



**UNIVERSITY OF CALICUT**

**Abstract**

MPed Programme-Modified Regulation, Scheme of examination and syllabus w.e.f. 2018 admissions-Approved-Implemented-Orders issued.

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**G & A - IV - J**

U.O.No. 4020/2018/Admn

Dated, Calicut University.P.O, 28.03.2018

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- Read:-*1. Item No. 1 in the minutes of the meeting of Board of Studies in Physical Education (PG) held on 19.03.2018  
2. Remarks of Dean Faculty of Education dtd. 26.03.2018  
4. Orders of Vice Chancellor in the file of even No. dtd. 27.03.2018

**ORDER**

Board of Studies in Physical Education PG vide paper read as (1), resolved to modify the Regulations, Scheme of examination & Syllabus of MPed Programme w.e.f. 2018 admissions.

Dean Faculty of Science vide paper read as (2), approved the resolution of Board of Studies and the Vice Chancellor, in exercising the powers of the Academic Council, has approved the resolution of the Board of Studies subject to ratification by Academic Council, vide paper read as (3).

Sanction has, therefore, been accorded to implement the modified Regulations, Scheme of examination & Syllabus of MPed Programme w.e.f. 2018 admissions.  
Orders are issued accordingly.

(The Regulations, Scheme & Syllabus attached).

Ajitha P.P

Joint Registrar

To

Affiliated Colleges offering MPed Programme/DPE/Digital wing (with a request to upload in the website)/GA I F Section  
Copy to : Pareeksha Bhavan

Forwarded / By Order

Section Officer

# **UNIVERSITY OF CALICUT**

## **Regulation, Scheme of examination and syllabus for the Master of Physical Education (MPed) Course (2018 onwards)**

The main objective of the M.P.Ed Course is to provide opportunity for professional training in Physical Education to students with Physical Education background and aptitude for higher studies. M.P.Ed Degree is one of the qualifications for appointment as physical education teachers and lecturers in Schools, Colleges, Universities etc. They can also work as instructors, trainers and coaches in fitness centres, health clubs, in companies and sports clubs.

### **1. DURATION OF THE COURSE**

The duration of the course shall be two academic years with four semesters.

### **2. ELIGIBILITY FOR ADMISSION**

A candidate for admission to the two year Master of Physical Education (M.P.Ed ) degree course shall fulfil the following conditions.

- (a) Should have passed the three year Bachelor Degree in Physical Education (B.P.E) up to 2009 admission/four year B.P.Ed(integrated)degree of any University recognized by the University of Calicut OR have passed a post graduate degree or diploma (B.P.Ed/B.P.E/D.P.Ed) in Physical Education of at least one year duration up to 2014 admission/a post graduate degree or diploma (B.P.Ed/B.P.E/D.P.Ed) in Physical Education of at least two year duration of an Indian or Foreign University or Board appointed by the Education Department of the State or Union Territory recognized by the Calicut University, with a minimum of 50% marks in aggregate.
- (b) Should be below the age of 28 years as on 1<sup>st</sup> July of the concerned academic year, SC/ST candidates will be given the eligible relaxation.
- (c) Should be physically fit for daily heavy load of physical activities and should not have physical deformity or mental disability.

### **3. SELECTION CRITERIA**

The candidate shall be selected for admission from the rank list prepared on the basis of the following criteria.

(a) Written test (Based on B.P.E/B.P.Ed Syllabus)	50 Marks
(b) Game Proficiency & Achievement	25 Marks
(c) Physical Fitness test (AAHPERD)	15 Marks
(d) Sports Achievement	10 Marks

**Total                      100 marks**

Candidates those who do not secure at least 40% marks in the selection test will not be included in the rank list . General reservation rules applicable for admission to post graduate degree course at the university departments shall be followed while admitting candidates from the rank list.

#### 4. **COURSE OF STUDY**

The course of study for the M.P.Ed Course will have three Parts.

1. Part –A Theory
2. Part B – Practical (General conditioning , Track and Field ,Yogasanas and Major Games )
3. Part C Sports Specialization

##### 1. **Part A Theory**

###### **First Semester**

Paper I          Research Methodology and Statistics in Physical Education

Paper II         Test, Measurements and Evaluation in Physical Education

Paper III        Management in physical Education and Sports

###### **Second Semester**

Paper IV        Physiology of Sports and Exercise

Paper V         Scientific Principles of Sports Coaching

Paper VI        Health and Fitness Education

###### **Third Semester**

Paper VII       Psychology of Sports

Paper VIII      Kinesiology and Sports Biomechanics

Paper IX        Introduction to Yoga and Yoga Therapy Theoretical Approach

###### **Fourth Semester**

Paper X         Sports Medicine

Paper XI        Sports Specialization(students can opt anyone game from the list of sports specialization )

Paper XII       Rules of Sports and Games

Paper XIII      Thesis: All the students should present the Research Proposal for Thesis work on Power Point presentation before Departmental Research Committee (DRC) and students within one month of the start of III Semester Classes.

#### 2 **Part –B Practical**

###### **First Semester**

1. General conditioning
2. Match Practice
3. Track and Field
4. Major Games 1:Football
5. Major Games 2:Cricket

## Second Semester

1. General conditioning
2. Match Practice
3. Track and Field
4. Major Games 3:Volleyball
5. Major Games 4:Basketball

## Third Semester

1. Practical's of Yoga and Yoga Therapy

### **3 Part- C Sports specialization**

Practical classes for Skill and Officiating of any one sports discipline from the following activities, a maximum of five activities shall be allotted subject to the availability of facilities and experts during an academic year. Separate Syllabus for the following games are enclosed.

1. Track and Field
2. Basketball
3. Cricket
4. Volleyball
5. Football
6. Judo
7. Handball
8. Kabaddi & Kho-Kho
9. Badminton
10. Lawn Tennis (Standard racket has to be brought by the students)
11. Gymnastics
12. Taekwondo

### **5. ATTENDANCE**

Each Semester should have a minimum of 100 working days and each working day will have three theory hours and four practical hours. Candidate must secure at least 90% of attendance in the lecture delivered in each of the theory subjects in the Part –A and the Practical of Part –B and C, and complete the prescribed course of laboratory works, tutorials, seminars, projects, assignments etc to appear for the university examinations.

### **6. INTERNAL ASSESSMENTS**

Internal assessments for 25 marks in each of the theory papers in Part A shall be on the basis of the internal examination (average of three examinations), assignments, seminars (paper presentation), attendance and evaluation conducted by the concerned teacher.

### **7 PROMOTION AND PASS**

Candidates who secure a minimum of 40% marks in the external examination and 50% marks including the internal assessment in each of the theory papers and thesis shall be declared to have passed the Part A of the M.P.Ed examination. No separate minimum is required in internal assessments in Part A.

Candidates must secure at least 50% marks separately in internal and external examination, for a pass in Part B and Part C of the M.P.Ed examination.

A candidate who fails in any paper in the Part A shall be eligible to appear that paper along with the subsequent main examination. Failed candidates will be declared to have passes the paper only if they secure 50% marks externally.

Candidates registered for the first semester M.P.Ed examination shall have to complete the course within five years from the date of registration.

## 8. SCHEME OF EXAMINATION

The total marks from all the four semesters will be 2000.

### MPed. First Semester

PART A	Paper Number and Subject		No. of Teach. Hours	Duration of Exam	Internal Marks	Uty. Exam Marks	Total Marks
	MTP 101	Research Methodology and Statistics in Physical Education	100	3 hrs.	25	75	100
	MTP 102	Test, Measurement and Evaluation in Physical Education	100	3 hrs.	25	75	100
	MTP 103	Management in Physical Education and Sports	100	3 hrs.	25	75	100
	Total		300		75	225	300
PART B	MTP 104	General conditioning	50	-	25	-	25
	MTP 105	Match practice	50	-	25	-	25
	MTP 106	Track & Field	100	-	50	-	50
	MTP 107	Major Game I(Football)	100	-	50	-	50
	MTP 108	Major Game II(Cricket)	100	-	50	-	50
	Total		400	-	200	-	200
	Total (Part A and Part B)				275	225	500

## MPed. Second Semester

P A R T  A	Paper Number and Subject		No. of Teach. Hours	Duration of Exam	Internal Marks	Uty. Exam Marks	Total Marks
	MTP 201	Physiology of Exercise	100	3 hrs.	25	75	100
	MTP 202	Scientific Principles of Sports Coaching	100	3 hrs.	25	75	100
	MTP 203	Health and Fitness Education	100	3 hrs.	25	75	100
	Total		300		75	225	300
P A R T  B	MTP 204	General conditioning	50	-	25	-	25
	MTP 205	Match Practice	50		25		25
	MTP 206	Track & Field	100		50		50
	MTP 207	Major Game III (Volleyball)	100	-	50	-	50
	MTP 208	Major Game IV (Basketball)	100	-	50	-	50
	Total		400	-	200	-	200
	Total (Part A and Part B)				275	225	500

### MPed. Third Semester

PART A	Paper Number and Subject		No. of Teach. Hours	Duration of Exam	Internal Marks	Uty. Exam Marks	Total Marks
	MTP 301	Psychology of Sports	100	3 hrs.	25	75	100
	MTP 302	Kinesiology and Sports Biomechanics	100	3 hrs.	25	75	100
	MTP 301	Introduction to Yoga & Yoga Therapy: Theoretical Approach	100	3 hrs.	25	75	100
	Total (Part A)		300		75	225	300
PART B	MTP 304	Practicals of Yoga and Yoga Therapy	100		50	--	--
	Total (Part B)		100		50	--	50
PART C	MTP 305	Sports Specialization (Rules & Officiating)	300		-	50	50
	MTP 306	Sports Specialization (Skills)			-	50	50
	Total (Part C)					100	100
	Grand Total (Part A, B and C)				125	325	450

## MPed. Fourth Semester

P A R T A	Paper Number and Subject		No. of Teach. Hours	Duration of Exam	Internal Marks	Uty. Exam Marks	Total Marks
	MTP 401	Sports Medicine	100	3 hrs.	25	75	100
	MTP 402	Sports Specialization	100	3 hrs.	25	75	100
	MTP 403	Rules of Sports and Games	100	3 hrs.	25	75	100
	MTP 404	Thesis			25	75	100
	Total		300		100	300	400
P A R T C	MTP 405	Sports Specialization (Rules & Officiating)	400	-	25	-	25
	MTP 406	Sports Specialization (Skills)		-	25	-	25
	MTP 407	Sports Specialization (Coaching Ability)		-	30	50	80
	MTP 408	Sports Specialization (Record Book)		-	20	-	20
	Total		400	-	100	50	150
	Total (Part A and Part C)				200	350	550

### Scheme of Examination for Sports Specialization (Any one game)

Semester	Paper Number and Subject	Internal Marks	External Marks University Exam (Practicals)	Duration of Exam	Grand Total
III	MTP 305 Rules and Officiating (Practicals)	-	50		50
	MTP 306 Skills (Practicals)		50		50
	Total		100		100



<b>IV</b>	<b>MTP 405 Rules &amp; Officiating</b>	25			25
	<b>MTP 406 Skills</b>	25			25
	<b>MTP 407 Coaching Ability (Practicals)</b>	30	50		80
	<b>MTP 408 Record Book</b>	20			20
	<b>Total</b>	<b>100</b>	<b>50</b>		<b>250</b>
<b>Total for Sports Specialization Sem. III &amp; IV</b>		<b>100</b>	<b>150</b>		<b>350</b>

Students who choose thesis shall have to appear for viva-voce examination for a maximum of 25 marks. The external evaluation of thesis shall be for 50 marks (The average of two examiners shall be taken as the final mark. The thesis should be prepared under the guidance of a member of the teaching faculty of the Department. Three copies of the thesis duly approved by the supervising teacher in the approved format together with 5 copies of the abstract should be submitted to the Department before the completion of IV semester examination.

Under Part C Sports Specialization each student should maintain a record book and take at least 20 coaching classes internally and externally, to appear for the university examination.

#### 9. , **MEDIUM OF INSTRUCTION AND EXAMINATION**

The medium of instruction and examination shall be English.

#### 10 . **CLASSIFICATION OF SUCCESSFUL CANDIDATES**

The marks secured in all the semesters and all the parts shall be considered for classification.

75 % and above : Distinction

60 % and above : First Class

50 % and above : Second class

10 (a) The marks secured in the subsequent appearance for the examination also can be considered for classification.

# Syllabus

## Part-A Theory

### First Semester

Paper I	:	Research Methodology and Statistics in Physical Education
Paper II	:	Test Measurements and Evaluation in Physical Education
Paper III	:	Management in Physical Education and Sports

### Second Semester

Paper IV	:	Physiology of Exercise
Paper V	:	Scientific principles of Sports Coaching
Paper VI	:	Health and Fitness Education

### Third Semester

Paper VII	:	Psychology of Sports
Paper VIII	:	Kinesiology and Sports Biomechanics
Paper IX	:	Introduction to Yoga and yoga Therapy: Theoretical Approach

### Fourth Semester

Paper X	:	Sports Medicine
Paper XI	:	Sports Specialization
Paper XII	:	Rules of Sports & Games

### First Semester

Paper I	:	Research Methodology and Statistics in Physical Education
Paper II	:	Test Measurements and Evaluation in Physical Education
Paper III	:	Management in Physical Education and Sports

## **PAPER – I- RESEARCH METHODS AND STATISTICS IN PHYSICAL EDUCATION**

### **Unit – I Introduction**

- a. Meaning & Definition of research
- b. Need and importance of research in Physical Education
- c. Scope of Research in Physical Education
- d. Types of research- analytical, descriptive, experimental, qualitative.
- e. Inter –disciplinary approach.

### **Unit – II**

- a. Research Problem : Formulation and Location of the research problem
- b. Criteria in selecting the research problem
- c. Defining and delimiting problem
- d. Preparation of a Research Proposal
- e. Formulation of hypothesis
- f. Library search, Library sources
- g. Preparation of Research report, Writing styles, format and technical standards, Bibliography and Abstracts.

### **Unit – III**

- a. Descriptive Research : Survey, its importance
- b. Tools of Surveys such as questionnaire, interviews etc.
- c. Case studies, definition, importance, characteristics, data collection
- d. Historical Research Method ; Scope of Physical Education, Historical Data, Historical Criticism.

### **Unit – IV Experimental Research**

- a. Experimental Research Meaning, Scope & Nature
- b. Experimental & Control groups.
- c. Experimental designs.

#### **A. One Group Design**

1. Single Group
2. Reverse group
3. Repeated measures

#### **B. More than one group design**

1. Static group comparison
2. Random group
3. Related group.

## **Unit -V**

- a. Statistics, definition, Types of statistics and their uses in Physical Education
- b. Quantitative Data, Frequency distribution, Measures of Central Tendency, Measures of Variability and Percentiles.
- c. Normal Curve, Definition, Properties and principles, uses and application
- d. Divergence from normality, Skewness and Kurtosis
- e. Scoring Scales Z, T, 6 Sigma and Hull Scale.

## **Unit -VI**

- a. Statistical inference, Meaning of Reliability, factors affecting reliability
- b. Differences between Statistical and Null Hypothesis
- c. Standard Error, Type –I and Type II errors, One tail and Two tail tests
- d. Sampling – Simple, Stratified and Random samples, Coefficient of variation and sampling error
- e. Testing of Hypothesis, level of significance, Degrees of freedom, standard procedure of systematizing hypothesis

## **Unit – VII**

- a. T ratio , independent group and dependent group.
- b. Analysis of Variance: with equal and unequal groups, post hoc tests
- c. Correlation ;its uses and interpretation – Pearson’s Product Moment correlation, Spearman Rank Difference Correlation

## **Unit – VIII**

- a. Computer Application in Physical Education & Sports
- b. Word Processing Concept
- c. Introduction to MS Office, Drawing of Graphs
- d. SPSS and its applications.

## **REFERENCES**

1. Thomas Jerry R. and Nelson, Jack K. Research Process in Physical Activity : Human Kinetics, Champaign, Illinois : 2001.
2. Baumgartner, Ted A. and Clinton H. Strong conducting and Reading Research in Health and Human Performance. Brown and Benchmark, 1994.
3. Clarke, H.H. and Clarke. K. H Research Processes in Physical Education Englewood cliffs : N. J. Prentice Hall. 1984.
4. Yoginder Prasad Sharma. Physical Education and Research Methodology : Reliance publishing House. New Delhi, 1997.
5. Sharma, Sita Ram, Research Methodology in Physical Education and sports: Book Enclave – Jaipur, 1997.
6. Kamlesh, M.L. Methodology of research in Physical Education and sport : Metropolitan. New Delhi, 1986.

7. Kothari, C. R. Research Methodology methods and techniques. Ed. 2 : Wishwa prakhawan. Chennai, 1995.
8. Clarke, David H and Clarke, H. Harrison/Research Process in Physical Education Englewood cliffs, N. J. Prentice Hall Inc. 1984.
1. Garret, Henry Statistics in Psychology and Education, Bombay: Vakils feftter and simors pvt. Ltd. 1973.
2. Rothstein , Anne, T. .Research Design and Statistics for Physical Education Englewood cliffs, N. J : Prentice hall inc. 1985.
3. Thomas, Jerry R. and Jack, Nelson. Research methods in Physical Activity, Champaign, Illinois : Human Kinetics Publishers Inc., 1990.
4. Daniel. L : Slotnick and others : Computer Applications.
5. Haggery T. The administrative use of computers in professional sports organizations.
6. Walnut H. Computers in college and university athletic departments,.
7. Verna. J. P. Sports Statistics.

## **PAPER –II –TEST MEASUREMENT AND EVALUATION**

### **IN PHYSICAL EDUCATION**

#### **Unit – 1 Introduction**

- a. Meaning of the terms-test, measurement and evaluation.
- b. Brief History of test, measurement and evaluation
- c. Need and importance of measurement and evaluation in the field of physical Education .

#### **Unit- I – Test Evaluation**

1. Criteria for test selection : a. Scientific authenticity. B. Administrative feasibility. C. Educational Application
2. Test construction
3. Constructing Sports skills tests
  - Steps in developing a sports skill test
  - Development of a battery of skill test
  - Development of rating scales
  - Research steps in constructing a validating physical performance tests constructing sports knowledge test.
- a. Table of specification
- b. Test administration
- c. Types of test items
- d. Weighing test components – correcting for guessing – reliability and tilability
- e. Administration of test
- f. Advance preparation-duties during testing-duties after testing

### **Unit – III- Measurement of fitness for health and skill**

- a. Definition of health related physical fitness, and skill related physical fitness.
- b. AAHPERD health related physical fitness test
- c. AAHPERD physical assessment programme
- d. Fit youth today
- e. AAHPERD Youth fitness test
- f. YMCA physical fitness test
- g. JCR test
- h. Barrow Motor ability test
- i. Johnson test for motor educability

### **Unit- IV**

#### **A. Posture tests**

- a. New York state posture rating test.
- b. Wodruff and alignment posture test.
- c. Cureton Posture measurement
- d. Footprint angle.

#### **B. Cardio- vascular tests**

- a. The Harvard step. Test and modification long and short form.
- b. Queens college step tests c. Coopers 12 minutes walk/run test

### **Unit – V – Test of specific sports skills**

- Badminton : a. The French short serve test. b. GSC Badminton clear test
- Basketball : a. Leilich Basketball test b. Knox Basketball test
- Hockey : a. Henry – Fridal Field Hockey test. b. Chapman ball control test
- Soccer : a. Yeagley soccer battery b. McDonald soccer skill test.
- Tennis : a. Sherman centimad consecutive roll test  
b. Heweit service placement test
- Volleyball : a. Helmen Volleyball test. b. Modified Brady volleyball test.

### **REFERENCES**

1. Barrow, Harold, McRosemary McGreee and Kathleen, A. tristchchler, Practical Measurements in Physical Education and Sports (4<sup>th</sup> edn.) Philadelphia : Lea na Febiger, 1989.
2. Baugmartner, Ted, A and Jackson, Andrew S. Measurement and Evaluation in Physical Education and Exercise, Science (4<sup>th</sup> Edn) Dubuque, LOA WMC. Brown publisher 1991.
3. Bosco, James S and Gustafson, William F. Measurement and Evaluation in Physical Education fitness and sports, Englewood Cliffs, New Jersey, Prentice Hall inc. 1983.

4. Safrit A Margaret J. : Introduction to Measurement in Physical Education and Exercise (2<sup>nd</sup> Edn.) St. Louis : Time Mirror/Mosby college publishing 1990.

## **PAPER – III MANAGEMENT IN PHYSICAL**

### **EDUCATION AND SPORTS**

#### **Unit I Sports Management**

Definition and guiding principles of sports management an evaluation in sports management – Sports management setting- The foundation of sports management for sport managers – Managerial Skills – managerial roles – management functions contingency views of management-schemes of management of Physical Education at higher secondary school, college, Facility and state.

#### **Unit II Facility Management**

- a. Planning the facility – location and layout of play area and track, suggestions for planning and layout of playing areas, care and maintenance of playing areas.
- b. Purchase care and supplies of equipment determining supply and equipment needs, guidelines for selecting supplies and equipment, guidelines for the equipment room, guidelines for checking, storing, issuing and maintaining supplies and equipment.
- c. Gymnasium and swimming Pool : Construction and maintenance of gymnasium, types of swimming pools, construction of a multipurpose swimming pool, regulations to be served by participants in the swimming pool.

#### **Unit - III**

- a. Finance and Budget : Model Physical Education budget for a year in a school and college, source of income and items of expenditure, Rules for the utilization of games fund in a school.
- b. Records and Registers – Stock Register of games articles, Attendance Register, Physical efficiency test Register and skill test Register.

#### **Unit – IV Supervision**

Qualities and qualifications of a supervision in Physical Education duties of a supervisor pertaining to administration, instructions, facilities and professional growth, Techniques of Supervision, visitation, conference, demonstration and bulletins.

## **Unit-V Sports Marketing**

Meaning, Historical background. Marketing management in sport, Factors in sports marketing product, strategic planning, price, promotion, place, package, positioning and perception. Promotional Licensing and sponsorship- Definition, growth of sponsorship, sponsorships place within the market mix, coordination and control of the market mix.

### **REFERENCES**

1. Bucher, Charles, A., and March, I Kortee/Management of Physical Education and sport, St. Louis : Mosby year Book, 1993.
2. Barkhouse, Bonnie L/The Management of sport. It's foundation and application, St. Louis : Mosby year Book, 1991.
3. Bernard. J. Mullin and others/Sport Marketing, Human Kinetics, P.O. Box. 5076, Champaign, USA.
4. Perks Janet B. Zanger Bevery R. K. Sports & Fitness Management : Human Kinetics, Campaign, Illinois, U.S.A
5. Parkhouse Bonnie L/The Management Sports Mosby Year Book. St. Louis No. 63146.
6. Watt C. David/Sports Management and Administration, Publisher E & FN Spon II New Fetter Lane, London
7. Kamlesh/M.L. Management concepts Physical Education and Sport : Metropolitan Book Co., New Delhi.
8. Chelladurai, packianathan/Human Resource Management in sport and recreation, Human Kinetics, Champaign, Illinois, 1999.

### **Second Semester**

Paper IV	:	Physiology of Exercise
Paper V	:	Scientific principles of Sports Coaching
Paper VI	:	Health and Fitness Education

### **PAPER – IV PHYSIOLOGY OF EXERCISE**

#### **Unit - I – Muscular Physiology**

- A. Skeletal muscle structure and function : Cross structure electron microscopic structure, muscle fiber types, fiber distribution and performance, sliding filament theory of muscular contraction types of muscular contraction, energy for muscular contraction, acute and delayed muscular soreness, effect of exercise on muscular system.
- B. Respiratory system : Respiratory muscles, mechanism of respiration, pulmonary ventilation, dead space, lung volumes and capacities, effect of exercise on pulmonary ventilation, second wind, stitch in the side, Oxygen Debt..



## **Unit – II- Cardio Respiratory Physiology**

- A. Circulatory System : Cardiac cycle, heart rate, stroke volume, systemic and pulmonary circulation, cardiac output during rest and exercise, measurement of cardiac output, factors influencing heart rate and blood pressure, circulatory adjustments during rest and exercise, effect of exercise on circulatory system.
- B. Nervous system. General nervous system and functions, organization of nervous system, structure of Neuron, electrical activity in Neurons, voluntary control of muscular movements, involuntary control of muscular movements proprioceptors.

## **Unit – III – Bioenergetics**

- A. Energy sources; adenosine triphosphate, aerobic and anaerobic metabolism (Carbohydrate, fat and protein metabolism) – Energy metabolism during rest, exercise and recovery)
- B. Exercise and environment: Exercise and temperature regulations in hot climates. Exercise and temperature regulations in cold climates, effects of high altitude on physical performance, physiological adaptations to altitude.

## **Unit – IV – Physiology of performance**

- a. Factors affecting performance, fatigue, general and chronic symptoms and sites of fatigue, prevention, factors limiting anaerobic performance and aerobic performance.
- b. Work tests to evaluate performance, laboratory assessment of physical performance, components of effective physiological testing, direct and indirect methods.

## **REFERENCES**

1. Astrand, P.O. and K. Rodahl. Test Book of work Physiology : Physiological Basis of Exercise, New York: McGraw Hill Book company, 1986.
2. Fox, Edward Richard Bowers and Merle Foss. Physiological Basis for exercise and Sport Dubuque, Iowa : WMC Brown and Benchmark, 1988.
3. Sndhya, Tiwari, Exercise Physiology : Sports Publications. Delhi, 1999.
4. Clarke, David H/Exercise Physiology : Prentice Hall. London, 1975.
5. Robergs, Robert A and Roberts, Scott, O. Exercise Physiology, Mosby London, 1997.

## **PAPER – V - SCIENTIFIC PRINCIPLES OF SPORTS COACHING**

### **Unit – I – Introduction**

- a. Definition, aims and characteristics of sports training

- b. Principles of Sports training specificity, overload, and reversibility.
- c. Massed and distributed practice.

## **Unit – II – Training load and adaptation**

- a. Loading – definition, internal and external load
- b. Components of load - Intensity of loading density of loading, duration and extent of loading, Load and adaptation.
- c. Progressive and fluctuation method of load
- d. Over load – Symptoms, causes and remedies

## **Unit – III – Motor Fitness Variable**

- a. Physical Fitness Components – Definitions, importance, classification and determining factors of Speed, Maximum Strength, Explosive Strength, Strength Endurance, Speed Endurance, Basic Endurance, Flexibility and Coordinative abilities.
- b. Fitness and training  
Basic types of training-resistance training, circuit training, interval training, fartlek training, pressure training, plyometrics, pressure training.

Means and methods of developing the above variable.

## **Unit- IV Technical and Tactical Training**

- a. Definitions of techniques and tactics.
- b. Aims of technical training
- c. Classification of technique
- d. Training tactics.
- e. Principles of tactical preparation

## **Unit – V- Planning**

- a. Principles of planning
- b. Types of training plans (Macro, Meso, Micro cycles)
- c. Periodization (Single, Double, Multiple and Triple)
- d. Training session – structure
- e. Competition, training and competition, principles of competition frequency, competition preparation.

## **REFERENCES**

- a. Hardayal, Singh, Science of sports training, New Delhi : D. V. S Publications, 1994.
- b. Dick, Frank, Science of sports training, London : Henry kimpton publisher ltd., 1980.
- c. Fox, Edward, Richar, Boners and merie foss. The physiological basis for exercise and sport, U.S.A : WCB, Brown and benchmark Publisher, 1993.
- d. Uppal, A. K. Principles of sports Training Friends, Publications : Delhi, 2001.
- e. Bompa, Tudor, Periodizatino of strength, Veritas Publication, Canada : 1996.

- f. Paish, Wilf, Complete Manual of sports science, London : A and C Black Publisher Ltd., 1998.
- g. Bompa, Tudor, O. Periodization: Theory and Method logy of Training Champaign Human Kinetics Inc., 1990.

## **PAPER –VI- HEALTH & FITNESS EDUCATION**

### **Unit- I**

- a. Introduction to health: Modern concept of health, meaning and definition of health, difference between HRPF and PRPF.
- b. Assessing the components of fitness, goals and objectives
- c. Goal setting, Exercise prescription
- d. Basic principles for exercise programme design
- e. Principles of training, Means for developing fitness
- f. Fitness for different age groups, fitness for disabled
- g. ACSM Guidelines

### **Unit- II**

- a. Exercise prescription for cardio-respiratory fitness.
- b. Type (mode), frequency and time (Duration), Intensity, Volume.
- c. Assessment of cardio-respiratory fitness, Graded exercise testing (GXT).
- d. Exercise prescription by heart rate, Exercise prescription by perceived exertion, Exercise prescription by workload

### **Unit- III**

- a. Exercise prescription for weight loss and weight management, principles and programmes.
- b. Obesity, Overweight, Underweight- Definition and trends.
- c. Obesity- types and causes.
- d. Weight management principles and practice, well balanced nutrition.
- e. Designing weight management programmes, preliminary steps- Designing weight loss programmes- Designing weight gain programmes.
- f. Designing programmes to improve body composition.

### **Unit- IV**

- a. Strength and muscular endurance assessment, One RM.
- b. Designing of strength development programme.
- c. Basic flexibility, assessment of flexibility.
- d. Designing low-back care exercise programme.

## **Unit- V**

- a. Exercise prescription for clients with diabetes mellitus type I & II.
- b. Exercise prescription for clients with obstructive pulmonary disease, hypertension.
- c. Exercise programmes for pregnant women, children and geriatrics

## **Unit – VI**

- a. Management of health and fitness centre- management theories applicable to health and fitness centre - modern trends and responsibilities of manager.
- b. Organizational structure of health and fitness facilities.
- c. Principles and guidelines for facility planning, special infrastructure for health and fitness facilities.
- d. Health and fitness marketing management.
- e. Care and safety of health and fitness equipments

## **REFERENCES**

1. Vivan H. Heyward: Advance Fitness Assessment and Exercise Prescription., Human Kinetics, Champaign, USA
2. David P. Swain, Brain C. Leutholtz: Exercise Prescription: A Case study Approach to the ACSM Guidelines., Human Kinetics, Champaign, USA
3. John c Grififfin: Client Centered Exercise Prescription., Human Kinetics, Champaign, USA
4. Franklin, BA, ed 2000. ACSM's Guidelines for Exercise Testing and Prescription., Human Kinetics, Champaign, USA
5. Baechle, TR and RW Earle, ed 2000. Essentials of Strength Training and Conditioning., Human Kinetics, Champaign, USA.

## **Third Semester**

Paper VII : Psychology of Sports

Paper VIII : Kinesiology and Sports Biomechanics

Paper IX : Introduction to Yoga and yoga Therapy : Theoretical Approach

## **PAPER –VII PSYCHOLOGY OF SPORTS**

### **Unit – I Introduction**

- a. Definition, meaning, nature and scope of psychology and sports psychology.
- b. The history of sports psychology in India.

### **Unit- II Basic consideration in Motor Learning.**

- a. The definition and measurement of attitude, attitude towards sport.
- b. Socio – Psychological factors.
- c. Definition and composition of personality, measuring personality

- d. Effect of sports on personality and its implications.
- e. Psycho tonic and autogenic training
- f. Self-hypnosis: Developing personalized training scripts.
- g. Audience effect ins sports
- h. Group cohesion, developing team cohesion

### **Unit – III**

#### **A Perception**

- a. Definition of perception – description
- b. Theories of perception
- c. Perception and motor learning

#### **B. Cognitive process**

- a. Definition of intelligence, relationship of intelligence to motor ability and performance.

### **Unit – IV- Motivation**

- a. Definition of motivation, extrinsic and intrinsic motivation, reinforcement, success and failure, and punishment, praise and criticism, knowledge of result, feedback and its implications.
- b. Emotional effects, tensions, anxiety and stress.
- c. Aggression and performance, definition of aggression, types of aggression in athletic competitions. Sex difference in aggression, and its implications.

### **Unit – V Mental Plans**

Developing the mental plan, self-assessment, pre-competition plan, event focus, pre-competition refocusing, refocusing within the competition, post competition evaluation, enhancing self-confidence.

Practical examples of application of psychology in sport doing imagery in the field, reversal theory, counseling athletes.

### **REFERENCES**

1. Weinberg, Rober, S and Gould, Daniel/Foundation of sports and exercise psychology, Champaign, Illinois Human kinetics publisher Inc. 1995.
2. Anderson, Mark B./ Doing Sport Psychology, Champaign, Illinois : Human Kinetics Publish Inc. 200.
3. Kerr John H/Counseling athletes, London and New York, Routledge Publisher Inc. 1999.
4. Jerivs Matt Sport Psychology, London and New York, Routlege Publisher Inc., 1999.
5. Singer, Robert N/Myths and truths in sports psychology, New York, Library of Congress cataloguing, 1975.

6. Silva III, John M and Stevens, Diane, E./Psychology, Tata McGraw hill, New York, 1999.
7. Feldman, Robert . S/Understanding Psychology, Tat McGraw hill, New York, 1997.
8. Gill, Diane L. Psychological Dynamics of sport, Human Kinetics, Champaign Illinois, 1986.
9. Suresh Kutty K., Sports and Exercise Psychology, Sports publications, New Delhi. 2003.

## **Paper – VIII - KINESIOLOGY & SPORTS BIOMECHANICS**

### **Unit -I            Introduction**

- e. Introduction : Meaning of Biomechanics.
- f. Biomechanics in Physical Education.
- g. Sports and Research.
- h. Movement analysis, mechanical analysis and biomechanical analysis.

### **Unit – II            Structure and functions of human articulations**

Major body articulations (Shoulder, Elbow, Knee, Ankle, Wrist and Hip joint)

### **Unit – III            Linear Kinematics**

- a. Distance and displacement.
- b. Speed and velocity.
- c. Acceleration.
- d. Uniform motion.
- e. Projectile motion and its application in sports.
- f. Application of principles of linear kinematics in sports.

### **Unit – IV            Linear Kinetics**

- a. Force : Internal and external force, Eccentric force, Torque, Centripetal and Centrifugal force.
- b. Newton's Law of motion and its application in sports
- c. Friction and its application in sports, Static friction, Kinetic friction,
- d. Momentum
- e. Impact and elasticity
- f. Work, Power and Energy, Definition, Types of energy, Conservation of Mechanical energy, principles of work and energy.
- g. Application of linear kinetics in sports.

### **Unit III    Angular Kinetics**

- a. Center of gravity
- b. Equilibrium - Types of equilibrium, Factors influencing equilibrium
- c. Levers, its types and characteristics

d. Application of principles of angular Kinetics in sports

**Unit – IV      Fluid Mechanics**

A. Fluid properties : Density, specific weight, viscosity, Buoyancy, Floatation.

**Unit - V      Modern Gadgets**

Cinematography, Stroboscopy, Video analysis.

**Unit – VI      Biomechanical Analysis of fundamental Human Movements**

Walking, Running, Jumping, Throwing, Lifting, Pulling, Pushing, Catching, Hitting and Climbing.

**Unit – VII      Biomechanical Analysis of Sports & Games**

Athletics, Basketball, Cricket, Handball, Football, Hockey, Tennis, Badminton and Volleyball.

**REFERENCES**

1. Hay, James, Biomechanics of sports technique, Prentice Hall Inc. USA, 1993.
2. Hall; Susan/Basic Biomachnics, Mosby year book Inc., St. Louis, 1991.
3. Dhananjay shaw. Bio-mechanics and Kinesiology of Human motion : Khe Sahitya Kendra – Delhi, 1998.
4. Hay, James GT. and Gavin Reid, J/Anatomy mechanics and Human Motion, Ed. 2; Prentice Hall – New Jersey, 1998.
5. Hong, Youlian, International research in Sports Biomechanics, Routledge, London 2002.
6. Luttgens, Kathryn, Helga Deutsch and Nancy Hamilton/Kinesiology Scientific Basis of human motion. Dubuque : IA : WM C. Brown communication Inc., 1992.
7. Thimson, W. and R. T. Floyol/manual of structure Kinesiology S. Louis : Morby 1994.
8. Dhananjay shaw. Pedagogic Kinesiology : Sports publications – Delhi, 1998.
9. Gladys Scott, M. Kinesiology: Sports Publications – Delhi, 1998.
10. Thompson and Floy. Manual of structure Kinesiology : Mosby – London, 1994.
11. Luttgens, Kathryn. Kinesiology : Scientific basis of Human motion, Ed. 8 : Brown & Benchmark – London, 1992.
12. Hoffmann, Shirly, J and Harris, Janet, C. Introduction to Kinesiology : Studying Physical activity, Human Kinetics, Champaign, Illinois, 2002.
- 13.

**PAPER – IX : INTRODUCTION TO YOGA AND YOGA THERAPY : THEORETICAL  
APPROACH**

**Unit I : Introduction to Yoga**

## **Unit II :**

Streams of yoga – Karma yoga – Bhakthi yoga- Jnana Yoga – Raja yoga- (Ashtanga yoga) – Yamas, Niyamas, Asanas, Pranayama, Prathyahara, Dharana, Dhyana, Samthi, Hatha yoga. Traditional prayers and its meaning Om sahanavavathu – Yogenā Chittasya- Hiranmayana-Prasyedam-Sarva bhavathu.

## **Unit III:**

Physiological benefits of Asanas and Pranayam-Regulation of Breathing- Types of Breathing-Panchaprana.

## **Unit IV :**

Role of Yoga in disease – Yogi concept of human body – Role of Asanas, Pranayama and meditation in various diseases like diabetics, hypertension, Coronary heart disease, Asthma, Arthritis, Obesity, Back pain.

## **Unit V :**

Mind and functions : (Chitta and Vrittis) Power of mind – functions and powers of conscious mind-subconscious mind-Sanskara re-engineering, different stages of mind.

## **REFERENCES**

1. Dr. Krishna Raman : A matter of Health (Integration of yoga and western medicine for prevention and cure) Chennai East West Books (Madras) Pvt. Ltd., 1998.
2. Sri. Ananda : the Complete Book of Yoga Harmony of Body and Mind (Orient Paper Backs : Vision Book Pvt. Ltd., 1982).
3. Swamy Satyananda Saraswathi : Asana, Pranayama, Mudra, Bandha (India : Yoga Publications Trust, Munger, Bihar)
4. Swami Sivanada : Practice of yoga (The Divine Life Society, Shivananda nagar, P.O., U.P. Himalayas, India).
5. Dr. Nagendra HR : The Art and Science of Pranayama (Vivekananda Kendra Yoga Prakashana, Bangalore)
6. Dr.J. P.N. Mishra : Yoga for common Ailments (B., Jain Publishers, Pvt. Ltd., New Delhi.)
7. Practical Guide to Applied Spirituality (Brahma Kumaris, Mount Abu, Rajasthan)
8. Building a value based peaceful and prosperous Society (Om Shanti Press Gyanamritt in bhavan, Shantivan, Mount Abu, Rajasthan)
9. Vicente Hao Chin, Jr : Notes on Self Transformation, (Phillippine theosophical Institute, Philippines)



#### **Fourth Semester**

Paper X	:	Sports Medicine
Paper XI	:	Sports Specialization
Paper XII	:	Rules of Sports & Games

#### **PAPER – X - SPORTS MEDICINE**

##### **Unit-I - Common Sports Injuries:**

Sports Medicine- Definition, Need and importance, History and scope of sports medicine

Sports Injuries- Abrasion, Laceration, Blisters Muscle injuries, Muscular Hematoma - Muscle Cramp, Stitch, Ligament Injuries Skeletal injuries, Periostitis, Dislocation Tender injuries, its treatment and prevention, Prevention of Sports Injuries, Important factors in preventing sport Injuries, RICE.

##### **Unit-II – Regional Injuries of the Body :**

Head & Neck - Shoulder, Upper Arm, Elbow- Wrist and Forearm – Hip and Thigh – Knee and Lower leg – Ankle and Foot.

##### **Unit-III - Rehabilitation :**

Specific rehabilitation Programme in the following joints - Ankle, Knee, Low back, Elbow, Wrist, Shoulder & Hip.

##### **Unit-IV - Stretching Exercises :**

Types of Stretching Exercises ( Static, Dynamic & PNF stretching ) – Advantages & disadvantages of each type – benefits of stretching exercises – stretching exercises programme for the following joints – Head & Neck – Shoulder Joint - Shoulder Griddle - Elbow, Wrist, Hip, Knee, Ankle and Spine.

##### **Unit-V - First Aid for Sports Injuries:**

First Aid, Golden rules of First Aid, Responsibilities of first Aids, Artificial respiration, Cardiac massage Shock, Head injuries, concussion unconsciousness, Back injuries Sportsmen should seek medical advice when.

##### **Unit-VI – Sports Supplements & Ergogenic Aid :**

Creatine, Pyruvate, Carnitine, Caffeine, Protein, Ergogenic aid, Definition and its classes - Doping : Definition, Doping Classes, Doping Method, Classes of Drugs.

## **Unit-VII - Thermoregulation:**

Conduction, Convection, Radiation, Evaporation, Thermometer, Absolute Humidity  
Relative Humidity - Mechanism of Temperature regulation - exercise and  
thermoregulation Heat acclimatization, Heat injuries, Cold acclimatization, Cold  
injuries.

## **Unit-VIII -- Sports Physiotherapy:**

Principles of Physiotherapy – Hydrotherapy : Modalities of Cryotherapy and  
Thermotherapy, Physiological effect of Hydrotherapy. Electrotherapy : Ultra Sound -  
Short wave Diathermy - Microwave Diathermy – Infra red Radiation – Ultraviolet  
radiation. Muscle stimulator ( Galvanic & Faradic), Transcutaneous Nerve  
Stimulation (TENS), Interferential therapy - Laser therapy.

## **REFERENCES**

1. Roy Steven and Richer Irvin. Sports Medicine, Prentice Hall, 1983.
2. Kulund Daniel N. The Injured Athlete, Philadelphia: J.B. Lippincott Co. 1988.
3. Booher James M. and Thibodeau Gary-A. Athletic Injury Assessment, Toronto: Mosby College Publishing, 1985.
4. Hutson M.A. Sports Injuries, Oxford: Oxford University Press, 1996.
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7. Mottram, David R. Drugs in Sports, London: Routledge. 2004.
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10. Pandey P.K. Know How? Sports Medicine, Jalandhar: A.P. Pub. 1985.
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12. Satpathy G.C. Sports Medicine and Exercise Science, New Delhi: Isha Books. 2005.
13. Sherry, Eugene and Bokor, Des. Sports Medicine, London: GMM Ltd. 1997.
14. Southmayd, William and Hoffman, Marshall. Sports Health, Ludhiana: Kalyani Publishers. 1998.
15. Prentice William, E. Therapeutic modalities sports medicine. St. Louis : Time Mirror Mosby college publishing 1990.
16. Starky, Chad Therapeutic Modalities for : Athletic Trainers, Philadelphia : F. A Davis Company, 1990.
17. Knight, Cryotherapy in Sport Injury management, Human Kinetics, Champaign : 1995.
18. Torg, Joseph, S.Etc. Rehabilitation of athletic injuries, an atlas of therapeutic exercise, year medical publications, London: 1987.
19. Prayor, Junnifer, A. & Webber, Barbara, A. Physiotherapy for Respiratory and cardiac problems, Ed. 2 : Churchill Livingstone. New York : 1993.

## **PAPER XI : SPORTS SPECIALISATION**

### **1. TRACK AND FIELD**

#### **Unit I**

- a. Introduction: History and Development of Track and field events
- b. Organizational setup of Track and Field Athletics
- c. Major competitions at National and International levels.

#### **Unit II**

- a. Rules and officiating in Track and field; Principles of officiating
- b. Track and Field lay out and marking

#### **Unit III**

- a. Fundamental techniques of Track events; Sprint events – Running form, starting and finishing technique.
- b. Middle and long distance running
- c. Walking events – walking technique
- d. Hurdles Events – Hurdling technique

#### **Unit IV**

- a. Fundamental techniques of jumping events, Long jump – Mechanics of Jumping Hang style and hitch-kick techniques – Approach run, Take off, action in the air, landing
- b. High Jump-Straddle-rod and Fosbury techniques

#### **Unit V**

- a. Fundamental Technique of Throwing events – Mechanics of throwing
- b. The shot put, Initial stance, glide/turn, throwing position, release, recovery.
- c. The Discus throw, Technique-initial stance, preliminary swing, the turn throwing position, release, recovery.
- d. The Javelin throw, Technique-the grip, carry, five-stride rhythm, release, recovery.
- e. The hammer throw, technique-the grip, initial position, preliminary swing, the turn release, and reverse.

#### **Unit VI**

- a. Combined Events – Decathlon and Heptathlon- General principles of training for combined events.

#### **Unit VII**

- a. Pedagogic Principles of Track and Field Training:
  - (i) Periodization of training – preparatory training – build up training – high performance training.

(ii) Training plans – Long term plan, yearly plan, monthly and weekly schedule, day's programme – physical qualities.

### **Unit VIII - Training Means and Methods:**

- a. Conditioning.
- b. Warming up – general and specific
- c. Development of Physical fitness and motor qualities.
- d. Specific training for techniques development tactics – effect of training in attitude.

### **Unit IX**

- a. Talent Identification
- b. Training youth athletes and women athletes
- c. Psychological preparation for competition in track and field.

### **Unit X**

- a. Common Injuries in Track and Field during training and competitions
- b. Prevention, treatment and rehabilitation of athletic injuries.
- c. Doping and its control

### **PRACTICAL'S - FUNDAMENTAL SKILLS**

- a. Starting technique – Standing start crouch start and its variations, props use of blocks.
- b. Finishing techniques – Run, through forward lunging shoulder shrug.
- c. Relays – Various patterns of Baton exchange and understanding to relay zones.
- d. Hurdles – Approach, clearance over the Hurdle lead leg action, Trail leg action and recovery middle and long distance running.
- e. Steeple chase – Approach clearance recovery walking technique
- f. Long Jump (hang style and running in the air style) Approach run, take off, flight in the air and landing.
- g. High Jump (Straddle technique and phosburry flop) – Approach run take off clearance over the bar and landing.
- h. Triple Jump – Approach run, take off hop step and Jun phase (action in the air) and landing.
- i. Pole vault – Hand grip and pole curry. The run and pole plant, take off, bar clearance and landing.
- j. Shot-put grip, stance glide, release and reverse (o' Brain style)
- k. Discuss Throw – Grip, stance preliminary swing. Turns release and reverse.
- l. Javelin Throw – Grip, curry approach run release and reverse.
- m. Hammer Throw – Grip, preliminary swing turns, release and reverse.
- n. Combined Events : Decathlon and Heptathlon.

## REFERENCES

1. Carr, Gerry R. Fundamentals of Track and Field, Mumbai: The Marine Sports. 1995.
2. Ekta. Teaching and Coaching Athletics, New Delhi: Sports Publication. 2003.
3. Emmanuel, George. Athletic meet – Marking, Rules, Directions, Cicily George: Kottayam. 2001
4. Lawson, Gerald. World Record Breakers in Track and Field Athletics, New York: Human Kinetics. 2000
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8. Hooks Gene Application of Weight Training to Athletics, Englewood Cliffs N.J. Prentice Hall Inc. 1962.
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11. Robinson Johnson James and Hirschi. Modern technique of track and field. London Henry Kimpton Publishers 1974.
11. Ken O Bosen – Track and Field fundamental technique NIS publications Patiala.
12. Parachiwala J. Athletics.

## 2. BASKETBALL

### Unit-I

- a. Historical development of game in India. Asia and world
- b. Organizational setup and structure of FIBA and BFI Competitions at National and International level and at various levels.
- c. Distinguished personalities, Arjuna Awardees in Basketball.

### Unit-II

- a. Rules and officiating the Game – duties of officials
- b. Coach, captain, game observation
- c. Individual and group scouting and statistical analysis of players and matches
- d. Objective and subjective tests.

- e. Warming up and Stretching
- f. Diet and Mental attitude

### **Unit-III**

- a. The Court-Dimensions and Markings
- b. Equipments and its measurement
- c. Teaching Aids.

### **Unit-IV**

- a. Fundamental Skills – Dribbling-Basic and reverse dribbling, Dribbling, start and stop of a dribble, high, low and combinations of dribbles, Cross over dribbling, between the legs dribbling, behind the back dribbling .
- b. Ball Handling – Grip, Pivoting, Stride stop, Jump Stop & fake and drive
- c. Passing – Chest pass, over head pass, Bounce Pass - static and dynamic receiving.
- d. Shooting – The Set Shot, The Jump Shot, The Lay-Up Shot and its variations, The Hook shot and the Slam Dunk.
- e. The Rebound-Boxing out, Tipping-in, Defensive Catching, Offensive Catching
- f. Defending-Stance, Defense against a dribbler, Marking a passer, Preventing pass reception.

### **Unit V - Drills**

- a. Dribbling Drills – Dribbling reaction, dribbling cones, dribbling tag, traffic jam dribbling.
- b. Passing Drills-Wall passing, piggy in the middle, 2-player passing drill, Machine gun passing
- c. Shooting Drills-One player drill, around the world, lay-up drill, three-man shooting drill
- d. Rebound drills – One-player drill, Tipping in drill, one on one drill
- e. Defensive Drills-Zig-Zag drills, Denial drill, two on two play.
- f. Fast break drills with three players and five players.

### **Unit-VI – Offensive Tactics**

- a. Individual passing fakes, shooting fakes, dribbling fakes, body and step fakes.
- b. Change of pace and direction different ways of cutting, cross over dribble.
- c. Combined tactics – give and go, criss-cross pick and roll, splitting the post, post plays out numbering situations, out of bound situations, jump ball situations, free throw situations, last movement situations.

### **Unit-VII –Individual Defence**

Guarding a man without the ball, with the ball, cutter pivot player, the shooter and overguarding defensive tactics strict to man, sliding switching, sandwiching, coupling fronting.

## **Unit-VIII –Offensive Game**

Fast break attack, freelance offense, passing game offense against man-man, offense against zone defense various systems of attack set plays and moves, defensive game man to man defense, floating man-man pressing man-man defense, man to man cum zone defense, different systems of zone defense, flexible man-man defense.

## **Unit-IX**

- a. Selection of teams and organization of short-term camps
- b. Teaching and Coaching aids and gadgets
- c. Lay out construction and maintenance of play ground, equipment management.
- d. Precautions and remedial measures of basketball injuries.

## **REFERENCES**

1. Drewett, Jim. [Basketball Internet](#) Linked, London: Ticktock Publisig Ltd. 2001.
2. Jain, Naveen. Play and Learn Basketball, New Delhi: Sports Publications, 2005.
3. Sharma, Basketball Skills and Rules, New Delhi: Sports Publications. 2005.
4. Abbas Mootasir, Principles of basketball. Skunda Publications, Bombay.
5. Ebert Cheatum. Basketball W.B. Saunders Company.
6. Robert A Fox, The complete hand book of individual skills Basketball Prentice Hall Englewood Cliffs New Jersey.
7. Paul Stimpson, Basketball. The skills of the game – the crow-wood press Ramaburry Marthorough Wiltshire.
8. Roget Hain Basketball drills from college coaches, packet publishing co. Inc. West Nyack New York.
9. Dean Smith, Basketball multiple offence in defense. Prentice Hall Inc. Englewood Cliffs New Jersey.

## **3. CRICKET**

### **Unit-I**

- a. History and development of Cricket – Bodyline and Ashes Series. Historical development of Cricket in England, Australia, West Indies, South Africa, New Zealand, India, Pakistan, Sri Lanka, Zimbabwe and Bangladesh.
- b. History of Women's Cricket.

- c. History of Indian Cricket.
- d. History of One-day cricket.
- e. History of World Cup Cricket.

#### **Unit-II**

- a. Cricket controlling Bodies and its Organizational Set up-ICC, MCC and TCCB.
- b. Organizational setup, aims and objectives of B.C.C.I.
- c. Standing Committees of B.C.C.I.
- d. Major Tournaments organized by B.C.C.I.

#### **Unit-III**

- a. Layout and maintenance of the oval.
- b. Dimensions of the field.
- c. Pitch-Types of Pitches and preparation and maintenance of a Turf Wicket.
- d. Essential equipments, measurements of equipments.
- e. Teaching Aids.
- f. Warming up, importance of warming up.

#### **Unit-IV**

- a. Fundamental skills-batting-basics. Defensive strokes, Attacking strokes, Modern improvised strokes. Funning between the wickets and Drills to improve the batting skills.
- b. Bowling-Basics. Out swinger. In swinger, Reverse Swing, Off spin and its variations, Leg spin and its variations and Drills to improve the bowling skills.
- c. Fielding-Ground fielding. (Stationary, on the run and Slide stop) Catching. (High, Low, Flat and Feflex Catching)
- d. Wicket Keeping-Drills to improve the wicket keeping skills.

#### **Unit-V**

- a. The laws of cricket with interpretations.
- b. Officials in Cricket.
- c. Umpires and their duties.
  - (i) Duties before the match
  - (ii) Duties during the interval.
  - (iii) Duties after the match.
- d. Signals, Unofficial and additional signals.

#### **Unit-VI**

- a. Captaincy: Qualities of a good captain.
- b. Duties of captain
- c. Symptom of bad captaincy.

#### **Unit VII**

- a. Criteria for selection of players at various levels.
- b. Warming up – conditioning and training process.
- c. Training methods.



- d. Planning a Coaching camp: Annual, Weekly and daily plan.

#### **Unit-VIII**

- a. Psychological qualities of cricket player.
- b. Method of developing psychological qualities. Psychological skills training.

#### **Unit-IX**

- a. Injuries in cricket, prevention and first aid.
- b. Nutrition for cricket players.

#### **Unit-X**

- a. Modern Trends in Cricket
- b. Cricket Vocabulary, Award winners and Records.

#### **REFERENCES**

1. A handbook of Practical Training in Cricket, Mumbai: Jaico Publishing House. 1998.
2. Bose, Mihir. A History of Indian Cricket, New Delhi: Rupa & Co. 1990
3. Bradman, Donald. The Art of Cricket, London: Robson Books. 1998.
4. Coaching Youth Cricket. Australian Cricket Board, New York: Human Kinetics. 2000.
5. Elliot, Bruce et. Al. The Science of Fast Bowling, Mumbai: Marine Sports, 2001.
6. Rundell, Michael. The Dictionary of Cricket, London: George Allen & Unwin. 1985.
7. Smith, Tom. New Cricket Umpiring and Scoring, London: Weidenfeld & Nicolson 2004.
8. Stewart, Alec. The Yough Cricketer, London: DK 1999.
9. The Laws of Cricket (2000 code 2<sup>nd</sup> Edition 2003) issued by BCCI.
10. Tyson, Frank, Learn Cricket with Frank Tyson. New Delhi: Rupa & Co. 2002.
11. Wills Book of Excellence: Cricket, Hyderabad: Orient Longman Limited 1987.
12. Wisden Cricketer's Almanack 2006.

### **4. VOLLEYBALL**

#### **Unit-I**

- a. History of Volleyball, the development of game in the world, volleyball in Asia, Volleyball in India.
- b. Organizational set up FIVB, AVC and VFI.
- c. Recipients of Arjuna Award and Dronacharya Award.

#### **Unit-II**

- a. Warming up, importance of warming up, principles of warming up, methods of warming up: General, specific and competition warming up, warm down.
- b. Court making: Construction and maintenance of volleyball court. Essential and additional equipments in volleyball.
- c. Rules of Volleyball and their interpretation.
- d. Duties of officials, Beach volleyball.

### **Unit-III**

Teaching and training of the techniques: With analysis. Volleyball pass (over head pass). Under hand pass (Dig pass). Underhand service. Tennis service. Upper hand back pass, Floating service. Pass in Jump. Straight Smash, Smash with body

turn. Wrist outward smash. Wrist inward smash, Hesitation and smash. Zig-zag smash. Back-court attack. Rising ball attack. Jump service. One man pass with back rolling. Volley pass with back rolling, Forward div and pass. Single block, Group block. Set up training and setter and attack on direct pass from back court.

### **Unit-IV**

- a. Organization of competitions: Types of competitions and organization of competitions.
- b. Systems of conducting the competition and world. Asia, Commonwealth, Regional and national levels.
- c. Methods of drawing, fixtures, to divide positions at the end of competitions.
- d. Philosophy of officiating – mechanics of officiating, steps to improve officiating.
- e. Pre-requisite characteristics of a volleyball player.

### **Unit-V**

- a. Tactics: Tactical training, individual tactics in service reception, set up, attack block and defense.
- b. Group tactics: 1) Service reception: 6 men reception, 5 men reception. 4 men reception, 3 men reception, 2 men reception.
- c. Attacking combinations: attack by 2,3 front row players and back row players and methods of teaching attacking combinations.
- d. Defense: Methods of teaching the defense system. Free ball defense (defense with no block) 2-1-3 forward angle defense. 2-1-3 backward angle defense. 2-0-4 defense system. 1-2-3 defense system 2-2-2 defense system 1-1-4 defense system 3-0-3 defense system. 3-1-2 defense system covering of the attack and methods of teaching.

### **Unit VI**

- a. Test and measurements: Specific test for volleyball (endurance, speed, flexibility, explosive straights of arms and legs, jumping ability and speed endurance.)
- b. Tests for skills: Service-dig pass, volley pass. Set up test, attack test, defense test.

- c. Selection of players and team composition: Talent selection, selection of a team, selection of team captain selection of starting six for immediate participation in competitions, team composition, scouting preparation of scout report, procedures, areas scouted using of scout report in individual player coaching and team coaching.

#### **Unit-VII**

- a. Psychological characteristics of a volleyball player: Psychological qualities required to specific position, methods of developing psychological qualities.
- b. Grading the team before, during and after the match, tactics of substitution and time out, rhythm of the game, switching of players, direct preparation of a team for a decisive competition.

#### **Unit-VIII**

- a. Complex training, functional training, pressure training, concentration training. Will training, situational training, small court games.

#### **REFERENCES**

- 1.Cox, Richard. H. "Teaching Volleyball" New Delhi subject publications.
- 2.Viera, Barbara Laun "Teaching Volleyball Steps to Success" Champaign, illionis, Leisure Press 1989.
- 3.Nicholas Keith, "Modern Volleyball for teacher coach and player" London lepus Books 1978.
- 4.Cozensky, Sue – "Championship/Volleyball Techniques and Drills", New York, parker publishing Co. Inc. 1983.
- 5.Nicholas Keith – "Volleyball the skills of the Games", Great Britain. The Gowood Press 1986.

### **6. FOOTBALL**

#### **Unit I**

- a. Introduction of the game. History and development of the game with special reference to India.
- b. Organization set up of the game in the world and in India.
- c. Important competitions held at National and International level.
- d. Distinguished players of the game both international & national .

#### **Unit II**

- a. General and specialized techniques: Drills and head-up activities.

#### **Unit III - Fundamental factors of soccer strategy.**

- a. System of play: Definition, development of system of play form Heroic Age of Soccer to present day of total football.

- b. Tactics: Definition, classification, General tactics, applied tactics. Tactics of attack and defense.

#### **Unit IV - Game analysis**

- a. Analysis of the individual game
- b. Analysis of the collective work.

#### **Unit V**

- a. Rules and their interpretations.
- b. Duties of officials, Officiating and officials signals.
- c. Planning the Layout, construction and marking & Maintenance of play field.

#### **REFERENCES**

- 1.C.Sanadi, Arpad, Budapast, Medicine, Konyuklads, 1978. The Football Associations Reference Chart and Players Guide to the Laws of Association Football – London Pan Books (Ltd. Ed.)
- 2.Hugher, Charles – The Football Association Coaching Book of Soccer. Tactics and Skills London British Broadcasting Corporation and Mac Donald Queen Anne Press 1987.
- 3.Mc. Gellingan, Tames. P. – Complete Book of Drills for winning Soccer, New York Parket 1980.
- 4.Morris. Dermond. The Soccer Tribe London Jonathan Cape 1981.
- 5.Wack Allen. The F.A. Guide to Training and Coaching London, William H. Einemann Ltd. 1981.
- 6.The Guinness Book of Soccer. Facts and Feasts Great Britain Guinness Superlatives Ltd. (Latest Edition).

## **6. JUDO**

#### **Unit-I**

- a. Origin, History and growth of Judo in India and in the world.
- b. World, Olympic and National competitions. World championships and regional championships.

#### **Unit II**

- a. Rules and Regulations of Judo competition.
- b. Planning the Layout, construction and marking & Maintenance of the competition arena.
- c. Officiating & Officials signals.

#### **Unit-III**

Fundamentals of Judo: Salutation, How to wear a Judogi, Kumi Katha, Ukemi, Posture, Kuzushi, Tskuri and Kake, Sluntai, Tai Sabaki using strength.

## **Unit-IV**

Techniques and tactics of Judo.

## **Unit-V**

Training for Judo competition. Long term and short term plans, preparations for competitions.

# **7. HANDBALL**

## **Unit-I**

- a. History of Handball. Development of Handball in India, Asia and World.
- b. Prerequisites for a Handball player.

## **Unit – II**

- a. Rules and Regulations of Handball.
- b. Planning the Layout, construction and marking & Maintenance of play field.
- c. Officiating & Officials signals.

## **Unit-III- Defensive Techniques**

Basic stance, Basic qualities, Initial position and movements of a defensive player.  
Group defense: Giving over-taking over of an opponent, Man to Man defence.

## **Unit –IV Offensive Techniques**

Catching, passing, Dribbling, Feints, Throw on goal, Jump shot long, Jump shot high, Straight shot, Hip throw, Dive shot and Fall shot.

## **Unit-V - Offensive Tactics**

Group Tactics – Frontal break through. Half position change, Positional change, screen, free throw combination, Counter attack. Systems of play in Offence and Defence: Offensive system – 3:3, 2:4, 4:2.

## **Unit –VI Defensive system.**

6:0, 5:1, 4:2, 3:3, 3:2:1, 5:0+1, 4:0+2.

## **Unit-VIII**

Training: Long term and short term plans. Preparing for competitions.

# **8. KABADDI AND KHO-KHO**

## **Unit-I**

- a. Origin-History and development of Kabaddi.
- b. Rules and regulations of the game.
- c. Planning the Layout, construction and marking & Maintenance of play field.

- d. Officiating & Officials signals.

## **Unit-II –Techniques**

- a. Raid-pre consideration of Raid-Caut-Entry-Retreat.
- b. Defence: Pre-requisites of a defensive player-right Zone-Centre Zone-Left Zone, Ankle-hold, Thigh hold, Knee hold, Waist, Wrist hold and Blocking.
- c. Chain system, Corner chain, Center Overchain.

## **Unit-III**

- a. Offensive Skills: Hand though, Toe though, Plunging though the chain, Jumping over the chain, escaping from the holds.

## **Unit-IV**

- a. Systems of Play: Tactics and Strategies in Offence and Defence of the Game.

## **Unit-V**

- a. Training: Long term and short term plans.
- b. Preparation for competitions.

## **Unit-VI**

- a. Origin, History and Development of Kho-Kho.
- b. Rules and regulations of the Game.
- c. Planning the Layout, construction and marking & Maintenance of play field.
- d. Officiating & Officials signals.

## **Unit-VII**

- a. Defensive skills: Sitting in the square, giving Kho-Kho, advance Kho, pole turn moving out of square taking direction pole dive, flat dive, taping, covering, third attack, Correction of fouls.
- b. Offensive skills: Initial position of the runner, single chain, double chain, three six up, sixth attack, seventh attack, eighth attack, ring game, avoiding, entry during the game.
- c. Tactics and strategies in offence and defence.

## **Unit-VIII**

- a. Training: Long term and short term plans.
- b. Preparation for competitions.

# **9. BADMINTON**

## **Unit-I**

- a. Origin, History and Development of Badminton in India and in the world.
- b. Competitions at National and International level.
- c. Rules and regulations of the game.
- d. Planning the Layout, construction and marking & Maintenance of play field.
- e. Officiating & Officials signals.

## **Unit-II**

- a. Grips
- b. Basic and advanced skills of badminton- Services, Defensive and Offensive shots and clears.
- c. Techniques of Badminton

## **Unit-III - Tactics of play.**

- a. Individual and team tactics.
- b. Singles, doubles and mixed doubles competitions.

## **Unit-IV – Training**

- a. Selection the players.
- b. Long term and short term training plans.
- c. Preparing for competitions.

# **10. LAWN TENNIS**

## **Unit-I**

- a. Origin, History and Development of Tennis.
- b. Competitions at National and International level.

## **Unit-II**

- a. Teaching of sports.
- b. Grips -
  - Eastern forehand
  - Eastern backhand
  - Continental
  - Western
- c. Basic Stroke
  - Forehand
  - Backhand
  - Service
  - Volley
  - Smash

## **Unit-III -Progression of Technique**

- a. Ball Sense
- b. Feeding
- c. Sequence of Coaching

## **Unit-IV -Basic fundamentals of the game**

- a. Tracking of the ball
- b. Movement of recovery
- c. Racket head control
- d. Balance
- e. Swing
- f. Intention

## **Unit-V - Tennis Equipment**

- a. Tennis Racket.
- b. Tennis Ball
- c. Strings
- d. Net
- e. Tennis Kit

## **Unit-VI**

- a. Rules of the game and their interpretations.
- b. Planning the Layout, construction and marking & Maintenance of play field.
- c. Officiating and Official signals.

## **Unit-VII**

- a) Different surface of Tennis Court and their maintenance.
- b) Selection of the site of a Tennis court.
- c) Marking of the Tennis court.

# **11.GYMNASTICS**

## **UNIT –I**

- a. History of Gymnastics:
- b. Distinguished Personalities connected with Gymnastics

## **UNIT -II**

### **Difference kinds of Gymnastics:**

- a. Artistic Gymnastics
- b. Acrobatic Gymnastics
- c. Rhythmic Gymnastics
- d. Trampoline

### **General Development Exercise:**

- a). General development exercise with objects
  - b). General development exercise without objects
- Structural and orderly exercise

## **UNIT –III**

- a. Gymnastic lessons: (45 minutes, 90 minutes, 180 minutes)
- b. Acrobatic exercise: Mobile games
- c. Variation of applied exercises for Gymnastic lesson.

## **UNIT – IV**

### **Classification of Free Exercises:**

- a. Free exercises with object
- b. Free exercises without object

### **Jumps**

- a) Simple Jumps      b) Complex jumps

Practical material on dynamic exercises: Exercises on apparatus.



## **UNIT V**

Apparatus measurements: Terminology of Gymnastics: Training periods: Various types of Gymnasium halls.

## **UNIT-VI**

Types of Gymnastics: Important competitions at National and International level  
Rules of Gymnastics and their interpretations.  
Introduction of code of points Latest edition.

## **UNIT –VII**

Organizing and conducting competitions:  
Types of Gymnastic competitions, competition attire:

## **JUDGING**

Seating of judges in different competitions.  
Evaluation D score and E score.  
Requirements of A, B, C, D,E, parts elements

## **UNIT-VIII**

Rhythmic Gymnastics for women  
(Hoops, Ribben, Ball, Clubs,)  
Flexibility routine for rhythemics

## **REFERENCES**

1. Tom De. Cario, Hand book of progressive Gymnastics, prentice Hall Inc. Englewood Cliffs N.J. (1963).
2. John Goodbody, The Illustrated History of Gymnastics, Stanley Paul, London Melbourne, Sydney, Auckland (1976)
3. Tony Murdock and Nikstuart, Gymnastics, Franklin Watts, London , New York, Toronto, Sydney (1985)
4. Don Tonry and Barbara Tonry, Sports Illustrated women's Gymnastics -2. LippinCot ;& Crowell Publishers, New York (1980) ISBN – 0690-01906 -8 (v.2) pbk.
5. Phyllis Cooper and Milan Trnka, Teaching Gymnastic skills to Men & Women, Surjeet Publications, Delhi, India (1962).
6. Anne Williams, Curriculum Gymnastics, A Teacher's guide to theory and practice, Hodder and Stoughton, London, Sydney, Auckland, Toronto (1987).

## **12. TAEKWONDO**

### **UNIT I**

- a. Origin and history of Taekwondo
- b. Definition and meaning of Taekwondo

- c. Organisation of the sport
- d. Conduct rules in the Dojang
- e. Taekwondo Oath
- f. Objectives and Tenets of Taekwondo

## **UNIT II**

- a. Taekwondo terminology: Taekwondo terms and its meanings
- b. Types of Seogi (Stances)-Chagi (kicks)-Special kicks and its Korean terms
- c. Korean numbering

## **UNIT III**

- a. Basic Movements-18 steps
- b. Block Combinations
- c. Hand Techniques
- d. Elbow Strikes
- e. Fighting Steps

## **UNIT IV**

- a. Training Methods of Taekwondo
- b. Specific Warm-up
- c. Endurance Training
- d. Knee-up Circuit/ Strengthening Circuit

## **UNIT V**

- a. Injuries in Taekwondo and their treatment
- b. Bodily Vital Points and Target of Attacks
- c. Self Defense (Hoshinsool)

## **UNIT VI**

- 6.1 Kyorugi and Poomsae
- 6.2 Competition Rules of kyorugi and Poomsae
- 6.3 Taegeuk 1Jang to Taegeuk 5 Jang

## **UNIT VII**

- a. Taekwondo Demonstration
- b. Types and contents of Taekwondo Demonstration

## **PRACTICUM**

- a. Basic Movements -18 steps, Block Combinations & Hand Techniques
- b. Self Defense Demonstration
- c. Taegeuk 1 Jang
- d. Taegeuk 2 Jang
- e. Taegeuk 3 Jang
- f. Teageuk 4 Jang
- g. Taegeuk 5 jang

## **REFERENCES**

1. Taekwondo Text Book, prepared and published by Technical Committee (TAKE-Taekwondo Association of Kerala).
2. Taekwondo: A Path to Excellence by Doug Cook, YMAA Publications Centre, October 16, 2009.
3. Traditional Taekwondo: Core Techniques, History and Philosophy by Doug Cook, YMAA Publications Centre, March 29, 2009.
4. Complete Taekwondo Poomsae: The Official Taegeuk, Palgwae and Black Belt Forms of Taekwondo by Kyu Hung Lee & Sang H Kim, Turtle Press U.S, 2007.
5. Taekwondo: The Indomitable Martial Art of Korea by Dong Keun ParkDong & Allan Schein, Invisible Cities Press, December 15, 2006.

## Paper XII: Rules of Sports and Games

The rules as per the respective National Federation of the following ten games/Sports are included namely Track and Field, Basketball, Football, Cricket, Handball, Volleyball, Kho-Kho/Kabaddi, Shuttle Badminton, Table Tennis and Hockey.

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