meaning - Definition of Health Education – Aim, Scope of Health Education- role of International Organizations (WHO, UNICEF), National, State Level Health Organizations

UNIT – II

Physical Health- Physical Fitness – Health related fitness – performance related fitness – components of Health related fitness and performance related fitness – mental health.

UNIT – III

Communicable Diseases - Causes, modes of spread – Prevention of Tuberculosis, Malaria, Filariasis, small pox, Chicken pox, and AIDS

UNIT – IV

Definition of Safety Education- factors affecting safety Education – need and Importance of Safety Education - Safety in Play fields, swimming pool, Gymnasium.

UNIT – V

Definition - Importance of First Aid - Athletic injuries: Sprain, Strain, contusion, Fracture, Dislocation, Muscle Cramp, Abrasion and Puncture.

Books for Reference:

- 1) Park and Park “Preventive and social medicine”
- 2) Anderson “School Health Practice”.
- 3) Bedi Yashpal “Social and Preventive medicine”.

EXERCISE PHYSIOLOGY

Unit - I

Meaning and scope of Physiology of exercise - Structure and function of skeletal Muscles – Types of Muscle fibers – Red and White – Types of Muscular Contraction – Isotonic Isometric and Isokinetic – Effect of exercise on Muscular system – Hypertrophy, Hypo trophy.

Unit - II

Mechanism of respiration – respiratory muscles – Lung volumes and Capacities - Heart rate – Stroke Volume – Cardiac cycle – Cardiac Output during rest and Exercise – Blood pressure – Systolic, Diastolic – Effect of exercise on Respiratory system and Circulatory system.

Unit - III

Nervous System – Types of Nervous System – Central Nervous System (CNS) and Peripheral Nervous System (PNS) – Structure of Neuron - Effect of exercise on Nervous system.

Unit - IV

Metabolism – Anabolism and catabolism - sources of energy – Aerobic and Anaerobic Metabolism, Fat metabolism and protein metabolism and endocrine system.

Unit- V

Exercise and temperature regulation in Hot and Cold climate – Exercise and Altitude – Sex differences on exercise – aging and exercise – Physical Conditioning.

Books for Reference

1. Devrises H.A Physiology of exercise for physical Education and Athletics London, Staples Press – 1976.
2. More house LE and Milter A.T. Physiology of exercise St Louis, The CV Mosby Company 1976.
3. Jonson W.R. Science and Medicine of exercise and sports London Harper & Bros 1974.
4. Guyton AC Text book of Medical Physiology W.B. Soundars Company Philadelphia.
5. Bourne GH the Structure and function of Muscle London Academic Press.

PRACTICAL IV**TRACK & FIELD-II****TESTING ON****Track & field events:**

- ❖ DISCUS THROW
- ❖ SHOT PUT
- ❖ HAMMER THROW
- ❖ JAVELIN THROW
- ❖ LONG JUMP
- ❖ HIGH JUMP
- ❖ LONG DISTANCE RUN

Books for Reference

1. Dr. P.Mariayyah Track & Fields Sports Publication Raja street coimbatore.
2. Dr. Anil Sharma, O.P.Sharma Rules of games, Sports Publications 4264/3 Ansari Road New delhe-2.
3. Conling David, Athletics London Robert Hale 1980.
4. Ken Bosen Track & Field Fundamental Techniques NIS Publications, Patiala.

Scheme of Assessment:

Fundamental Skills & Defensive and OffensiveSkills	:	35
Playing ability / Performance	:	20
Officiating Technique	:	10
Record note	:	10
TOTAL	:	75

THEORIES OF MAJOR GAMES –II

(Major Games: Ball Badminton, Badminton, Basketball, Cricket, Hockey, Kh0-Kh0)

UNIT – I

Origin, History and development of the game- International, National and State Level Organizations.

UNIT – II

Fundamental Skill- Lead Up Games - Various System of Play – Selection of Players.

UNIT:III

Training: Warm-up and Warm down - Technical Training – Tactical Training – Coaching Program.

UNIT:IV

Layout of Playfield with all Measurements, Facilities and equipment and its specifications

UNIT: V

- Rules and their Interpretation
- Methods of Officiating
- Duties of Officials

Books for Reference

1. Ballon B. Ralph Teaching Badminton Delhi, Surject Publication 1982
2. KHO-KHO Rules Book.
3. Wein Harat “The Science of Hockey” London Pelham Books,1979.
4. Coleman Brain and Peter Ray, Basset hall, Eash Ardsley, Ep publishing Ltd 1976.
5. Tyson Frank “The Cricket Coaching Manual”, Calcutta, Rupa & Co, 1985.

SPORTS PSYCHOLOGY AND SOCIOLOGY

Unit-I

Meaning and definition of Psychology and sports Psychology – Development of sports Psychology in India – Need and importance of sports Psychology in the field Physical Education and sports.

Unit - II

Definition Motor Learning – Physical and Motor considerations- Body Build, Height and Weight, strength, Muscular, endurance, Flexibility, Balance Co-Ordination, Reaction time, Movement time and Reflex time Cognitive – Affective –Psychomotor?

Unit - III

Definition of Perception – Theory of Perception Gestalt Theory, Palror Theory and witkins's Theory emotional effects tension, anxiety and stress – its role in Physical Education and sports.

Unit - IV

Personality traits of sports person – Composition of personality – Aggression – Theories of Aggression – Psycho – regulative procedures Autogenic training, yoga and Music's.

Unit - V

Meaning, Nature and scope of sociology in physical Education and sports – Social factors in sports – Leadership in sports spectators and fans group cohesion Social Integration

Books for Reference

1. Alderman A.B. Psychological Behaviour in sports W.B. Saundar company, Saundar 1974.
2. Puni A.T. Sports psychology chanduga NIS.
3. Alderman Psychology Behavior
4. Cratty B.J. Psychology and Physical activity
5. Singer R.N. Coaching, Athletics and psychology.

TEST, MEASUREMENTS AND EVALUATION IN PHYSICAL EDUCATION

Unit - I

Meaning of Test, Measurement and Evaluation – Brief History of Test, Measurement and Evaluation, - Need and Importance of Measurement and Evaluation in Physical Education.

Unit - II

Classification of Test – Standardized and Teacher Made test – Object and subjective Tests – Construction of Knowledge's test and skill Test – Administration of Test – Duties during testing – Duties after Testing.

Unit - III

Criteria for Test Selection – Validity – Reliability – Objectivity – Norms - Administrations Economic Feasibility – Educational Applications - Followup.

Unit - IV

Definition – Health Related fitness – Skill Related Physical fitness – JCR Test – Barrow motor ability Test – Harvard step cooper 12 Minute Run/ Walk Test.

Unit - V

Basket ball – Johnson Basketball ability Test, Hockey - Friedel Field Hockey Test Soccer – MC Donald Soccer Test, Volleyball – Russel Lange Volley Ball Test, Badminton – Miller Wall Volley Test. Tennis – Broer Miller Tennis test.

Book for Reference

1. Safrit Margarat J Measurement in Physical Education and Exercises science, St louis Times Morrro Mos by college publishing 1986.
2. Bosco James Measurement and Evaluation in Physical Education and sports New Jersy Prenstice Hall In 1983.
3. Barry L.Johnson, Jack K.Nelson and Measurements for Evaluation in physical education the surjeet Publications.
4. A.K.Gupta Tests & Measurements in physical Education sports publication New Delhi – 52
5. A Practical applied to measurement in Physical Education – Horold M.Borrow.

THEORIES OF TRACK AND FIELD - II

UNIT – I

History of Track & Field: Track events, Throws, Jumps, Organizational set up in District, State and National level.

UNIT – II

Shot Put : Fundamental skills: Grip, Placement of shot, initial stance, Glide, Releasing, Reserve

Discus : Grip, Initial stance, Release, Follow through.

UNIT – III

Hammer Throw : Initial stance – rotation – Releasing and Follow through

Javelin : Holding – Approach run – Release - reverse

UNIT – IV

Long Jump : Fundamental Skills of long Jump: Approach run, Take off, Flying Phase, Landing

High Jump : Approach run, Take off, Flying phase – landing.

Long Distance Running : Correct running style, proper arm and leg action,. Running Tactics.

UNIT – V

Rules and their interpretations – Methods of officiating – Duties of Official – Equipment and their Specification – Layout of the Track Events –Throws and Jumps

Books for Reference:-

1. Dr. Anil Sharma, O.P. Sharma Rules of sports, sports publication, 4264/3 Ansari Road, New Delhi-2.
2. Conling David, Athletics, London Robert Hale 1980.
3. Dr. P. Mariayyah Track and Field, sports publication, Raja St. Coimbatore.
4. Ken O. Bosen, “Track & field Fundamental Techniques NIS Publications, Patiala.
5. Doherty, J. Mennath, “ Modern Track and Field”, Englewood cliffs, Prentice Hall. Inc., New Jersey.

PRACTICAL – V
SPECIALISATION MAJOR GAMES
(BASKETBALL, FOOTBALL, HOCKEY, KABADDI, VOLLEYBALL)

Testing On

- Fundamental Skills
- Finer Skills
- Playing ability / Performance
- Officiating Technique

Book for reference

1. Dr.Anil Sharma O.P.Sharma Rules of games sports publication 4264/3
2. An sari Road New Delhi – 2.
3. Dr.P.Mariayyah Sports & Games Sports Publication Raja Street, Coimbatore
4. Rao C.V.Kabaddi Patiala NIS Publication 1971.
5. Dr.P.Mariayyah in “Volley ball”

Scheme of Assessment:

Fundamental Skills & Defensive and OffensiveSkills	:	35
Playing ability / Performance	:	20
Officiating Technique	:	10
Record note	:	10
TOTAL	:	75

Science of Sports Training

Unit - I

Meaning and Definition – Aim, Tasks and characteristics of sports Training – Principles of sports Training Importance of warm - Up and warm – down.

Unit - II

Important features of Training Load- Intensity Density and volume – Type of Training Load – Training and Adaptation – Over Load –Causes, Symptoms and Remedies – Periodisation.

Unit - III

Means and methods of developing: Strength – Endurance –Speed – Flexibility- Agility – Co –Ordination.

Unit - IV

Basic Types of Training: Weight training – Circuit training – Plyo metric training – Fartlek training –Interval training – Pressure training.

Unit – V

Technical and Tactical Training: Definitions of Techniques and Tactics – Aims of technical training – Classification of techniques – Training tactics – Principles of tactical preparation.

Books for Reference

1. Singh Hardhayal sports training General theory and methods NIS Patiala 1984
2. Williams J II Athletic Training and Physical fitness Allyn and Bacon Inc., Sydney 1977.
3. Singh H “Science of sports Training”
4. Dick Frank “ Sports Training Principles”
5. Mateweyew L.P. Fundamental Sports Training.

THEORIES OF TRACK AND FIELD - III

Unit - I

History of Events
Relay (Visual, Non – Visual)
4X100 Mts Relay
4X400 Mts Relay

Unit – II History of combines Events
Heptathlon

Unit - III History of Combined events
Pentathlon

Unit - IV Triple Jump
History of the events
Specific Conditioning exercise
System of Officiating

Unit – V History of the events
Pole vault
System of Officiating

Book for Reference:-

1. Dr. P. Mariayyah Track and Field, sports publication, Raja St. Coimbatore.
2. Dr. Anil Sharma, O.P. Sharma Rules of sports, sports publication, 4264/3 Ansari Road, New Delhi-2.
3. Conling David, Athletics London Robert Hale 1980.
4. Ken O. Bosen Track & field fundamental Techniques MS Publication Patiala.

THEORIES OF SPECIALISATION MAJOR GAMES
(BASKETBALL, FOOTBALL, HOCKEY, KABADDI, VOLLEYBALL)

Unit- I

History of games – National and State level organizations.

Unit – II

Fundamental Skill – lead up Games – Various System of Play.

Unit – III

Training: Warm up – Technical Training coaching Program.

Unit – IV

Layout of Play field with all measurements, facilities and equipment and its specifications.

Unit – V

Rules and their Interpretation. - Methods of Officiating - Duties of Officials.

Books for reference

1. Dr.Anil Sharma O.P.Sharma Rules of games sports publication 4264/3
An sari Road New Delhi – 2.
2. Dr.P.Mariayyah Sports & Games Sports Publication Raja Street, Coimbatore
3. Rao C.V.Kabaddi Patiala NIS Publication 1971.
4. Dr.P.Mariayyah in ‘‘Volley ball’

PRACTICAL – VI**TRACK AND FIELD – III**

(Relay, Combined Events, Triple Jump Pole Vault)

- Relay (4X100, 4X400) Events
- Explain the various stages in relay Events
- Combined Events
- (Pentathlon, Decathlon, Heptathlon)
- Jump (Triple Jump)
- Explain the various styles in Jump Event.
- Pole Vault.

Books for Reference

1. Dr. P.Mariayyah track and field sports Publications Raja street Coimbatore
2. Conling David, Athletics Condon Robert Hale 1980
3. Prabhakar Eric. The way to Athletic Gold. Madras East – West press PVT Ltd 1995.

Scheme of Assessment:

Fundamental Skills & Defensive and Offensive Skills	:	35
Playing ability / Performance	:	20
Officiating Technique	:	10
Record note	:	10
TOTAL	:	75

SPORTS BIO-MECHANICS

UNIT I

Meaning and Definition – Aim, Need and Importance of Bio-Mechanics in the field of Physical Education and Sports –Types of motion-linear and angular motion – Friction – air and water resistance.

UNIT II

Linear Kinematics-Distance and Displacement, Speed, Velocity and Acceleration and Projectile- Angular Kinematics- Angular distance and Displacement, Angular speed, Velocity and acceleration.

UNIT III

Center of Gravity Equilibrium - Stages of equilibrium-Factors affecting-equilibrium. Centrifugal and Centripetal, Force-Direction-angle, Point of application - Lever - Principles and its types-Mechanical Advantage-Application of Levers in Physical Education & Sports.

UNIT IV

Inertia-Mass and weight - Force-Factors affecting force-Types of force –Work, Power and Energy-Impact and Elasticity –Newton’s Law of motion.

UNIT V

Use of the above scientific principles in: Track and Field events – Running, Throwing, Jumping – Basketball, Football, Volleyball.

Books for Reference

1. Greire millor, Paul & smith, Techniques for the analysis of Human movement lapse books London 1975.
2. Bunn John W “Scientific Principles of coaching”.
3. Charles “Fundamentals of sports Bio-Mechanics Techniques.
4. Hay, James G “The Biomechanics of sports.
5. T.Mc Clurg Anderson Bio Mechanics of Human Motion

KINESIOLOGY

Unit - I

Meaning and definition – Brief history of Kinesiology – Academic and Professional objectives of kinesiology – Need and importance of kinesiology - Role of Kinesiology in Physical Education and Sports.

Unit - II

Classification of joints and Muscles Terminology of fundamental Movements at the joints Flexion, Extension, abduction, Adduction, Rotation Circumduction etc – Multi – Joints Muscles.

Unit - III

Structures and function of Joints – Elbow joint, Wrist Joint, Shoulder joint, Knee joint, and Ankle, Hip Joint.

Unit - IV

Location, Origin, Insertion and action of the following muscles - Biceps, Triceps, Pectoralis Major Hamstring groups, Quarterceps groups, Gartrocnemius. Rectus abdomin us and Trapeziums.

Unit - V

Application of Kinesiology Principles in fundamental Movement – walking, Running, Jumping Throwing, Pulling and Pushing.

Books for Reference

1. Coper and Glassgow, Kinisiology joint, Louis C.V.Mosby Company 1976.
2. Dr.Dhavanjoy Shah Pedagogic Kinesiology sports publications New Delhi 1998.
3. Logan and McKinney “ Anatomic Kinesiology”
4. Raschi and Burke “Kinesiology and Applied Anatomy
5. Walks and Lutt gens “ Kinesiology”

SPORTS MANAGEMENT

UNIT – I

Meaning –Definition and Functions of Sports Management – Importance and Historical Background of Sports Management –Interpersonal Roles in Manpower planning – Meaning of Recruitment – Sports Organization.

UNIT – II

Nature, Principles and Purpose of Organization – Systems of Organization – Leadership: Meaning - Personal Traits – Attitude and Behavior approach – Qualities of a Leader – Positional power.

UNIT – III

Concepts and Need of Motivation in Sports Organization – Job feed back – Types of Public Relation – Role of Government, Media, and Conference – Finances – Qualities of Good Public Relation Organization.

UNIT – IV

Concepts, Objectives and Need for Strategies for Vocational Guidance; Principles – Approaches – Career Talk – Industrial visit – Personal, Social, Vocational Counseling, Social Guidance; Purpose-Types of Social Problems – Social Needs and Social Life. Personal Guidance: Concepts, Purpose – Emotional Characteristics of Adolescents.

UNIT V

Infrastructure – Equipment – Salaries and Wages – Raising of Funds – Budget, Record maintenance and Purchase of Equipment - Advantages – Essentials – Types of Budget – Research and Development, Budget – Funds collection prices.

Books for reference

1. S.S. Roy, Sports Management: Friends Publications: New Delhi.
2. Samiran Chakrabarty, Sports Management: Sports Publications: Delhi, 1998.
3. Janet A. Wessel, Luke Keely, Achievement – Based Curriculum Development in Physical Education: Lea & Febiger, 1986.

MODERN TRENDS IN PHYSICAL EDUCATION

UNIT – I

Physical Education Teacher Training programme in India : C.P.Ed: B. Sc., B.P.E., B.P.Ed., M.P.Ed., NIS and M.S. – Avenues for Placements - School : Physical Education Teacher, Physical Director, RIPE, CIPE, – College & University : Asst. Director of Physical Education, Deputy Director of Physical Education, Director of Physical Education, Lecturer, Reader, Professor, Principal – Sports Council : Coaches, DSO, RSM, DGM and GM).

UNIT – II

Meaning of Doping – Anabolic steroids – Blood Doping and side effects – WADA and its function – Influence of Doping on performance – Side effect of Doping.

UNIT – III

Meaning and Definition of research – Types of research – Basic, Action, Applied, all case study and survey method – Need and importance of research in Physical Education and sports – Application of computer in the field of physical education and sports.

UNIT – IV

Talent Identification in sports and games – The compulsory Physical Education programme in Schools and Colleges – Play area – synthetic track – Turf field – Toroflex surface – Grass field – Wooden surface (Preparation is not included) – Indoor stadium – Structure and facilities – Flood lit matches.

UNIT V

Assistance for building infrastructure – playfields, Gymnasium., Swimming pool, Stadium and Equipments – Assistance for coaching and training program – Rural and urban – different levels – advance training and coaching – Assistance for competitions – District, State, National, International – Incentive and awards.

BOOKS FOR REFERENCE

1. Bucher A., Charles, **Foundations of Physical Education**, Saint Louis, The C.V.Kosby Company, 1972.
2. Bunn, John W. **Scientific Principles of Coaching**, New York. Prentice Hall Inc. 1955
3. Hey.James, G., **The Diomechanics of Sports Techniques**, Prentice Hall Inc. Englewood Cliffs N.S. 1973.
