

**KANNUR  UNIVERSITY**

(Abstract)

Two year Master of Physical Education (M. P. Ed.) Degree Programme – Regulation, Scheme, Syllabus and Model Question papers - in tune with NCTE regulation 2014 – implemented in Kannur University with effect from 2015 admission – orders issued

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ACADEMIC 'C' SECTION

U.O. No. Acad/C4/5242/2015

Civil Station (P.O), 06 -11 -2015

- Read: 1. Letter No. SRO/NCTE/Estt/Reg/ N & S/2014-15/60555 Dated 11-12-2014  
2. Minutes of the meeting of the Department Council held on 16.04.2015  
3. Letter from the Course Director, Dept. of Physical Education.  
4. Minutes of the meeting of the curriculum committee held on 03.09.2015

**ORDER**

1. The NCTE vide paper read (1) above has made new Norms & Regulation for Teacher Education Programmes in India and directed to revise the curriculum in accordance with the Norms & Regulation.
2. The meeting of the Department Council held on 16-04-2015 vide reference (2) above, resolved to revise the curriculum of M. P. Ed. in tune with the guidelines of NCTE Regulation 2014 and approved the draft Regulation, Scheme, Syllabus and Model Question Papers of two year M. P. Ed. Programme.
3. Vide paper read (3) above, the Course Director, Dept. of Physical Education has forwarded the revised regulation, Scheme and Syllabus for two year M. P. Ed. Programme for implementation with effect from 2015 admission
4. The meeting of the Curriculum Committee held on 03-09-2015 approved the Revised Regulation, Scheme, Syllabus & Model Question Papers for Two year M. P. Ed. Programme under Choice Based Credit Semester System in the Department vide paper read (4) above.
5. The Vice-Chancellor, after considering the matter in detail, and in exercise of the powers of the Academic Council, conferred under Section 11 (1) of Kannur University Act, 1996 and all other enabling provisions read together with, has accorded sanction to implement the Regulation, Scheme, Syllabus and Model Question Papers for two year Master of Physical Education Programme with effect from 2015 admission subject to report Academic Council.

P.T.O.



6. Orders are, therefore, issued accordingly.

7. The implemented Regulation, Scheme, Syllabus and Model Question Papers of M. P. Ed. Programme w.e.f. 2015 admission are appended.

Sd/-  
**JOINT REGISTRAR (ACADEMIC)**  
**For REGISTRAR**

To:

The Course Director, Dept. of Physical Education  
Mangattuparamba Campus, Kannur University

Copy to:

1. The Examination Branch (through PA to CE)
2. The Course Director, Dept. of Physical Education
3. PS to VC/PA to PVC/PA to Registrar/PA to CE.
4. JR/AR-I (Academic).
5. Web Manager (for uploading in the Website)
6. SF/DF/FC

Forwarded /By Order

  
SECTION OFFICER

*B.*



- *For more details log on to [www.kannur.university.ac.in](http://www.kannur.university.ac.in)*



**KANNUR UNIVERSITY**  
**FACULTY OF PHYSICAL EDUCATION**

**REGULATION SCHEME AND SYLLABUS OF M.P.Ed.**  
**UNDER CHOICE BASED CREDIT AND SEMESTER SYSTEM**  
**AS PER NCTE GUIDELINES**

# REGULATION SCHME AND SYLLABUS OF M.P.Ed.COURSE

## Introduction

Master of Physical Education (M.P.Ed) is a two year professional degree programme with an objective to prepare Physical Education teachers to impart physical education in educational institutions subject to fulfilling the criteria prescribed by the State and the Central Government. The course will also facilitate for employment as Sports Administrators , Sports science experts , Trainers/ Instructors/coaches in fitness centres, health club, sports clubs , sports academy e.tc

1. **Name of the Course :** The name of the course shall be Master of Physical Education (M.P.Ed.)
2. **Nature of the Course :** The course shall be full time residential and co-educational.
3. **Duration :**The duration of the course shall be two academic years with four semesters.
4. **Eligibility for admission and reservation of seats.**

For admission to the M.P.Ed Course the candidate shall fulfill the following conditions

- (i) Should have passed a Bachelor Degree in Physical Education( BPEd/BPE) of Kannur University or any other University recognized as equivalent there to.
- (ii) Should be below the age of 27 years as on 1<sup>st</sup> July of the year of admission
- (iii) Should be physically fit for daily heavy load of physical exercises and should not have any physical deformity or mental disability which prevents him/her from actively taking part in physical education program.

## 5. Selection Criteria

The selection of candidates for admission to the M.P.Ed Course shall be based on the merit. The merit of the candidate shall be determined based on the following criteria:

- |       |   |          |
|-------|---|----------|
| (i)   | Written test<br>(Based on B.P.E/B.P.Ed Syllabus)    | 50 Marks |
| (ii)  | Game Proficiency                                    | 20 Marks |
| (iii) | Physical fitness test (AAHPERD test)                |          |
|       | (a) 50 m. sprint (b) 4x9 m. shuttle run (c) sit-ups | 20 Marks |
|       | (d) Pull ups (flexed arm hang for girls)            |          |
|       | (e) Standing broad jump (f) 600 m. run              |          |
| (iv)  | Sports achievement                                  | 10 Marks |

**Total** **100 Marks**

Candidates should score at least 40% in the selection tests to place in the rank list.

**6. Medium of Instruction and Examination**

The medium of instruction and examination of the course shall be English.

**7. Programme in the Credit & Semester System**

The following are the important aspects of the B.P.Ed programme.

- Semesters
- Credit System
- Continuous Evaluation (CE)
- End Semester Examination (ESE)
- Grading

**8. Semesters:** An academic year is divided into two semesters. Each semester will consist of 17-20 weeks of academic work equivalent to 100 actual teaching days. The institution shall work for a minimum of 36 working hours in a week (five or six days a week).

**9. Working days:** There shall be at least 200 working days per year exclusive of admission and examination processes etc.

**10. Academic Week** is a unit of six working days in which distribution of work is organized from day one to day five, with seven contact hours which includes tutoring on each day.

**11. Choice based Credit Semester System** is an instructional package developed to suit the needs of students, to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

**12. Core Course** means a subject that is compulsory as specified for all students undergoing the M.P.Ed. programme.

**13. Elective Subject** means a subject which would enrich the M.P.Ed. programme where the students are allowed to choose from a category of subjects

**14. Core Practical** means a Game of Sports discipline that comes under the category of Games which are compulsory as specified for all students undergoing the M.P.Ed. degree programme

**15. Course** : The term course is usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise Lectures/ tutorials/laboratory work/field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.

The following are the various categories of courses suggested for the M.P.Ed. Programme.

**Theory****Core Course****Elective Course****Practicum****Compulsory Course (Track and Field)****Elective Course****Teaching/Coaching Practices****Internship**

**16. Credit** refers to a unit by which the programme is measured. It is a unit of academic input measured in terms of the weekly contact hours assigned to a course .It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or one and half / two hours of practical work/field work per week. The term 'Credit' refers to the weight given to a course, usually in relation to the instructional hours assigned to it. The total minimum credits, required for completing M.P.Ed. Programme is 90 credits and for each semester 20 credits.

**Provision of Bonus Credits Maximum 06 credits in each Semester**

<b>Sr. No</b>	<b>Special Credits for Extra Co-curricular Activities</b>	<b>credits</b>
1	Sports achievement at State level Competition (Medal Winner)	1
	Sports achievement at National level Competition (Medal Winner)	2
	Sports participation International level Competition	4
2	Inter Uni. Participation (any one game)	2
3	Inter college participation (min two games)	1
4	National cadet corps/ national service scheme	2
5	Blood donation/ cleanliness drive/ community service	2
6	Mountaineering-basic camp/ Advance camp/ Adventure Activities	2
7	News reposting/ article Writing/ books writing/ progress report writing	1

Students can earn maximum 06 bonus credits in each semester by his/her participation on the above mentioned activities duly certified by the head of the institution/ Department. This bonus credit will be used only to compensate loss of credits in academic activities.

## 17. Structure of the M.P.Ed Programme

<b>First Semester : Part A Theoretical Course</b>		
Courses	Number of papers	Credits
Core Courses	3	3 x 3 = 9
Elective Course	1 (out of two)	1 x 3 = 3
<b>Part B Practical Course</b>	4	4x3 = 12
<b>Total Credits</b>		<b>24</b>
<b>Second Semester : Part A Theoretical Course</b>		
Courses	Number of papers	Credits
Core Courses	3	3 x 3 = 9
Elective Course	1 (out of two)	1 x 3 = 3
<b>Part B Practical Course</b>	4	4x3 = 12
<b>Total Credits</b>		<b>24</b>
<b>Third Semester : Part A Theoretical Course</b>		
Courses	Number of papers	Credits
Core Courses	3	3 x 3 = 9
Elective Course	1 (out of two)	1 x 3 = 3
<b>Part B Practical Course</b>	4	4x3 = 12
<b>Total Credits</b>		<b>24</b>
<b>Fourth Semester : Part A Theoretical Course</b>		
Courses	Number of papers	Credits
Core Courses	3	3 x 3 = 9
Elective Course	1 (out of two)	1 x 3 = 3
<b>Part B Practical Course</b>	4	4x3 = 12
<b>Total Credits</b>		<b>24</b>

## 18. Pattern of Question Papers:

Question Papers shall have five questions corresponding to numbers of units of each theory Course that is three Essay types one short note type and one Multiple Choice Type questions

### M.P.Ed : Format of Question Paper

Question No. Description Marks	Question No. Description Marks	Question No. Description Marks
1	Essay Type questions 3 out of six questions	45 marks (15 marks each)
2	Short notes: any three out of six	15 marks ( 5 marks each)
3	Multiple Choice Type Questions (10 out of 12)	10 marks ( 1 mark each)
<b>Total Marks</b>		<b>70 marks</b>

## 19. Scheme of Evaluation

The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade point. Evaluation for each course shall be done by a continuous evaluation (CE) by the concerned course teacher as well as by end semester examination and will be consolidated at the end of course. The components for continuous internal assessment are :

Best out of three test	15 marks
Assignments/Lab Tests	10 marks
Attendance	5 marks
Total	30 marks

Attendance shall be taken as a component of continuous assessment, although the students should have at least 85% attendance each of the theory papers and practical subjects to appear for the examination. Besides the students should attend leadership training camp, complete the prescribed laboratory work, practical, project work etc. if any. Condonation of attendance shall be granted to a maximum of 10 days or 55 hours in a semester. It can be availed only once during the whole period of the programme may be granted by the university on valid grounds. This condonation shall not be counted for Continuous internal assessment. Student who is not eligible for condonation of attendance shall repeat the course along with the next batch. Benefit of attendance may be granted to students attending Inter collegiate /University/ National sports program ,participation in co-curricular activities by treating them as present for the days of absence, by the Head of the institution and this benefit shall be considered for internal assessment also. The marks for the attendance shall be as under :

- Above 95 % - 5 marks
- 90 to 94 % - 4 marks
- 85 to 89 % - 3 marks
- Below 85 % - 0 marks.

In addition to continuous evaluation component, the end semester examination, which will be written type examination of at least three hours duration, would also form an integral component of the evaluation. The ratio of marks to be allotted to continuous internal assessment and to end semester examination is 30:70. The evaluation of practical work, wherever applicable, will also be based on continuous internal assessment and on an end-semester practical examination. In case of theory courses the continuous internal assessment will be done by the faculty. Practical examinations shall be on the basis skill tests, theory ,officiating and record book in the concerned activity. The practical examination will be done by the Board of practical examination constituted by the University. All students should appear before the Board of Practical Examination for external evaluation

## **20. Conduct of the External Examination**

There shall be examinations at the end of each semester. The Head of the Department shall submit a confidential panel of examiners to the University for approval for the purpose of



question papers settings, Centralized valuation of theory papers Practical examination and evaluation of dissertation and viva voce.

A candidate who does not pass the examination in any course(s) shall be permitted to appear in such failed course(s) in the subsequent semester examinations to be held in November / December of May /June..

## **21. Minimum Passing Standard**

The minimum passing standard for CE (Continuous Evaluation) and External Examinations shall be 50%, i.e. 15 marks out of 30 marks and 35 marks out of 70 marks respectively for theory and practical courses.

## **22. Grading**

As per Kannur University /NCTE grading system

## **23. Classification of Final Result**

For the purpose of declaring a candidate to have qualified for the degree of bachelor of physical education in the first class/ second class/ pass class or first class with distinction, the marks and the corresponding CGPA earned by the candidate in core courses will be the criterion..

## **24. Award of the M.P.Ed Degree**

A candidate shall be eligible for the award of the degree of M.P.Ed. only if he/she has earned the minimum required credit including bonus credits of the programme prescribed above. i.e not less than 50% of marks.

## **25. Grievance Redressal Mechanism**

The students have all rights to know how the teacher arrived at the grade in the Continuous Internal Evaluation . In order to redress the grievance of students, a four level Grievance Redressal mechanism is envisaged.

Level I - Teacher Level. The teacher concerned

Level 2 Department level - The committee with the Head of the Department as Chairman, Co-ordinator, a teacher nominated by the Department Council as member.

Level 3- University Level : Committee constituted by the Vice-Chancellor

Level 4 - Complaints unsolved by the University level Grievance Committee shall be placed before the Vice Chancellor

The Department council shall nominate a teacher as coordinator of Continuous Evaluations. To make continuous evaluation transparent, students should be made aware

of the modus operandi of evaluation process and the evaluation criteria by the Coordinator well in advance.

## 26. Revision of Syllabi:

1. Syllabi of every course should be revised according to the NCTE.
2. Revised Syllabi of each semester should be implemented in a sequential way.
3. In courses, where units / topics related to governmental provisions, regulations or laws, that change to accommodate the latest developments, changes or corrections are to be made consequentially as recommended by the Academic Council.
4. All formalities for revisions in the syllabi should be completed before the end of the Semester for implementation of the revised syllabi in the next academic year.
5. During every revision, up to twenty percent of the syllabi of each course should be changed so as to ensure the appearance of the students who have studied the old (unrevised) syllabi without any difficulties in the examinations of revised syllabi.
6. In case, the syllabus of any course is carried forward without any revision, it shall also be counted as revised in the revised syllabi.

## Semester - I

<b>Part A: Theoretical Course</b>						
Course code	Title of the papers	Total hours	Credit	Internal marks	External marks	Total marks
<b>Core Course</b>						
MPCC-101	Research Process in Physical Education & Sports Sciences	3	3	30	70	100
MPCC-102	Physiology of Exercise.	3	3	30	70	100
MPCC-103	Yogic Sciences	3	3	30	70	100
<b>Elective Course (Anyone)</b>						
MPEC-101	Tests, Measurement and Evaluation in Physical Education	3	3	30	70	100
MPEC-102	Sports Technology					
<b>Part B: Practical Course</b>						
MPPC-101	Track and Field 1. Running Events *2. Gymnastics *3. Swimming. (*Any one)	6	3	30	70	100
MPPC-	Laboratory Practical Sports Psychology,	6	3	30	70	100

102	Physiology of Exercise, Sports Biomechanics and Kinesiology <b>(Two practicals for each subject)</b>					
MPPC-103	Yoga *Aerobics/ Self Defence Techniques-Martial Arts, Taekwon-do/ Shooting/ Archery – (*Any One activity + Yoga)	6	3	30	70	100
MPPC-104	Mass Demonstration Activities: Kho-Kho/ Dumbbells/ Tipri/ Wands/ Hoop/ Umbrella	6	3	30	70	100
<b>Total</b>		<b>36</b>	<b>24</b>	<b>240</b>	<b>560</b>	<b>800</b>

**Note: Total number of hours required to earn 3 credits for each theory course are 51-60 hours per semester whereas 102-120 hours for each practicum course.**

## Semester – II

<b>Part A: Theoretical Course</b>						
Course code	Title of the papers	Total hours	Credit	Internal marks	External marks	Total marks
<b>Core Course</b>						
MPCC-201	Applied Statistics in Physical Education & Sports	3	3	30	70	100
MPCC-202	Sports Biomechanics & Kinesiology	3	3	30	70	100
MPCC-203	Athletic Care and Rehabilitation	3	3	30	70	100
<b>Elective Course (Anyone)</b>						
MPEC-201	Sports Journalism and Mass Media	3	3	30	70	100
MPEC-202	Sports Management and Curriculum Designs in Physical Education					
<b>Part B: Practical Course</b>						
MPPC-201	Track and Field II: Jumping events + Hurdles *Gymnastics/ *Aquatics (*any one)	6	3	30	70	100
MPPC-202	Games Specialization- Kabaddi, Kho-Kho,	6	3	30	70	100

	Badminton/ Table Tennis/ Tennis/ Squash/ Baseball/ Volleyball/ Basketball/ Cricket/ football/ Handball/ Hockey/ Netball/ Softball (Any two games.)					
MPPC-203	Teaching Lessons of Indigenous Activities and Sports- 5 Lessons(4 Internal & 1 External)	6	3	30	70	100
MPPC-204	Class room Teaching Lessons on theory of different Sports & Games- 5 Lessons (4 Internal & 1 External)	6	3	30	70	100
<b>Total</b>		<b>36</b>	<b>24</b>	<b>240</b>	<b>560</b>	<b>800</b>

**Note: Total number of hours required to earn 3 credits for each theory course are 51-60 hours per semester whereas 102-120 hours for each practicum course.**

### Semester – III

<b>Part A: Theoretical Course</b>						
Course code	Title of the papers	Total hours	Credit	Internal marks	External marks	Total marks
<b>Core Course</b>						
MPCC-301	Scientific Principles of Sports Training	3	3	30	70	100
MPCC-302	Sports Medicine	3	3	30	70	100
MPCC-303	Health Education and Sports Nutrition	3	3	30	70	100
<b>Elective Course (Anyone)</b>						
MPEC-301	Sports Engineering	3	3	30	70	100
MPEC-302	Physical Fitness and Wellness					
<b>Part B: Practical Course</b>						
MPPC-301	Track and Field III: Throwing Events +introduction of Heptathlon event. *Gymnastics/*Swimming (*Any One)	6	3	30	70	100
MPPC-	Games Specialization- III Boxing/ Fencing/ Judo/	6	3	30	70	100



302	Karate/ Wrestling/ Wushu (Any Two)					
MPPC-303	Coaching Lessons of Track and Field/ Gymnastics/ Swimming - 5 Lessons (4 Internal & 1 External)	6	3	30	70	100
MPPC-304	Coaching Lessons of Game Specialization - 5 Lessons (4 Internal & 1 External)	6	3	30	70	100
<b>Total</b>		<b>36</b>	<b>24</b>	<b>240</b>	<b>560</b>	<b>800</b>

**Note: Total number of hours required to earn 3 credits for each theory course are 51-60 hours per semester whereas 102-120 hours for each practicum course.**

### Semester – IV

<b>Part A: Theoretical Course</b>						
Course code	Title of the papers	Total hours	Credit	Internal marks	External marks	Total marks
<b>Core Course</b>						
MPCC-401	Information & Communication Technology (ICT) in Physical Education	3	3	30	70	100
MPCC-402	Sports Psychology	3	3	30	70	100
MPCC-403	Dissertation	3	3	30	70	100
<b>Elective Course (Anyone)</b>						
MPEC-401	Value and Environmental Education	3	3	30	70	100
MPEC-402	Education Technology in Physical Education					
<b>Part B: Practical Course</b>						
MPPC-401	Track and Field Introduction of Decathlon event *Gymnastics * Swimming Practical Skill (*any one )	6	3	30	70	100
MPPC-402	Games Specialization- Practical skills (any two)	6	3	30	70	100
MPPC-403	Officiating Lessons of Track and Field/ Gymnastic/ Swimming - 5 Lessons (4 Internal & 1 External)	6	3	30	70	100

MPPC-404	Officiating Lessons of Game Specializations - 5 Lessons (4 Internal & 1 External)	6	3	30	70	100
<b>Total</b>		<b>36</b>	<b>24</b>	<b>240</b>	<b>560</b>	<b>800</b>

**Note: Total number of hours required to earn 3 credits for each theory course are 51-60 hours per semester whereas 102-120 hours for each practicum course.**

### SCHEME OF EXAMINATION (SEMESTER – I)

Paper	Subject	Internal marks	External marks	Total marks
<b>THEORY (400 )</b>				
MPCC-101	Research Process in Physical Education & Sports Sciences	30	70	100
MPCC-102	Physiology of Exercise.	30	70	100
MPCC-103	Yogic Sciences	30	70	100
MPEC-101	Tests, Measurement and Evaluation in Physical Education	30	70	100
MPEC-102	Sports Technology			
<b>PRACTICAL (400)</b>				
MPPC-101	Track and Field I: Sprint, Middle and Long Distance Running, Long Jump, High Jump (Performance in any one from running + 2 jumping events.)	30	70	100
MPPC-102	Games Specialization- I (Second Best) (Individual skills, game situation, officiating, lead-up games)	30	70	100
MPPC-103	Yoga Performance in Asanas, Kriyas, Bandhas & Pranayama.	30	70	100

MPPC-104	Class Room Teaching Lessons	30	70	100
<b>Total</b>		<b>240</b>	<b>560</b>	<b>800</b>

### Semester – II

Paper	Subject	Internal marks	External marks	Total marks
<b>THEORY (400)</b>				
MPPC-201	Applied Statistics in Physical Education & Sports	30	70	100
MPPC-202	Sports Biomechanics & Kinesiology	30	70	100
MPPC-203	Athletic Care and Rehabilitation	30	70	100
MPEC-201	Sports Journalism and Mass Media	30	70	100
MPEC-202	Sports Management and Curriculum Designs in Physical Education			
<b>PRACTICAL (400)</b>				
MPPC-201	Track and Field II: Shot Put, Discus Throw, Javelin Throw (Performance in any two events)	30	70	100
MPPC-202	Games Specialization- II (Second Best) Individual skills, game situation, officiating, lead-up games)	30	70	100
MPPC-203	Teaching Lessons of Track and Field	30	70	100
MPPC-204	Teaching Lessons of Game Specializations	30	70	100
<b>Total</b>		<b>240</b>	<b>560</b>	<b>800</b>

### Semester – III

Paper	Subject	Internal marks	External marks	Total marks
	<b>THEORY (400)</b>			
MPCC-301	Scientific Principles of Sports Training (Lab. Practicals – Tread mill, Bicycle ergometer, strength, endurance & fitness testing.)- Internal	30	70	100
MPCC-302	Sports Medicine (Lab Practicals)-Internal	30	70	100
MPCC-303	Health Education and Sports Nutrition	30	70	100
MPEC-301	Sports Engineering	30	70	100
MPEC-302	Physical Fitness and Wellness			
	<b>PRACTICAL (400)</b>			
MPPC-301	Track and Field III: Relay, Triple Jump, Pole Vault (Performance in any two events)	30	70	100
MPPC-302	Games Specialization- III (First Best) Individual skills, game situation, officiating, lead-up games)	30	70	100
MPPC-303	Officiating Lessons of Track and Field; Game Specializations	30	70	100
MPPC-304	Internship	30	70	100
<b>Total</b>		<b>240</b>	<b>560</b>	<b>800</b>

#### Semester – IV

Paper	Subjects	Internal marks	External marks	Total marks
	<b>THEORY (400)</b>			
MPCC-401	Information & Communication Technology (ICT) in Physical Education	30	70	100
MPCC-402	Sports Psychology	30	70	100
MPCC-	Dissertation	30	70	100



403				
MPEC-401	Value and Environmental Education	30	70	100
MPEC-402	Education Technology in Physical Education			
	<b>PRACTICAL (400)</b>			
MPPC-401	Track and Field IV: Javelin Throw, Hammer Throw, Hurdles (Performance in any two events)	30	70	100
MPPC-402	Games Specialization- IV (First Best) (Individual skills, game situation, officiating, lead-up games)	30	70	100
MPPC-403	Coaching Lessons of Track and Field	30	70	100
MPPC-404	Coaching Lessons of Game Specializations	30	70	100
<b>Total</b>		<b>240</b>	<b>560</b>	<b>800</b>

## **M.P.ED. PART A Theory**

### **SYLLABUS**

#### **MPCC-101 RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES**

##### **UNIT I – Introduction**

Meaning and Definition of Research – Need, Nature and Scope of research in Physical Education. Classification of Research, Location of Research Problem, Criteria for selection of a problem, Qualities of a good researcher.

##### **UNIT II – Methods of Research**

Descriptive Methods of Research; Survey Study, Case study, Introduction of Historical Research, Steps in Historical Research, Sources of Historical Research: Primary Data and Secondary Data, Historical Criticism: Internal Criticism and External Criticism.

### **UNIT III – Experimental Research**

Experimental Research – Meaning, Nature and Importance, Meaning of Variable, Types of Variables. Experimental Design - Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

### **UNIT IV – Sampling**

Meaning and Definition of Sample and Population. Types of Sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified Sampling. Area Sampling – Multistage Sampling. Non- Probability Methods; Convenience Sample, Judgement Sampling, Quota Sampling.

### **UNIT V – Research Proposal and Report**

Characterization of Thesis / Dissertation, Front Materials, Body of Thesis – Back materials. Method of Writing Research proposal, Thesis / Dissertation; Method of writing abstract and full paper for presenting in a conference and to publish in journals ,Mechanics of writing Research Report, Footnote and Bibliography writing.

### **REFERENCE :**

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc  
Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.  
Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, Londonl Routledge Press  
Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics;  
Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi  
Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippaga Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall.  
Subramanian, R, Thirumalai Kumar S & Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication  
Moorthy A. M. Research Processes in Physical Education (2010); Friend Publication, New Delhi

Semester I  
Theory Courses

## **MPCC-102 PHYSIOLOGY OF EXERCISE**

### **UNIT I – Skeletal Muscles and Exercise**

Macro & Micro Structure of the Skeletal Muscle, Chemical Composition. Sliding Filament theory of Muscular Contraction. Types of Muscle fibre. Muscle Tone, Chemistry of Muscular Contraction – Heat Production in the Muscle, Effect of exercises and training on the muscular system.

### **UNIT II – Cardiovascular System and Exercise**

Heart Valves and Direction of the Blood Flow – Conduction System of the Heart – Blood

Supply to the Heart – Cardiac Cycle – Stroke Volume – Cardiac Output – Heart Rate – Factors Affecting Heart Rate – Cardiac Hypertrophy – Effect of exercises and training on the Cardiovascular system.

### **UNIT III – Respiratory System and Exercise**

Mechanics of Breathing – Respiratory Muscles, Minute Ventilation – Ventilation at Rest and During Exercise. Diffusion of Gases – Exchange of Gases in the Lungs – Exchange of Gases in the Tissues – Control of Ventilation – Ventilation and the Anaerobic Threshold. Oxygen Debt – Lung Volumes and Capacities – Effect of exercises and training on the respiratory system.

### **UNIT IV – Metabolism and Energy Transfer**

Metabolism – ATP – PC or Phosphagen System – Anaerobic Metabolism – Aerobic Metabolism – Aerobic and Anaerobic Systems during Rest and Exercise. Short Duration High Intensity Exercises – High Intensity Exercise Lasting Several Minutes – Long Duration Exercises.

### **UNIT V – Climatic conditions and sports performance and ergogenic aids**

Variation in Temperature and Humidity – Thermoregulation – Sports performance in hot climate, Cool Climate, high altitude. Influence of: Amphetamine, Anabolic steroids, Androstenedione, Beta Blocker, Choline, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Amphetamines, Caffeine, Ephedrine, Sympathomimetic amines. Stimulants and sports performance.

Note: Laboratory Practicals in Physiology be designed and arranged internally.

#### **REFERENCES:**

- Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.
- Beotra Alka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.
- Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
- David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
- Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
- Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.
- Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.
- Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers.
- Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

Semester I  
Theory Courses

**MPCC-103 YOGIC SCIENCES**

### **Unit I – Introduction**

Meaning and Definition of Yoga. Astanga Yoga: Yama, Niyama, Aasna, Pranayama, Prathyahara, Dharana, Dhyana, Samadhi, Concept of Yogic Practices; Principles of Breathing – Awareness – Relaxation, Sequence – Counter pose – Time – Place – Clothes – Bathing – Emptying the bowels – Stomach – Diet – No Straining – Age – Contra- Indication – Inverted asana – Sunbathing.

### **Unit II – Aasanas and Pranayam**

Loosening exercise: Techniques and benefits. Asanas: Types- Techniques and Benefits, Surya Namaskar: Methods and benefits. Pranayama: Types- Methods and benefits. Nadis: Meaning, methods and benefits, Chakras: Major Chakaras- Benefits of clearing and balancing Chakras.

### **Unit III – Kriyas**

Shat Kriyas- Meaning, Techniques and Benefits of Neti – Dharti – Kapalapathi- Trataka – Nauli – Basti, Bandhas: Meaning, Techniques and Benefits of Jalendra Bandha, Jihva Bandha, Uddiyana Bandha, Mula Bandha.

### **Unit IV – Mudras**

Meaning, Techniques and Benefits of Hasta Mudras, Asamyukta hastam, Samyukta hastam , Mana Mudra, Kaya Mudra, Banda Mudra, Adhara Mudra. Meditation: Meaning, Techniques and Benefits of Meditation – Passive and active, Saguna Meditation and Nirguna Meditation.

### **Unit V – Yoga and Sports**

Yoga Supplemental Exercise – Yoga Compensation Exercise – Yoga Regeneration Exercise- Power Yoga. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Depression Concentration, Self Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory System.

Note: Laboratory Practicals be designed and arranged internally.

### **REFERENCE:**

- George Feuerstein, (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.  
Gore, (1990), Anatomy and Physiology of Yogic Practices. Lonavata: Kanchan Prakashan. Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.
- Iyengar, B.K.S. (2000), Light on Yoga. New Delhi: Harper Collins Publishers.
- Karbelkar N.V.(1993) Patanjali Yogasutra Bhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal
- Kenghe. C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: Bharata Manishai.
- Kuvalyananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.
- Moorthy A.M. & Alagesan. S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.
- Swami Kuvalayanda, (1998), Asanas. Lonavata: Kaivalyadhama.
- Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga.
- Swami Satyananda Sarasvathi. (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust.
- Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication.



Thirumalai Kumar. S and Indira. S (2011) Yoga in Your Life, Chennai: The Parkar Publication.  
Tiwari O.P. (1998), Asanas-Why and How. Lonavala: Kaivalyadham.

Semester I  
Theory Courses

MPEC-101

**TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION  
(Elective)**

**UNIT I – Introduction**

Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. Criteria for Test Selection – Scientific Authenticity. Meaning, definition and establishing Validity, Reliability, Objectivity. Norms – Administrative Considerations.

**UNIT II – Motor Fitness Tests**

Meaning and Definition of Motor Fitness. Test for Motor Fitness; Indiana Motor Fitness Test (for elementary and high school boys, girls and College Men) Oregon Motor Fitness Test (Separately for boys and girls) - JCR test. Motor Ability; Barrow Motor Ability Test – Newton Motor Ability Test – Muscular Fitness – Kraus Weber Minimum Muscular Fitness Test.

**UNIT III – Physical Fitness Tests**

Physical Fitness Test: AAHPERD Health Related Fitness Battery (revised in 1984), ACSM Health Related Physical Fitness Test, Roger's physical fitness Index. Cardio vascular test; Harvard step test, 12 minutes run / walk test, Multi-stage fitness test (Beep test)

**UNIT IV – Anthropometric and Aerobic-Anaerobic Tests**

Physiological Testing: Aerobic Capacity: The Bruce Treadmill Test Protocol, 1.5 Mile Run test for college age males and females. Anaerobic Capacity: Margaria-Kalamen test, Wingate Anaerobic Test, Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring Skin folds: Triceps, Sub scapular, Suprailiac.

**UNIT V – Skill Tests**

Specific Spots Skill Test: Badminton: Miller Wall Volley Test. Basketball: Johnson Basketball Test, Harrison Basketball Ability Test. Cricket: Sutcliff Cricket test. Hockey: Friendel Field Hockey Test, Harban's Hockey Test, Volleyball, Russel Lange Volleyball Test, Brady Volleyball Test. Football: Mor-Christian General Soccer Ability Skill Test Battery, Johnson Soccer Test, Mc-Donald Volley Soccer Test. Tennis: Dyer Tennis Test.

*Note: Practicals of indoor and out-door tests be designed and arranged internally.*

## REFERENCES :

- Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2<sup>nd</sup> edition) Lanham: Scarecrow Press
- Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company
- Getchell B (1979) Physical Fitness A Way of Life, 2<sup>nd</sup> Edition New York, John Wiley and Sons, Inc
- Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publishing Co. Inc
- Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications
- Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication
- Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3<sup>rd</sup> Edition, Dallas TX: The Cooper Institute for Aerobics Research
- Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3<sup>rd</sup> Edition. Champaign IL: Human Kinetics
- Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publication

Semester I  
Theory Courses

**MPEC-102 SPORTS TECHNOLOGY (Elective)**

**Unit I – Sports Technology**

Meaning, definition, purpose, advantages and applications, General Principles and purpose of instrumentation in sports, Workflow of instrumentation and business aspects, Technological impacts on sports.

**Unit II – Science of Sports Materials**

Adhesives- Nano glue, nano moulding technology, Nano turf. Foot wear production, Factors and application in sports, constraints. Foams- Polyurethane, Polystyrene, Styrofoam, closed-cell and open-cell foams, Neoprene, Foam. Smart Materials – Shape Memory Alloy (SMA), Thermo chromic film, High-density modelling foam.

**Unit III – Surfaces of Playfields**

Modern surfaces for playfields, construction and installation of sports surfaces. Types of materials – synthetic, wood, polyurethane. Artificial turf. Modern technology in the construction of indoor and outdoor facilities. Technology in manufacture of modern play equipments. Use of computer and software in Match Analysis and Coaching.

**Unit IV – Modern equipment**

Playing Equipments: Balls: Types, Materials and Advantages, Bat/Stick/ Racquets: Types, Materials and Advantages. Clothing and shoes: Types, Materials and Advantages. Measuring equipments: Throwing and Jumping Events. Protective equipments: Types, Materials and Advantages. Sports equipment with nano technology, Advantages.

**Unit V – Training Gadgets**

Basketball: Ball Feeder, Mechanism and Advantages. Cricket: Bowling Machine, Mechanism and Advantages, Tennis: Serving Machine, Mechanism and Advantages, Volleyball: Serving Machine Mechanism and Advantages. Lighting Facilities: Method of erecting Flood Light and measuring luminous. Video Coverage: Types, Size, Capacity, Place and Position of Camera in Live coverage of sporting events.

Note: Students should be encouraged to design and manufacture improvised sports testing equipment in the laboratory/workshop and visit sports technology factory/ sports goods manufacturers.

**REFERENCE:**

- Charles J.A. Crane, F.A.A. and Furness, J.A.G. (1987) “Selection of Engineering Materials” UK: Butterworth Heiremann.  
Finn, R.A. and Trojan P.K. (1999) “Engineering Materials and their Applications” UK: Jaico Publisher.

John Mongilo, (2001), "Nano Technology 101 "New York: Green wood publishing group. Walia, J.S. Principles and Methods of Education (Paul Publishers, Jullandhar), 1999.

Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jullandhar, Sterling Publishers Pvt. Ltd.), 1982

Kozman, Cassidy and Jackson. Methods in Physical Education (W.B. Saunders Company, Philadelphia and London), 1952.

Semester II  
Theory Courses

**MPCC-201 APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS**

**UNIT I – Introduction**

Meaning and Definition of Statistics. Function, need and importance of Statistics. Types of Statistics. Meaning of the terms, Population, Sample, Data, types of data. Variables; Discrete, Continuous. Parametric and non-parametric statistics.

**UNIT II – Data Classification, Tabulation and Measures of Central Tendency**

Meaning, uses and construction of frequency table. Meaning, Purpose, Calculation and advantages of Measures of central tendency – Mean, median and mode.

**UNIT III – Measures of Dispersions and Scales**

Meaning, Purpose, Calculation and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation, Probable Error. Meaning, Purpose, Calculation and advantages of scoring scales; Sigma scale, Z Scale, Hull scale

**UNIT IV – Probability Distributions and Graphs**

Normal Curve. Meaning of probability- Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis. Graphical Representation in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve.

**UNIT V – Inferential and Comparative Statistics**

Tests of significance; Independent "t" test, Dependent "t" test – chi – square test, level of confidence and interpretation of data. Meaning of correlation – co-efficient of correlation – calculation of co- efficient of correlation by the product moment method and rank difference method. Concept of ANOVA and ANCOVA.

Note : It is recommended that the theory topics be accompanied with practical, based on computer software of statistics.

REFERENCE



Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc  
Clark D.H. (1999) Research Problem in Physical Education 2<sup>nd</sup> edition, Eaglewood Cliffs, Prentice Hall, Inc.  
Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics;  
Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc  
Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, Senthilkumar Publications.

Semester II  
Theory Courses

**MPCC-202 SPORTS BIOMECHANICS AND KINSESIOLGY**

**UNIT I – Introduction**

Meaning, nature, role and scope of Applied kinesiology and Sports Biomechanics. Meaning of Axis and Planes, Dynamics, Kinematics, Kinetics, Statics Centre of gravity -Line of gravity plane of the body and axis of motion, Vectors and Scalars.

**UNIT II – Muscle Action**

Origin, Insertion and action of muscles: Pectoralis major and minor, Deltoid, Biceps, Triceps (Anterior and Posterior), Trapezius, serratus, Sartorius, Rectus femoris, Abdominis, Quadriceps, Hamstring, Gastrocnemius.

**UNIT III – Motion and Force**

Meaning and definition of Motion. Types of Motion: Linear motion, angular motion, circular motion, uniform motion. Principals related to the law of Inertia, Law of acceleration, and law of counter force. Meaning and definition of force- Sources of force - Force components .Force applied at an angle - pressure -friction -Buoyancy, Spin - Centripetal force - Centrifugal force.

**UNIT IV – Projectile and Lever**

Freely falling bodies - Projectiles -Equation of projectiles stability Factors influencing equilibrium - Guiding principles for stability -static and dynamic stability. Meaning of work, power, energy, kinetic energy and potential energy. Leverage -classes of lever - practical application. Water resistance - Air resistance -Aerodynamics.

Note: Laboratory practicals should be designed and arranged for students internally.

**UNIT V – Movement Analysis**

Analysis of Movement: Types of analysis: Kinesiological, Biomechanical. Cinematographic. Methods of analysis – Qualitative, Quantitative, Predictive

**REFERENCE:**

Deshpande S.H.(2002). Manav Kriya Vigyan – Kinesiology (Hindi Edition)

Amravati :Hanuman Vyayam Prasarak Mandal.  
Hoffman S.J. Introduction to Kinesiology (Human Kinesiology publication In.2005. Steven Roy, & Richard Irvin. (1983). Sports Medicine. New Jersey: Prentice hall. Thomas. (2001). Manual of structural Kinesiology, New York: Me Graw Hill. Uppal A.K. Lawrence Mamta MP Kinesiology(Friends Publication India 2004)  
Uppal, A (2004), Kinesiology in Physical Education and Exercise Science, Delhi Friends publications.  
Williams M (1982) Biomechanics of Human Motion, Philadelphia; Saunders Co.

Semester II  
Theory Courses

**MPCC-203 ATHLETIC CARE AND REHABILITATION**

**Unit I – Corrective Physical Education**

Definition and objectives of corrective physical Education. Posture and body mechanics, Standards of Standing Posture. Value of good posture, Drawbacks and causes of bad posture. Posture test – Examination of the spine.

**Unit II – Posture**

Normal curve of the spine and its utility, Deviations in posture: Kyphosis, lordosis, flat back, Scoliosis, round shoulders, Knock Knee, Bow leg, Flat foot. Causes for deviations and treatment including exercises.

**Unit III – Rehabilitation Exercises**

Passive, Active, Assisted, Resisted exercise for Rehabilitation, Stretching, PNF techniques and principles.

**Unit IV – Massage**

Brief history of massage – Massage as an aid for relaxation – Points to be considered in giving massage – Physiological , Chemical, Psychological effects of massage – Indication / Contra indication of Massage – Classification of the manipulation used massage and their specific uses in the human body – Stroking manipulation: Effleurage – Pressure manipulation: Petrissage Kneading (Finger, Kneading, Circular) ironing Skin Rolling – Percussion manipulation: Tapotement, Hacking, Clapping, Beating, Pounding, Slapping, Cupping, Poking, Shaking Manipulation, Deep massage.

**Unit V – Sports Injuries Care, Treatment and Support**

Principles pertaining to the prevention of Sports injuries – care and treatment of exposed and unexposed injuries in sports – Principles of apply cold and heat, infrared rays – Ultrasonic, Therapy – Short wave diathermy therapy. Principles and techniques of Strapping and Bandages.

Note: Each student shall submit Physiotherapy record of attending the Clinic and observing the cases of athletic injuries and their treatment procedure.(To be assessed internally)

#### REFERENCES:

Doherty. J. Meno. Wetb, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc. Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.

Mc Ooyand Young (1954) Tests and Measurement, New York: Appleton Century. Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd. Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co. Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

### **Semester II Theory Courses MPEC-201 SPORTS JOURNALISM AND MASS MEDIA (Elective)**

#### **UNIT I Introduction**

Meaning and Definition of Journalism, Ethics of Journalism – Canons of journalism- Sports Ethics and Sportsmanship – Reporting Sports Events. National and International Sports News Agencies.

#### **UNIT II Sports Bulletin**

Concept of Sports Bulletin: Journalism and sports education – Structure of sports bulletin – Compiling a bulletin – Types of bulletin – Role of Journalism in the Field of Physical Education: Sports as an integral part of Physical Education – Sports organization and sports journalism – General news reporting and sports reporting.

#### **UNIT III Mass Media**

Mass Media in Journalism: Radio and T.V. Commentary – Running commentary on the radio – Sports expert's comments. Role of Advertisement in Journalism. Sports Photography: Equipment- Editing – Publishing.

#### **UNIT IV Report Writing on Sports**

Brief review of Olympic Games, Asian Games, Common Wealth Games World Cup, National Games and Indian Traditional Games. Preparing report of an Annual Sports Meet for Publication in Newspaper. Organization of Press Meet.

#### **UNIT –V Journalism**

Sports organization and Sports Journalism – General news reporting and sports reporting. Methods of editing a Sports report. Evaluation of Reported News. Interview with and elite Player and Coach.

Practical assignments to observe the matches and prepare report and news of the same; visit to News Paper office and TV Centre to know various departments and their working. Collection of Album of newspaper cuttings of sports news.

#### REFERENCE:

- Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi :Surjeet Publications
- Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
- Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
- Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
- Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
- Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication,.
- Padmanabhan. A & Perumal A (2009), Science and Art of Living, Madurai: Pakavathi Publication
- Shiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited.
- Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period. Sterling publication Pvt. Ltd.

## **Semester II Theory Courses**

### **MPEC-202 SPORTS MANAGEMENT AND CURRICULUM DESIGN IN PHYSICAL EDUCATION (Elective)**

#### **UNIT I – Introduction to Sports Management**

Definition, Importance. Basic Principles and Procedures of Sports Management. Functions of Sports Management. Personal Management: Objectives of Personal Management, Personal Policies, Role of Personal Manager in an organization, Personnel recruitment and selection.

#### **UNIT II – Program Management**

Importance of Programme development and the role of management, Factors influencing programme development. Steps in programme development, Competitive Sports Programs, Benefits, Management Guidelines for School, Colleges Sports Programs, Management Problems in instruction programme, Community Based Physical Education and Sports program.

#### **UNIT III – Equipments and Public Relation**

Purchase and Care of Supplies of Equipment, Guidelines for selection of Equipments and Supplies, Purchase of equipments and supplies, Equipment Room, Equipment and supply

Manager. Guidelines for checking, storing, issuing, care and maintenance of supplies and equipments. Public Relations in Sports: Planning the Public Relation Program – Principles of Public Relation – Public Relations in School and Communities – Public Relation and the Media.

#### **UNIT IV – Curriculum**

Meaning and Definition of Curriculum. Principles of Curriculum Construction: Students centred, Activity centred, Community centred, Forward looking principle, Principles of integration, Theories of curriculum development, Conservative (Preservation of Culture), Relevance, flexibility, quality, contextually and plurality. Approaches to Curriculum; Subject centred, Learner centred and Community centred, Curriculum Framework.

#### **UNIT V – Curriculum Sources**

Factors that affecting curriculum: Sources of Curriculum materials – text books – Journals – Dictionaries, Encyclopaedias, Magazines, Internet. Integration of Physical Education with other Sports Sciences – Curriculum research, Objectives of Curriculum research – Importance of Curriculum research. Evaluation of Curriculum, Methods of evaluation.

#### **Reference:**

- Aggarwal, J.C (1990). Curriculum Reform in India – World overviews, Doaba World Education Series – 3 Delhi: Doaba House, Book seller and Publisher.
- Arora, G.L. (1984): Reflections on Curriculum, New Delhi: NCERT.
- Bonnie, L. (1991). The Management of Sports. St. Louis: Mosby Publishing Company, Park House.
- Bucher A. Charles, (1993) Management of Physical Education and Sports (10th ed.,) St. Louis: Mobsy Publishing Company.
- Carl, E, Willgoose. (1982. Curriculum in Physical Education, London: Prentice Hall.
- Chakraborty & Samiran. (1998). Sports Management. New Delhi: Sports Publication.
- Charles, A, Bucher & March, L, Krotee. (1993). Management of Physical Education and Sports. St. Louis: Mosby Publishing Company.
- Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. HumanKinetics.
- John, E, Nixon & Ann, E, Jewett. (1964). Physical Education Curriculum, New York: The Ronald Press Company.
- McKernan, James (2007) Curriculum and Imagination: Process, Theory, Pedagogy and Action Research,. U.K. Routledge
- NCERT (2000). National Curriculum Framework for School Education, New Delhi:
- NCERT (2000). National Curriculum Framework for School Education, New Delhi:
- NCERT (2005). National Curriculum Framework, New Delhi: NCERT.
- NCERT (2005). National Curriculum Framework-2005, New Delhi: NCERT.
- Williams, J.F. (2003). Principles of Physical Education. Meerut: College Book House.
- Yadvinder Singh. Sports Management, New Delhi: Lakshay Publication.

**Semester III  
Theory Courses**

**MPCC-301 SCIENTIFIC PRINCIPLES OF SPORTS TRAINING**

**UNIT I – Introduction**

Sports training: Definition – Aim, Characteristics, Principles of Sports Training, Over Load: Definition, Causes of Over Load, Symptoms of Overload, Remedial Measures – SuperCompensation – Altitude Training – Cross Training

**UNIT II – Components of Physical Fitness**

Strength: Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training, Speed: Methods to Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints, Endurance, Methods to Improve Endurance: Continuous Method, Interval Method, Repetition Method, Cross Country, Fartlek Training

**UNIT III – Flexibility**

Flexibility: Methods to Improve the Flexibility- Stretch and Hold Method, Ballistic Method, Special Type Training: Plyometric Training. Training for Coordinative abilities: Methods to improve Coordinative abilities: Sensory Method, Variation in Movement Execution Method, Variation in External Condition Method, Combination of Movement Method, Types of Stretching Exercises.

**UNIT IV – Training Plan**

Training Plan: Macro Cycle, Meso-Cycle. Short Term Plan and Long Term Plans - Periodisation: Meaning, Single, Double and Multiple Periodisation, Preparatory Period, Competition Period and Transition Period.

**UNIT V – Doping**

Definition of Doping – Side effects of drugs – Dietary supplements – IOC list of doping classes and methods. Blood Doping – The use of erythropoietin in blood boosting – Blood doping control – The testing programmes – Problems in drug detection – Blood testing in doping control – Problems with the supply of medicines Subject to IOC regulations : over-the-counter drugs (OTC) – prescription only medicines (POMs) – Controlled drugs (CDs). Reporting test results – Education

**REFERENCES :**

- Beotra Alka, (2000), Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India.
- Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, PrenticeHall Inc.
- Cart, E. Klafs & Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosby Company
- Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book
- David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University

Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics  
Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications  
Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia  
Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2nd Edition, London: Jones and  
Bartlett Publications  
Yograj Thani (2003), Sports Training, Delhi : Sports Publications

### **Semester III Theory Courses**

#### **MPCC-302 SPORTS MEDICINE**

##### **UNIT I – Introduction**

Meaning, definition and importance of Sports Medicine, Definition and Principles of therapeutic exercises. Co-ordination exercise, Balance training exercise, Strengthening exercise, Mobilization exercise, Gait training, Gym ball exercise Injuries: acute, sub-acute, chronic. Advantages and Disadvantages of PRICE, PRINCE therapy, Aquatic therapy.

##### **UNIT II – Basic Rehabilitation**

Basic Rehabilitation: Strapping/Tapping: Definition, Principles Precautions  
Contraindications. Proprioceptive neuromuscular facilitation: Definition hold, relax, repeated contractions. Show reversal technique exercises. Isotonic, Isokinetic, isometric stretching. Definition. Types of stretching, Advantages, dangers of stretching, Manual muscle grading.

##### **UNIT III – Spine Injuries and Exercise**

Head, Neck and Spine injuries: Causes, Presentational of Spinal anomalies, Flexion, Compression, Hyperextension, Rotation injuries. Spinal range of motion. Free hand exercises, stretching and strengthening exercise for head neck, spine. Supporting and aiding techniques and equipment for Head, Neck and Spine injuries.

##### **UNIT IV – Upper Extremity Injuries and Exercise**

Upper Limb and Thorax Injuries: Shoulder: Sprain, Strain, Dislocation, and Strapping.  
Elbow: Sprain, Strain, Strapping. Wrist and Fingers: Sprain Strain, Strapping. Thorax, Rib fracture. Breathing exercises, Relaxation techniques, Free hand exercise, Stretching and strengthening exercise for shoulder, Elbow, Wrist and Hand. Supporting and aiding techniques and equipment for Upper Limb and Thorax Injuries.

##### **UNIT V – Lower Extremity Injuries and Exercise**

Lower Limb and Abdomen Injuries: Hip: Adductor strain, Dislocation, Strapping.  
Knee: Sprain, Strain, Strapping. Ankle: Sprain, Strain, Strapping. Abdomen: Abdominal wall, Contusion, Abdominal muscle strain. Free exercises – Stretching and strengthening exercise for Hip, knee, ankle and Foot. Supporting and aiding techniques and equipment for Lower limb and Abdomen injuries.

*Practicals: Lab. Practical and visit to Physiotherapy Centre to observe treatment procedure of sports injuries; data collection of sports injury incidences, Visit to TV Centre etc. should be planned internally.,*

**REFERENCES:**

- Christopher M. Norris. (1993). Sports Injuries Diagnosis and Management for Physiotherapists. East Kilbride: Thomson Litho Ltd.
- James, A. Gould & George J. Davies. (1985). Physical Physical Therapy. Toronto: C.V. Mosby Company.
- Morris B. Million (1984) Sports Injuries and Athletic Problem. New Delhi: Surjeet Publication.
- Pande. (1998). Sports Medicine. New delhi: Khel Shitya Kendra
- The Encyclopedia of Sports Medicine. (1998). The Olympic Book of Sports Medicine, Australia: Tittel Blackwell Scientific publications. Practical: Anthropometric Measurements.

**Semester III  
Theory Courses**

**MPCC-303 HEALTH EDUCATION AND SPORTS NUTRITION**

**Unit - I Health Education**

Concept, Dimensions, Spectrum and Determinants of Health  
Definition of Health, Health Education, Health Instruction, Health Supervision  
Aim, objective and Principles of Health Education  
Health Service and guidance instruction in personal hygiene

**Unit - II Health Problems in India**

Communicable and Non Communicable Diseases Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive, Population, Personal and Environmental Hygiene for schools Objective of school health service, Role of health education in schools Health Services - Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

**Unit- III – Hygiene and Health**

Meaning of Hygiene, Type of Hygiene, dental Hygiene, Effect of Alcohol on Health, Effect of Tobacco on Health, Life Style Management, Management of Hypertension, Management of Obesity, Management of Stress

**Unit – IV- Introduction to Sports Nutrition**

Meaning and Definition of Sports Nutrition, Role of nutrition in sports, Basic Nutrition guidelines, Nutrients: Ingestion to energy metabolism (Carbohydrate, Protein and Fat), Role of carbohydrates, Fat and protein during exercise.

**Unit – V Nutrition and Weight Management**

Concept of BMI (Body mass index), Obesity and its hazard, Dieting versus exercise for



weight control Maintaining a Healthy Lifestyle, Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss.

**References:**

Bucher, Charles A. "Administration of Health and Physical Education Programme".

Delbert, Oberteuffer, et. al." The School Health Education".

Ghosh, B.N. "Treaties of Hygiene and Public Health".

Hanlon, John J. "Principles of Public Health Administration" 2003.

Turner, C.E. "The School Health and Health Education".

Moss and et. At. "Health Education" (National Education Association of U.T.A.)

Nemir A. "The School Health Education" (Harber and Brothers, New York).

Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc.

Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.

Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

**Semester III  
Theory Courses**

**MPEC-301 SPORTS ENGINEERING (Elective)**

**Unit - I Introduction to sports engineering and Technology**

Meaning of sports engineering, human motion detection and recording, human performance, assessment, equipment and facility designing and sports related instrumentation and measurement.

**Unit - II Mechanics of engineering materials**

Concept of internal force, axial force, shear force, bending movement, torsion, energy method to find displacement of structure, strain energy. Biomechanics of daily and common activities –Gait, Posture, Body levers, ergonomics, Mechanical principles in movements such as lifting, walking, running, throwing, jumping, pulling, pushing etc.

**Unit- III Sports Dynamics**

Introduction to Dynamics, Kinematics to particles – rectilinear and plane curvilinear motion coordinate system. Kinetics of particles – Newton's laws of Motion, Work, Energy, Impulse and momentum.

**Unit- IV Building and Maintenance:**

Sports Infrastructure- Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door Stadium, Play Park, Academic Block, Administrative Block, Research Block, Library, Sports Hostels, etc. Requirements: Air ventilation, Day light, Lighting arrangement, Galleries, Store rooms, Office, Toilet Blocks (M/F), Drinking Water, Sewage and Waste Water disposal system, Changing Rooms ( M/F), Sound System (echo-free), Internal arrangement according to need and nature of activity to be performed, Corridors and

Gates for free movement of people, Emergency provisions of lighting, fire and exits, Eco-friendly outer surrounding. Maintenance staff, financial consideration.

**Building process**:- design phase (including brief documentation), construction phase functional (occupational) life, Re-evaluation, refurbish, demolish.

**Maintenance policy**, preventive maintenance, corrective maintenance, record and register for maintenance.

#### **Unit – V Facility life cycle costing**

Basics of theoretical analysis of cost, total life cost concepts, maintenance costs, energy cost, capital cost and taxation

#### **Reference**

Franz K. F. et. al., Editor, **Routledge Handbook of Sports Technology and Engineering** (Routledge, 2013)

Steve Hake, Editor, **The Engineering of Sport** (CRC Press, 1996)

Franz K. F. et. al., Editor **The Impact of Technology on Sports II** (CRC Press, 2007)

Helge N., **Sports Aerodynamics** (Springer Science & Business Media, 2009)

Youlin Hong, Editor **Routledge Handbook of Ergonomics in Sport and Exercise** (Routledge, 2013)

Jenkins M., Editor **Materials in Sports Equipment, Volume I** (Elsevier, 2003)

Colin White, **Projectile Dynamics in Sport: Principles and Applications**

Eric C. et al., Editor **Sports Facility Operations Management** (Routledge, 2010)

### **Semester III**

#### **Theory Courses**

#### **MPEC-302 PHYSICAL FITNESS AND WELLNESS (Elective)**

##### **Unit I – Introduction**

Meaning and Definition" of Physical Fitness, Physical Fitness Concepts and Techniques, Principles of physical fitness, Physiological principles involved in human movement. Components of Physical Fitness. Leisure time physical activity and identify opportunities in the community to participate in this activity. Current trends in fitness and conditioning, components of total health fitness and the relationship between physical activity and lifelong wellness.

##### **Unit II – Nutrition**

Nutrients; Nutrition labelling information, Food Choices, Food Guide Pyramid, Influences on food choices-social, economic, cultural, food sources, Comparison of food values. Weight Management-proper practices to maintain, lose and gain. Eating Disorders, Proper hydration, the effects of performance enhancement drugs

##### **Unit III – Aerobic Exercise**

Cardio respiratory Endurance Training; proper movement forms, i.e., correct stride, arm movements, body alignment; proper warm-up, cool down, and stretching, monitoring heart rates during activity. Assessment of cardio respiratory fitness and set goals to maintain or improve fitness levels. Cardio respiratory activities including i.e. power

walking, pacer test, interval training, incline running, distance running, aerobics and circuits.

#### **Unit IV – Anaerobic Exercise**

Resistance Training for Muscular Strength and Endurance; principles of resistance training, Safety techniques (spotting, proper body alignment, lifting techniques, spatial, awareness. and proper breathing techniques). Weight training principles and concepts; basic resistance exercises (including free hand exercise, free weight exercise, weight machines, exercise bands and tubing. medicine balls, fit balls) Advanced techniques of weight training

#### **Unit V – Flexibility Exercise**

Flexibility Training, Relaxation Techniques and Core Training. Safety techniques (stretching protocol; breathing and relaxation techniques) types of flexibility exercises (i.e. dynamic, static), Develop basic competency in relaxation and breathing techniques. Pilates, Yoga.

#### **Reference:**

David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.

Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. Bedford row, London 1998

Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992. Warner W.K. Oeger & Sharon A. Hoeger, Fitness and Wellness, Morton Publishing Company, 1990.

Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.

Emily R. Foster, Karyn Hartiger & Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.

Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999

Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York 2001

### **Semester IV Theory Courses**

#### **MPCC-401 INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN PHYSICAL EDUCATION**

##### **Unit I – Communication & Classroom Interaction**

Concept, Elements, Process & Types of Communication Communication Barriers & Facilitators of communication Communicative skills of English - Listening, Speaking, Reading & Writing Concept & Importance of ICT Need of ICT in Education Scope of ICT: Teaching Learning Process, Publication Evaluation, Research and Administration Challenges in Integrating ICT in Physical Education

##### **Unit II – Fundamentals of Computers**

Characteristics, Types & Applications of Computers Hardware of Computer: Input,

Output & Storage Devices Software of Computer: Concept & Types Computer Memory: Concept & Types Viruses & its Management Concept, Types & Functions of Computer Networks Internet and its Applications Web Browsers & Search Engines Legal & Ethical Issues

### **Unit III – MS Office Applications**

MS Word: Main Features & its Uses in Physical Education

MS Excel: Main Features & its Applications in Physical Education

MS Access: Creating a Database, Creating a Table, Queries, Forms & Reports on Tables and its Uses in Physical Education

MS Power Point: Preparation of Slides with Multimedia Effects

MS Publisher: Newsletter & Brochure

### **Unit IV – ICT Integration in Teaching Learning Process**

Approaches to Integrating ICT in Teaching Learning Process

Project Based Learning (PBL)

Co-Operative Learning

Collaborative Learning

ICT and Constructivism: A Pedagogical Dimension

### **Unit V – E-Learning & Web Based Learning**

E-Learning

Web Based Learning

Visual Classroom

### **REFERENCES:**

B. Ram, New Age International Publication, Computer Fundamental, Third Edition-2006

Brain under IDG Book. India (p) Ltd Teach Yourself Office 2000, Fourth Edition-2001

Douglas E. Comer, The Internet Book, Purdue University, West Lafayette in 2005

Heidi Steel Low price Edition, Microsoft Office Word 2003- 2004

ITL Education Solution Ltd. Introduction to information Technology, Research and DevelopmentWing-2006

Pradeep K. Sinha & Priti; Sinha, Foundations computing BPB Publications -2006.

Rebecca Bridges Altman Peach pit Press, Power point for window, 1999

Sanjay Saxena, Vikas Publication House, Pvt. Ltd. Microsoft Office for ever one, Second Edition-2006

## **Semester IV Theory Courses**

### **MPCC-402 SPORTS PSYCHOLOGY**

#### **UNIT I - Introduction**

Meaning, Definition, History, Need and Importance of Sports Psychology. Present Status of Sports Psychology in India. Motor Learning: Basic Considerations in Motor Learning – Motor Perception – Factors Affecting Perception – Perceptual Mechanism. Personality:

Meaning, Definition, Structure – Measuring Personality Traits. Effects of Personality on Sports Performance.

## **UNIT II - Motivation**

Meaning and Definition, Types of Motivation: Intrinsic, Extrinsic. Achievement Motivation: Meaning, Measuring of Achievement Motivation. Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance. Stress: Meaning and Definition, Causes. Stress and Sports Performance. Aggression: Meaning and Definition, Method of Measurement. Aggression and Sports Performance. Self-Concept: Meaning and Definition, Method of Measurement.

## **UNIT III – Goal Setting**

Meaning and Definition, Process of Goal Setting in Physical Education and Sports. Relaxation: Meaning and Definition, types and methods of psychological relaxation. Psychological Tests: Types of Psychological Test: Instrument based tests: Pass-along test – Tachistoscope – Reaction timer – Finger dexterity board – Depth perception box – Kinesthesiometer board. Questionnaire: Sports Achievement Motivation, Sports Competition Anxiety.

## **UNIT IV – Sports Sociology**

Meaning and Definition – Sports and Socialization of Individual Sports as Social Institution. National Integration through Sports. Fans and Spectators: Meaning and definition, Advantages and disadvantages on Sports Performance. Leadership: Meaning, Definition, types. Leadership and Sports Performance.

## **UNIT V – Group Cohesion**

Group: Definition and Meaning, Group Size, Groups on Composition, Group Cohesion, Group Interaction, Group Dynamics. Current Problems in Sports and Future Directions – Sports Social Crisis Management – Women in Sports: Sports Women in our Society, Participation pattern among Women, Gender inequalities in Sports.

**Practicals:** *Atleast five experiments related to the topics listed in the Units above should be conducted by the students in laboratory. (Internal assessment.)*

## **REFERENCES:**

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.

Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Test, New Delhi: National Council of Educational Research and Training Publication.

Jain. (2002), Sports Sociology, Heal Sahety Kendre Publishers.

Jay Coakley. (2001) Sports in Society – Issues and Controversies in International Education, Mc-Craw Seventh Ed.

John D Lauther (2000) Psychology of Coaching. Ner Jersey: Prenticce Hall Inc.

John D. Lauther (1998) Sports Psychology. Englewood, Prentice Hall Inc.

Miroslaw Vauks & Bryant Cratty (1999). Psychology and the Superior Athlete. London: The Macmillan Co.

- Richard, J. Crisp. (2000). Essential Social Psychology. Sage Publications.
- Robert N. Singer (2001). Motor Learning and Human Performance. New York: The Macmillan Co.
- Robert N. Singer. (1989) The Psychology Domain Movement Behaviour. Philadelphia: Lea and Febiger.
- Thelma Horn. (2002). Advances in Sports Psychology. Human Kinetic.
- Whiting, K, Karman., Hendry L.B & Jones M.G. (1999) Personality and Performance in Physical Education and Sports. London: Hendry Kimpton Publishers.

**Semester IV  
Theory Courses**

**MPCC-403 DISSERTATION**

1. A candidate shall have dissertation for M.P.Ed. – IV Semester and must submit his/her Synopsis and get it approved by the Head of Department on the recommendation of D.R.C. (Departmental Research Committee).
2. A candidate selecting dissertation must submit his/her dissertation not less than one week before the beginning of the IVth Semester Examination.
3. The candidate has to face the Viva-Voce conducted by DRC.

**Semester IV  
Theory Courses**

**MPEC-401 VALUE AND ENVIRONMENTAL EDUCATION(Elective)**

**UNIT I – Introduction to Value Education.**

Values: Meaning, Definition, Concepts of Values. Value Education: Need, Importance and Objectives. Moral Values: Need and Theories of Values. Classification of Values: Basic Values of Religion, Classification of Values.

**UNIT II – Value Systems**

Meaning and Definition, Personal and Communal Values, Consistency, Internally consistent, internally inconsistent, Judging Value System, Commitment, Commitment to values.

**Unit- III – Environmental Education**

Definition, Scope, Need and Importance of environmental studies., Concept of environmental education, Historical background of environmental education, Celebration of various days in relation with environment, Plastic recycling & prohibition of plastic bag / cover, Role of school in environmental conservation and sustainable development, Pollution free ecosystem.

**Unit - IV Rural Sanitation and Urban Health**

Rural Health Problems, Causes of Rural Health Problems, Points to be kept in Mind for improvement of Rural Sanitation, Urban Health Problems, Process of Urban Health, Services of Urban Area, Suggested Education Activity, Services on Urban Slum Area, Sanitation at Fairs & Festivals, Mass Education.

**Unit - V Natural Resources and related environmental issues:**

Water resources, food resources and Land resources, Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution

Management of environment and Govt. policies, Role of pollution control board.

**REFERENCE:**

Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)

Odum, E.P. Fundamentals of Ecology (U.S.A.: W.B. Saunders Co.) 1971.

Rao, M.N. & Datta, A.K. Waste Water Treatment (Oxford & IBH Publication Co. Pvt. Ltd.)1987

Townsend C. and others, Essentials of Ecology (Black well Science)

Heywood, V.H. and Watson V.M., Global biodiversity Assessment (U.K.: Cambridge University Press), 1995.

Jadhav, H. and Bhosale, V.M. Environmental Protection and Laws (Delhi: Himalaya Pub.House), 1995.

Mc Kinney, M.L. and Schoel, R.M. Environmental Science System and Solution (Web enhanced Ed.) 1996.

Miller T.G. Jr., Environmental Science (Wadsworth Publishing Co.)

**Semester IV  
Theory Courses**

**MPEC-402 EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION  
(Elective)**

**Unit I – Nature and Scope**

Educational technology-concept, Nature and Scope. Forms of educational technology: teaching technology, instructional technology, and behaviour technology; Transactional usage of educational technology: integrated, complementary, supplementary stand-alone(independent); programmed learning stage; media application stage and computer application stage.

**Unit II – Systems Approach to Physical Education and Communication**

Systems Approach to Education and its Components: Goal Setting, Task Analysis, Content Analysis, Context Analysis and Evaluation Strategies; Instructional Strategies and Media for Instruction. Effectiveness of Communication in instructional system; Communication -Modes, Barriers and Process of Communication.

**Unit III- Instructional Design**

Instructional Design: Concept, Views. Process and stages of Development of Instructional Design. Overview of Models of Instructional Design; Instructional Design for Competency Based Teaching: Models for Development of Self Learning Material.

#### **Unit IV – Audio Visual Media in Physical Education**

Audio-visual media - meaning, importance and various forms Audio/Radio: Broadcast and audio recordings - strengths and Limitations, criteria for selection of instructional units, script writing, pre-production, post-production process and practices, Audio Conferencing and Interactive Radio Conference. Video/Educational Television: Telecast and Videorecordings Strengths and limitations, Use of Television and CCTV in instruction and Training, Video Conferencing, SITE experiment, countrywide classroom project and Satellite based instructions. Use of animation films for the development of children's imagination.

#### **Unit V – New Horizons of Educational Technology**

Recent innovations in the area of ET interactive video - Hypertext, video-texts, optical fiber technology - laser disk, computer conferencing. etc. Procedure and organization of Teleconferencing/Interactive video-experiences of institutions, schools and universities. Recent experiments in the third world countries and pointers for, India with reference to Physical education. Recent trends of Research in Educational Technology and its future with reference to education.

#### **REFERENCE:**

- Amita Bhardwaj, New Media of Educational Planning”. Sarup of Sons, New Delhi-2003  
Bhatia and Bhatia. The Principles and Methods of Teaching (New Delhi : Doaba House), 1959.  
Communication and Education, D. N. Dasgupta, Pointer Publishers  
Education and Communication for development, O. P. Dahama, O. P. Bhatnagar, Oxford Page 68 of 71 IBH Publishing company, New Delhi  
Essentials of Educational Technology, Madan Lal, Anmol Publications  
K. Sampath, A. Pannirselvam and S. Santhanam. Introduction to Educational Technology (New Delhi: Sterling Publishers Pvt. Ltd.) : 1981.  
Kochar, S.K. Methods and Techniques of Teaching (New Delhi, Jalandhar, Sterling Publishers Pvt. Ltd.), 1982  
Kozman, Cassidy and Jackson. Methods in Physical Education (W.B. Saunders Company, Philadelphia and London), 1952.

### **Semester I Practicum Course**

#### **MPPC- 101 TRACK AND FIELD I: RUNNING EVENTS / GYMNASTICS/**



## **AQUATICS.**

### **Running**

- **Fundamental skills** –Short and Middle distance.
  - Use of Starting blocks- stance on the blocks.
  - Body position at the start- starting technique, change in body position during running, movements of the arms, stride length and frequency, position of torso while running and at finish.
- **Advanced Skills** Various techniques of sprint start: Bullet start, standing start ,
- **Active game practice**

### **Semester I Practicum Course**

#### **MPPC- 102 FLAG HOISTING, MARCH PAST, CEREMONIES LIKE OPENING, CLOSING, VICTORY,(DURING INTRA MURALS COMPETITIONS) OFDIFFERENT SPORTS AND GAMES/ LEAD UP GAMES/ MINOR GAMES/ RELAY GAMES**

**National Flag:** Meaning, concept and significance of National Flag, Symbolism of Tri-colour and Wheel. Code of hoisting or lowering of Flag, Dimensions of the Flag & tri-colour proportions. Honour of the Flag and its use. Penalty of misusing or dishonouring the Flag..

Opening and Closing Ceremonies: Schedule and formality of Opening Ceremony- Unfurling of Flag, Flame igniting, Oath, March-Past of players/teams, Salutation, Declaration of Opening of the Meet.brief address by the guests, announcement of beginning of competition Victory & Prize distribution Ceremony- Planning of schedule for victory ceremony.

Closing Ceremony: Assembly of sports-persons, March-Past, Salutation, re-assembly, briefaddress of the guests, Declaration of results and distribution of Prizes/ Certificates, Vote of thanks, Ceremonial Flag-lowering, Flame extinguishing, Declaration of Closing of the Meet.

Practical of the organization of Sports / Athletic Meet during Intramural Programme should be arranged as a project by the students under the supervision of the faculty. Organization of Sports Festival, Play Day, Social Party games, etc. should be encouraged.

### **Semester I Practicum Course**

#### **MPPC- 103 YOGA/ AEROBICS/ SELF DEFENCE TECHNIQUES-MARTIAL ARTS, TAEK-WON-DO/ SHOOTING/ ARCHERY**

Yoga, Asanas prescribed by Maharshi 'Patanjali', Shudhi Kriyas, jalneti, sutraneti, dugdhaneti, kunjaj, Nauli, Bhastika, shatkriya, Pranayams, Anulom-vilom, Kapalbhathi,

## **AEROBICS**

Rhythmic Aerobics - dance

Low impact aerobics

High impact aerobics

Aerobics kick boxing

Moves

March single, basics, side to side alternate, turn s/a ,double side to side, step touch, grapevine, knee up, leg curl, kick front, toe touch, kick side, side lunge, over the top, back lunge, straddle, kick front, travel s 11. kick side, corner, heel to reft, shape, 'e' shape, shapew, shape, repeater left mode

Warm up and cool down

Being successful in exercise and adaptation to aerobic workout.

## **SELF DEFENCE TECHNIQUES-MARTIAL ARTS- KALARIPAYATTU,TAEK-WON-DO/ SHOOTING/ ARCHERY**

**Semester I**

**Practicum**

**MPPC-104 ADVENTURE ACTIVITIES/ MASS DEMONSTRATION**

**ACTIVITIESLEZIM, DUMB-BELL, UMBRELLA, TIPRI, WANDS, HOOPS/ MALKHAMBH**

**ADVENTURE ACTIVITIES:** Trekking, Wall climbing, River crossing, Mountaineering, etc

**MASS DEMONSTRATION ACTIVITIES- lezim, dumb-bell, umbrella, tipri, wands, hoops,** free arms drill, folk dances, etc.*(Students are expected to learn and organize mass drill in school situation)*

- o Apparatus/ Light apparatus Grip
- o Attention with apparatus/ Light apparatus
- o Stand – at – ease with apparatus/ light apparatus
- o Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- o Standing Exercise
- o Jumping Exercise
- o Moving Exercise
- o Combination of above all

**MALKHAMB:** Table of Exercises on **Malkhamb** should be prepared internally for teaching

**General out-line of the contents of teaching of theory of Games and Sports**

Introduction of the game/sport and historical development with special reference to India, Orientation of the students to the play area and equipment used in the game/sport, Important tournaments held at National and International levels, Distinguished sports awards and personalities related to the Game/sport. Warming-up- General free hand exercises, specific work out using equipment. Fundamental skills, Lead up activities, General rules and their interpretations, Duties of officials, officiating in class competitions and Intramurals, Marking of the play area.

**Semester II  
Practicum Course**

**MPPC- 201 TRACK AND FIELD II: JUMPING EVENTS  
/ SWIMMING / GYMNASTICS**

*(Course contents in Gymnastics and Swimming should be chalked out internally considering advance level of students and suitable to their age and gender).*

**Semester II  
Practicum Course**

**MPPC-202 GAMES SPECIALIZATION II**

**The Candidate has choice to select any one of the following games as the Specialization – II (Second best) in 2nd Semester.**

(Kabaddi, Kho-kho, Badminton/ Table Tennis/ Tennis/ Squash/ Baseball/ Volleyball/ Basketball/ Cricket/ football/ Handball/ Hockey/ Netball/ Softball)

**Semester II  
Practicum Course**

**MPPC-203 TEACHING LESSONS OF INDIGENIOUS ACTIVITIES AND  
SPORTS**

The students of M.P.Ed – II Semester need to develop proficiency in taking teaching classes in indigenous activities and sport under school situation. In view of this, the students shall be provided with teaching experience. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the second semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

**Semester II Practicum Course**

**MPPC-204 CLASS ROOM TEACHING**

## **(LESSONS ON THEORY OF DIFFERENT SPORTS & GAMES)**

The students of M.P.Ed – II Semester need to develop proficiency in taking teaching lessons as per selected games and sport or game specialization. In view of this, the students shall be provided with selected or specialized game teaching experience. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the second semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these teaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

### **Semester III Practicum Course**

#### **MPPC- 301 TRACK AND FIELD III: THROWING EVENTS/ GYMNASTICS/SWIMMING**

*(Course contents in Gymnastics and Swimming should be chalked out internally considering advance level of students and suitable to their age and gender).*

### **Semester III Practicum Course**

#### **MPPC-302 GAMES SPECIALIZATION- III BOXING/ FENCING/ JUDO/ KARATE/ WRESTLING/ WUSHU**

*(Course contents in the game of specialization should be chalked out internally considering advance level of students and suitable to their age and gender).*

### **Semester III Practicum Course**

#### **MPPC-303 COACHING LESSONS OF TRACK AND FIELD/ GYMNASTICS/ AQUATICS**

The students of M.P.Ed – III Semester need to develop proficiency in taking coaching lesson on above mentioned selected discipline. In view of this, the students shall be provided with advance training and coaching in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class, they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the

third semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these coaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

### **Semester III Practicum Course**

#### **MPPC-304 COACHING LESSONS OF GAME SPECIALIZATIONS**

The students of M.P.Ed – III Semester need to be develop proficiency in taking coaching lesson in selected game discipline. In view of this, the students shall be provided with advance training and coaching in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the third semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these coaching lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

### **Semester IV Practicum Course**

#### **MPPC- 401 TRACK AND FIELD/ SWIMMING/ GYMNASTICS**

*(Course contents in Gymnastics and Swimming should be chalked out internally considering advance level of students and suitable to their age and gender. Practical Skill Test any one out of these after completion of syllabus)*

### **Semester IV Practicum Course**

#### **MPPC-402 GAMES SPECIALIZATION**

*(Course contents in game or sport of specialization should be chalked out internally considering advance level of students and suitable to their age and gender .Practical skill test- any two)*

### **Semester IV Practicum Course**

## MPPC-403 OFFICIATING LESSONS OF TRACK AND FIELD/ GYMNASTICS/ AQUATICS

The students of M.P.Ed – IV Semester need to develop proficiency in taking officiating lesson on selected above discipline. In view of this, the students shall be provided with advance mechanism of officiating in selected discipline. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level.

Each student teacher is expected to take at least five lessons during the course of the fourth semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

### Semester IV Practicum Course

## MPPC-404 OFFICIATING LESSONS OF GAME SPECIALIZATIONS

The students of M.P.Ed – IV Semester need to be develop proficiency in taking officiating lesson on selected game specialization. In view of this, the students shall be provided with advance mechanism of officiating in selected game specialization. The duration of the lesson to be conducted by these students shall be in the range of 30 to 40 minutes depending on the class time they are going to handle at school and college level. Each student teacher is expected to take at least five lessons during the course of the fourth semester. The lessons will be supervised by the faculty members and experts who would discuss the merits and demerits of the concerned lesson and guide them for the future. In these officiating lessons, the duration should slowly increase and all the parts of the lesson covered progressively.

**Note:** *Where ever details of any activities are not mentioned, it is expected to elaborate skills by the competent bodies of local Universities/ Autonomous Colleges.*

Table-1 Semester wise distribution of hours per week

Semester	Theory	Practicum	Teaching practice	Total
I	12	18	6	36
II	12	12	12	36
III	12	12	12	36
IV	12	12	12	36
Total	48	54	42	144

Minimum of 36 teaching hours per week is required in five or six days in a week

Table-2 Number of credits per semester

Semester	Theory	Practicum	Teaching	Total
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			practice	
I	12	9	3	24
II	12	6	6	24
III	12	6	6	24
IV	12	6	6	24
Total	48	27	21	96
Minimum of 36 teaching hours per week is required in five or six days in a week				

Reg. No:.....

Name :.....

**I Semester M.P.Ed. Degree Examination, December 2015**

**MPCC-101 RESEARCH PROCESS IN PHYSICAL EDUCATION AND  
SPORTS SCIENCES**

Time: 3 Hours

Max Marks: 70

Instructions: 1) Attempt **three** questions from **part A** and **three** from **part B**.

2) Part C is **compulsory**.

**Part A**

1. Define research and explain its need and importance in Physical Education and Sports. 15
  2. What do you mean by experimental research? Explain any two designs in detail. 15
  3. Explain the preparation of a research report in detail. 15
  4. How would you go about in locating a research problem? 15
  5. Highlight the procedure for developing a good hypothesis. 15
  6. Define sample. Explain three sampling techniques with suitable examples. 15
- (3x15=45)

**Part B**

7. How can you evaluate the sources of historical research? 5
8. Explain the types of research. 5
9. Write a short note on bibliography and abstracts. 5
10. Explain the types of variables. 5

P.T.O



11. Write a short note on case study. 5

12. With the help of suitable examples, explain the concept of primary data and secondary data. 5

(3x5=15)

### Part C

13. Answer any **ten**:

a. As sample size increases the chance of sampling error \_\_\_\_\_ 1

- i. Increases
- ii. Decreases
- iii. No change
- iv. All of the above

b. Select the independent variables from the list given below:

- i. VO2Max
- ii. Plyometric training
- iii. Varied pace running
- iv. Cardiorespiratory endurance

c. Philosophical research is also called as \_\_\_\_\_.

1

- i. Rational research
- ii. Perceptual research
- iii. Conceptual research
- iv. Behavioural research

d. Case study does not include \_\_\_\_\_.

1

- i. Observation
- ii. Interview
- iii. Questionnaire
- iv. measurement

e. Null hypothesis is also known as \_\_\_\_\_. 1

- i. Research hypothesis
- ii. Alternate hypothesis
- iii. Statistical hypothesis
- iv. No difference hypothesis

f. Historical research is also known as \_\_\_\_\_.

1

- i. Demographic research

- ii. Event study
- iii. Retrospective research
- iv. Biographic research
- g. External and internal criticism is done in \_\_\_\_\_. 1
  - i. Experimental research
  - ii. Survey
  - iii. Philosophical research
  - iv. Historical research
- h. Systematic sampling may be used instead of simple random sampling if the: 1
  - i. Population list is in random order.
  - ii. Sample size is small.
  - iii. Population is heterogeneous.
  - iv. Expected difference is small.
- i. Equated group design is also called \_\_\_\_\_. 1
  - i. Random group design
  - ii. Repeated measures design
  - iii. Reverse group design
  - iv. Parallel group design
- j. There will not be any difference between the BMD of trained and untrained middle aged women. This is a \_\_\_\_\_. 1
  - i. Research hypothesis
  - ii. Null hypothesis
  - iii. Both
  - iv. None of the above.
- k. Experimental research aims at:
  - i. What is?
  - ii. What was?
  - iii. What will be?
  - iv. None of the above.
- l. Close form questionnaire contains questions that call for:
  - i. Free response
  - ii. Check response
  - iii. Descriptive response
  - iv. Short response

(10x1=10)

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Reg. No:.....

Name :.....

**I Semester MPEd Degree Examination, December 2015**

**MPCC-102 PHYSIOLOGY OF SPORTS AND EXERCISE**

Time: 3 Hours

Max Marks: 70

Instructions: 1) Attempt **three** questions from **part A** and **three** from **part B**.

2) Part C is **compulsory**.

**Part A**

1. Explain different types of muscles based on their characteristics. 15
2. Describe anaerobic metabolism for muscular work. 15
3. With the help of a neat diagram of neuromuscular junction explain the transmission of nerve impulses through synapse. 15
4. Comment on effect of exercise on respiratory system. 15
5. Analyse the effects of drugs in sports performance. 15
6. Narrate the fraching effects of high altitude for long distance runners. 15

(3x15=45)

**Part B**

7. Explain the types of muscle fiber. 5
8. Explain the thermo regulatory function of body. 5
9. Describe types of muscular contraction. 5
10. Write short note on Oxygen Debt. 5
11. Describe the effects of smoking on athletic performance. 5

P.T.O

12. Describe lactic acid formation. 5  
(3x5=15)

### Part C

13. Answer any **ten**:

- m. Who proposed the sliding filament theory of muscle contraction? 1  
i. Hugh Huxley  
ii. Embden  
iii. Mayerhoff  
iv. None of the above
- n. What is cardiac cycle? 1  
i. Amount of blood ejected out from heart in a single beat.  
ii. Amount of blood ejected out from heart in a minute.  
iii. Complete cycle of events in the heart from the beginning of one heart beat to the beginning of the next.  
iv. None of the above.
- o. \_\_\_\_\_ is known as the pacemaker of the heart. 1  
i. Sinoatrial node  
ii. Atrioventricular node  
iii. Purkinje fibers  
iv. None of the above
- p. X has a stroke volume of 80mL. If his heart rate is 56bpm, find out his cardiac output. 1  
i. 80 mL  
ii. 4480 mL  
iii. 5760 mL  
iv. None of the above
- q. Define residual volume. 1  
i. Volume of air inhaled in a single breath.  
ii. Amount of air that remains in the lungs after a forceful expiration.  
iii. Maximum volume of air that the lung can hold.  
iv. None of the above.
- r. The contractile elements of muscles are \_\_\_\_\_. 1  
i. Sarcolemma  
ii. Myofibrils  
iii. Epimysium  
iv. None of the these

- s. The deficiency in the amount of oxygen reaching tissues is called \_\_\_\_ . 1
- i. Hypoxia
  - ii. Hypothermia
  - iii. Hypoglycemia
  - iv. None of the above
- t. Define anaerobic threshold. 1
- i. Level of exercise intensity at which lactic acid builds up in the body faster than it can be cleared away.
  - ii. Level of exercise intensity at which lactic acid starts accumulating.
  - iii. Level of exercise intensity at which work is done without the presence of oxygen.
  - iv. None of the above.
- u. What happens to PO<sub>2</sub> (partial pressure of O<sub>2</sub>) as altitude increases? 1
- i. Increases
  - ii. Decreases
  - iii. No change
  - iv. All of the above
- v. What is hyperthermia? 1
- i. Increased pressure
  - ii. Decreased pressure
  - iii. Increased temperature
  - iv. Decreased oxygen content
- w. The immediate source of energy is \_\_\_\_\_. 1
- i. ATP
  - ii. Fat
  - iii. Carbohydrate
  - iv. Protein
- x. Anaerobic glycolytic system is also called Lactate system. Why? 1
- i. Lactic acid is used to produce ATP.
  - ii. Lactic acid is the end product.
  - iii. Glucose is broken down in the absence of oxygen.
  - iv. None of the above.

(10x1=10)

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Reg. No:.....

Name :.....

**I Semester MPEd Degree Examination, December 2015**

**MPCC-103 YOGIC SCIENCE**

Time: 3 Hours

Max Marks: 70

Instructions: 1) Attempt **three** questions from **part A** and **three** from **part B**.

2) Part C is **compulsory**.

**Part A**

1. Why Patanjala Yoga Sutra is popularly known as Astanga Yoga? Explain. 15
2. What are the rules and instructions for practice of yoga? Explain the concept of Mithahara. 15
3. Why Suryanamaskar is an excellent exercise for cardio respiratory endurance? 15
4. Explain the similarities and difference between Yoga and other physical Exercises. 15
5. How yoga is complimentary to sports? 15
6. Explain in detail the yoga therapy for respiratory disorders. 15

(3x15=45)

**Part B**

7. Explain the benefits of Bhujangasana. 5
8. Explain three processes in pranayama. 5
9. Write short note on types of mudras. 5

P.T.O

10. Write short note on yogic breathing. 5
11. Explain the meaning of Hatha yoga. 5
12. Write short note on Bandhas. 5
- (3x5=15)

### Part C

13. Answer any **ten**:

- a. Karma Yoga means: 1
- i. Union
  - ii. Samadhi
  - iii. Selfless work
  - iv. None of the above
- b. Shambhavi Mudra is: 1
- i. Gazing at nose tip
  - ii. Gazing at the eye brow center
  - iii. Gazing at the sky
  - iv. None of the above
- c. Suryabhedhana is a: 1
- i. Pranayama
  - ii. Mudra
  - iii. Meditation
  - iv. None of the above
- d. The classical text in yoga is: 1
- i. Gherandha Samhitha
  - ii. Hatha Ratnavali
  - iii. Patanjali Yoga Sutra
  - iv. None of the above
- e. The sixth limb of astanga yoga is: 1
- i. Niyama
  - ii. Pranayama
  - iii. Dharana
  - iv. Pratyahara
- f. The asana which is helpful in management of diabetes is: 1
- i. Ardhamatsyendrasana
  - ii. Shavasana
  - iii. Padahasthasana

- iv. None of the above
- g. Nadishodhana pranayama is a: 1
- i. Balancing Pranayama
- ii. Cooling Pranayama
- iii. Heating Pranayama
- iv. None of the above
- h. The founder of transcendental meditation: 1
- i. Maharshi Mahesh Yogi
- ii. Paramahansa Yogananda
- iii. Swami Shivananda
- iv. None of the above
- i. Kumbhaka is: 1
- i. Inhalation
- ii. Exhalation
- iii. Retention
- iv. None of the above
- j. The third chakra is: 1
- i. Ajna chakra
- ii. Anahata chakra
- iii. Manipura chakra
- iv. None of the above
- k. Shashankabhujaṅgāsana is a: 1
- i. Backward bend asana
- ii. Forward bend asana
- iii. Both forward and backward bend asana
- iv. None of the above
- l. The world yoga day falls on: 1
- i. June 21
- ii. August 16
- iii. December 31
- iv. None of these

(10x1=10)

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Reg. No:.....

Name :.....

**I Semester MPed Degree Examination, December 2015**

**MPEC-101 TEST, MEASUREMENT AND EVALUATION IN PHYSICAL  
EDUCATION**

Time: 3 Hours

Max Marks: 70

Instructions: 1) Attempt **three** questions from **part A** and **three** from **part B**.

2) Part C is **compulsory**.

**Part A**

1. Describe in brief the concept and importance of measurement and evaluation. 15
  2. Give a detailed note on evaluation procedures in physical education. 15
  3. Explain the procedure of constructing a sports skill test. 15
  4. What are the criteria in selecting a test? 15
  5. Define anthropometry. Explain the procedure in taking the bulk anthropometric measurement. 15
  6. Explain any two tests of measuring the physiological parameters. 15
- (3x15=45)

**Part B**

7. Explain the AAPHED health related fitness test. 5
8. Explain the JCR test. 5
9. Write a short note on motor fitness. 5
10. Explain the Kraus Weber test. 5

P.T.O

11. Explain Dyer tennis test. 5
12. With the help of suitable examples, explain the concepts of validity, reliability and objectivity of a test. 5
- (3x5=15)

### Part C

13. Answer any **ten**:
- y. Cardio respiratory efficiency is best measured through \_\_\_\_\_. 1
- i. Indiana motor fitness test
  - ii. Harward step test
  - iii. John Methany test
  - iv. JCR test
- z. A test with which of the following validity can be used to measure a variable: 1
- i. 0.50
  - ii. 0.65
  - iii. 0.75
  - iv. 0.92
- aa. Purpose of the test is measured through \_\_\_\_\_. 1
- i. Reliability
  - ii. Validity
  - iii. Objectivity
  - iv. Split half method
- bb. \_\_\_\_\_ is used to measure thigh girth. 1
- i. Flexometer
  - ii. Stadiometer
  - iii. Skinfold caliper
  - iv. Gullick tape
- cc. \_\_\_\_\_ is not a test to measure cardiovascular fitness. 1
- i. Haward step test
  - ii. Cooper test
  - iii. Beep test
  - iv. Margaria – Kalamen test
- dd. Tournament standing serves as adequate standard for establishing: 1
- i. Validity
  - ii. Reliability

- iii. Subjectivity
- iv. Norms
- ee. Formula for rapid form of haward step test is: 1
  - i.  $\frac{\text{Duration of exercise in seconds}}{2 \times \text{sum of pulse counts in recovery}} \times 100$
  - ii.  $\frac{\text{Duration of exercise in seconds}}{5.5 \times \text{sum of pulse counts in recovery}} \times 100$
  - iii. Both
  - iv. None of these
- ff. The reliability of objective written test is determined by: 1
  - i. Correlation between equivalent form of the test
  - ii. Correlation between split halves test
  - iii. Correlation between repeated test
  - iv. All of the above.
- gg. Relaxed biceps girth is measured at the point where \_\_\_\_\_. 1
  - i. Maximum bulging is seen when muscle is relaxed
  - ii. Midpoint of the humerus
  - iii. Maximum bulging is seen when muscle is contracted
  - iv. None of the above.
- hh. Expand ISAK? 1
  - i. Indian Society for Anthropometry and Kinematics
  - ii. International Society for Anthropometry and Kinesiology
  - iii. International Society for Advancement of Kineanthropometry
  - iv. None of the above
- ii. Pedograph is used to measure: 1
  - i. Kyphosis
  - ii. Lordosis
  - iii. Scoliosis
  - iv. Flat foot
- jj. A test measures what it intends to measure is assessed by \_\_\_\_\_. 1
  - i. Validity
  - ii. Objectivity
  - iii. Reliability
  - iv. None of the above

(10x1=10)

Reg. No:.....

Name :.....

**I Semester MPEd Degree Examination, December 2015**

**MPEC-102 SPORTS TECHNOLOGY**

Time: 3 Hours

Max Marks: 70

Instructions: 1) Attempt **three** questions from **part A** and **three** from **part B**.

2) Part C is **compulsory**.

**Part A**

1. Technology has enormous influence in modern day sports. Discuss. 15
2. Explain the changes that have occurred in modern day sports equipments. 15
3. Video coverage has undergone vast changes with respect to viewing. Comment on the statement. 15
4. The surface on which different racket sports is played has undergone drastic changes. Enumerate the statement with respect to the game of tennis, badminton, volleyball and kabaddi. 15
5. Describe in detail the changes that have developed in outdoor and indoor lighting in sporting arenas. 15
6. Sporting attire has become lights comfortable and one of the contributory factor towards recording performance. Justify. 15

(3x15=45)

**Part B**

7. Explain the influence of Nano technology in sports. 5
8. Write a short note on use of computers in match analysis. 5
9. Write a short note on modern day protective equipments. 5
10. Write a short note on high definition camera. 5
11. Write a short note on instrumentation. 5

12. Write a short note on shape memory alloy.

5

(3x5=15)

### Part C

13. Answer any **ten**:

- a. SMA means 1
  - i. Shadow Memory Alloy
  - ii. Short Memory Alloy
  - iii. Shape Memory Alloy
  - iv. None of the above
  
- b. The term 'Ball feeder' is related to 1
  - i. Football.
  - ii. Basketball.
  - iii. Handball
  - iv. Volleyball.
  
- c. Protective equipment is 1
  - i. Slugger
  - ii. Helmet
  - iii. Bails
  - iv. Cover
  
- d. Who invented the Cricket Bowling Machine 1
  - i. Michael Stuart
  - ii. Michael Clerke
  - iii. Stew Vough
  - iv. Michael Murphy
  
- e. Stamford Bridge Stadium is related to ..... Game 1
  - i. Football
  - ii. Hockey
  - iii. Rugby
  - iv. Cricket
  
- f. Foot wear Production Company 1
  - i. Sony
  - ii. Casio
  - iii. Fila
  - iv. None of the these
  
- g. Cricket bat is made up of ----- wood. 1
  - i. Willo

- ii. Neem
- iii. Rubber
- iv. Teak
- h. Synthetic Track Surface made up of ----- 1
  - i. Polyurethane
  - ii. Polystyrae
  - iii. Styrofoam
  - iv. None of the above.
- i. Plasticine indicator is related to 1
  - i. Athletics
  - ii. Softball
  - iii. Netball
  - iv. Cricket
- j. Duck Worth- lewis method is used in ..... 1
  - i. Cricket
  - ii. Baseball
  - iii. Tennis
  - iv. Kabaddi
- k. Medea which broad caste sports and games 1
  - i. ESPN
  - ii. Aaj-tak
  - iii. CNN
  - iv. BBC
- l. A multiple-day event is *covered* by a *video* shoot is known as 1
  - i. Candids
  - ii. Happy-face
  - iii. Both
  - iv. None of the above.

(10x1=10)

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