

SHIVAJI UNIVERSITY KOLHAPUR



Syllabus of M.Phil/ Ph.D in Physical Education
(Introduced from June 2011-12)

(Subject to modifications that will be made from time to time.) ||

Shivaji University, Kolhapur
Structure & Syllabus of M.Phil/ Ph.D in Physical Education
Introduced from June 2011 to 2012

1) Objectives:

- i) The M.Phil/ degree is looked upon the first research whose components will be course works as well as research works. It would provide facilities for undertaking research. Training will be provided in research methodology.
- ii) The Course work of M.Phil shall be a" pre-requisite for Ph.D. degree: Thus new registrants for Ph.D. degree will have to undertake Pre-Ph.D course which may be the same as for the M.Phil course. Further, candidate who have registered for M.Phil degree and have complete the course work be given the option of changing form the M.Phil programme to the Ph.D. Programme the extended the enlarged work may be submitted for Ph.d. Degree after fulfilling other condition for registration.
- iii) A Candidate who registered for Ph.D. degree may on cancellation of his Ph.D. registration be permitted to register himself for M.Phil course and course and submit the reseai'ch carried out by him for Ph.D. degree with such modification as may be deemed appropriate by the candidate forwards the dissertation for the M.Phil examination if he so desires.

2) Eligibility and admission:

A candidate for being eligible for admission to M.Phil Course must have passed the Master Degree in Physical Education examination in second class at least with 50% marks of this University or an examination of any other statutory University recognized as equivalent thereto.

Admission to the M.Phil Course should be made on the basis of

I) Performance of the candidates at the Master degree in Physical Education examination.

II) Performance at an entrance test conducted by the University.

The entrance test will be Knowledge of the sub ect and research aptitude .It will involve written test and oral. A fee prescribed by the University will be charged for entrance test such entrance test will be completed by the end of July early August every year.

- a) The admission for M.Phil. Course in University Departments affiliated Colleges/ Recognized institutions will be made by the University on the basis of the Entrance test conducted by University.
- b) Of the total seats available, 50% will be for the teacher fellows working in the recognized institutions or colleges affiliated to this University and remaining 50% will be for fresh post-graduate

students of this University on the basis of the merit at the Entrance test. Out of these 50% seats as also those left out from the earlier mentioned 50% seats, allotment of seats will be made in the following order of preference.

- i) Teacher from recognized institutions/affiliated colleges of Shivaji University in order of merit in the entrance test.
- ii) Teacher and students from other universities in order of merit at the entrance test.

In this, preference will be given to the teacher fellows from this university the next to the teachers from other Universities. The rules for the reservation of seats for backward candidates as per the Government of Maharashtra resolution will be strictly observed.

The M.Phil course will be conducted in the University Post-Graduate Departments in various faculties and also by recognized institutions, College affiliated to this university, which is recognized by the university for the conduct of M.Phil course in the selected subjects. Admissions to the M.Phil course; will be made at the beginning of the first term of every academic year.

3) Duration of the course:

The M.Phil course shall be a full time course spread over two terms of the academic year.

The University examination for the M.Phil course spread over two term of the academic year.

The university examination for the M.Phil theory paper will be conducted once in a year in April/May. The dissertation of a candidate will be after completion of all the requirements of the course-such as satisfactory attendance, passing in all the theory papers etc. A candidate shall submit four copies of his dissertation.

A candidate must complete the whole course within a period of two years from the date of Registration, excludable on payment of a fee Rs. 700/- science and Rs, 500/- for other subject by advance but in any case before the completion of the second term.

A candidate passing theory examination at the first attempt shall submit his dissertation within a candidate passing Theory examination in two attempts shall submit his dissertation within a period of six months after 2nd, attempt after paying additional fees.

4) Content and teaching :

- a) Content: The Content component of the three papers will be prepared by the concerned nature of the three theory papers will be as shown below.

Paper I: Research in Physical Education and Sports (Compulsory)

Paper I: Recent Trends and Advance in Physical Education and Sports (Compulsory)

Paper III: Special fields in Physical Education and sports (Optional Subject) any one of the following.

- a) Sports Medicine
- b) Sports Physiology
- c) Psychology of Sports
- d) Yoga and Sports Science
- e) Scientific Approach to Techniques in Advance coaching and Training
- f) Tests and Measurement in Physical Education

Paper I & II will be compulsory for all the students in a subject.

Whereas paper - III will be optional and related to the subject of the Dissertation.

- b) Teaching: There will be three lecturing periods of sixty minutes each per week paper of the which 66.7% percent will be developed for lecture and 33.3 percent for group discussion seminar and library work and laboratory work.
- c) Regarding dissertation there will be two contact lectures for student per week.
- 1) All professors, Readers and lectures holding Ph.D. degree in Physical Education or Education working in the University Department will be automatically recognized for teaching the M.Phil theory courses and guiding the M.Phil. Dissertation research work.
- 2) The teacher working in the affiliated/ recognized institutions and holding Ph.D. degree in physical education or education will be recognized for teaching theory courses and guiding M.Phil Dissertation research work. Those teachers, who do not hold Ph.D. degree but possess M.Phil, degree in physical education or education and experience of teaching the subject at special level at least 5 years will be recognized for teaching theory papers. The teacher working in the affiliated college who do not hold M.Phil/Ph.D. in Physical Education and having experience of ten years at the special level and five years at Post Graduate level are eligible to teach theory papers of M.Phil course. The teacher working in the college, recognized institution will have to apply for such recognition as per the university rules.
- 3) A teacher working in the University Department will be allowed to register. The M.Phil students whereas a recognized teacher in an affiliated college, recognized institution would be allowed to register not more than two M.Phil students.
- 4) The number of students to be admitted to the M.Phil course in a subject in the University Department- for a Department in an affiliated college/recognized institution will be depend upon the availability of eligible teachers and the facilities of laboratory equipment.

- 5) Fees: As per University rule
- 6) Administration of M.Phil Programme
 - A) The committee in each subject already constituted shall administer the M.Phil Programme.
 - B) Powers and duties of the research committee as regards the M.Phil Programme.
- i) Make recommendation for admission to the M.Phil, course and assign supervision to guide in the selection of topic for dissertation based on the subject.
- ii) Draw the syllabus for the course including the system of evolution for submission to E.O.S. and make teaching arrangements.
- iii) Prepare an exhaustive panel of examiners for evaluation of M.Phil dissertation in the concerned, subject.

MEDIUM OF INSTRUCTION AND EXAMINATION

The medium of instruction and examinations will be English

- i) All the papers will be answered in English/Marathi/Hindi except the papers in Languages. All the dissertations will be written in English except those in languages.
- ii) The students of M.Phil course in the faculties of Social science and education and P.E. would be allowed to write their dissertation in Marathi/Hindi on the condition that.
 - a) The Guide of the candidate must permit him to. do so.:
 - b) The dissertation written in Marathi/Hindi Shall be sent to the experts who are conversant with.
 - c) The viva-voce of such candidates will be held in : Marathi/Hindi language.

7) Examination and evaluation:

- 1) The entire M.Phil course will consist of the following.

a) Three papers of 100 marks each	300 marks
b) Seminars	050 marks
c) Discretion	200 marks
d) Viva-Voce	050 marks
Total	600 marks
- 2) Each Theory paper, dissertation, seminar and viva-voce will form a separate head of passing.
- 3) There will be double valuation for theory papers. One internal and one examiner will examine each paper.
- 4) The answer-book shall be first sent to the External examiner who' shall submit marks and grades one separate sheet supplied to them directly to the controller of the examination but shall not enter the marks and grades on the answer books.

The external examiner after evaluation of the answer book shall send these to the internal Examiner who shall submit marks and grades on separate sheets to the controller of the examinations

If there is a difference of more than two grades between the assessment of the external and Internal examiners, the answer-book shall be sent to the third examiner for evaluation who will be external and who shall submit the marks and the grades on separate sheet supplied to him without entering them on the answer books. Vice-Chancellor will appoint the third examiner from the panel of examiners.

For the purpose of result the average grade points of each paper of the internal and external examiners shall be calculated up to two places of decimals.

In case, where the answer-book is sent to the third examiner the grades given by him and those nearest to his grades given either-by; internal or external examiner will be taken for working out the average grade even if the difference of two or more grades remain in their assessment.

The evaluation of dissertation will be done by the external referee only who shall evaluate the dissertation for 200 marks and submit the marks and grades to the Controller of Examination in the performa given along with a valuation report.

8) Procedure for appointment of external examiners for evaluation of Dissertation. :

The B.U.T. R/Academic council will approve the exhaustive list prepared by the M.Phil committee. After the submission of M.Phil dissertation, the Head of the University Department in the concerned subject, in consultation with the guide shall recommend three names from the list to the Vice-Chancellor for appointing one person as the referee of the dissertation if the student has registered in the University Department. The Vice-Chancellor shall nominate one person out of the three as the referee for evaluation of the dissertation.

In case, where an M.Phil candidate is registered in an affiliated college, Recognized institution, three names from the list shall be submitted by the Head of the Department in the concerned subject of the college/Recognized institution where the student has registered for M.Phil in consultation with the research guide to the Vice-Chancellor for appointing one person as a referee for the dissertation.

The Head of the Department will make the assessment of the Seminar out of 50 marks in the concerned subject, research guide and any two recognized teachers in the Department. The student will give minimum two seminars each carrying 25 marks of the two seminars at least one shall be on his dissertation research work.

In case of candidates who have registered for M.Phil in an affiliated college/Recognized institute the assessment of the seminar as shown

above will be a committee consisting of the concerned research Guide and any two M.Phil recognized teachers from the college/recognized institute or from a nearly college/Recognized Institute.

The Viva-Voce on the dissertation after the receipt on the report of the external examiner will be conducted by a committee consisting of three recognized teacher one of who shall be guide of the students and the other two teacher suggested jointly by the Head of the University.

In case, there is no university Department in a subject the Dean of the Faculty concerned and the guide will suggest names of two teachers for conduction of Viva-Voce.

The Viva-Voce of the M.Phil students registered both in the University and the recognized college will be conducted in the University Department.

9) **Standard of Passing :**

The assessment of the M.Phil candidates shall be in the grades on the seven-point scale. The candidate should get at least 'C' grade in every paper, dissertation viva-voce and seminar separately and in aggregate he should get. 'B' grade for being eligible for the award of M.Phil Degree.

If a candidate; fails at the M.Phil examination he will be allowed to reappear for that examination again, only in those heads of passing (papers/dissertation/viva-voce/seminars) in which he has obtained 'B' grade and above grades. However the grade of these exempted heads of passing (papers/ Dissertation/Viva-Voce/Seminars) shall be taken into account for the next evaluation.

The University office shall consolidate the grade point obtained by a candidate and declare his result. At the time of consolidation of grade points of various heads of passing, the final grade shall be rounded off to next digit if the fraction is 0.5 or more.

The following tables and procedure shall be made application for giving Grades.

Notation	Equivalent-numerical Scores	Grade points
O	65-100	6
A	60-64	5
B	51-59	4
C	41-50	3
D	31-40	2
E	21-30	1
F	00-20	0

For Example	External	Internal
I	A 5 (Paper Average 4.50)	B 4
II	B 4 (Paper Average 3.50)	C 3
III	A 5 (Paper Average 4)	C 3
IV	DISSERTATION	B=8
V	VIVA-VOCE 8s SEMINAR	A=5
Total =	$4.50 - 3.50 + 4 + 8 + 5 = \frac{25}{6} = 4.16 = \text{B Grade}$	

Suppose the total is 4.50 or more, then the candidate should be awarded 'A' Grade candidate who have secured a lower grade than the minimum passing 'C' in any paper Dissertation be informed the same and will be allowed to reappear for paper/ papers again

**A) Ordinance / Rules/ Regulations:-
(as applicable to M.Phil./Ph.D. programme)**

**B) Shivaji University, Kolhapur
New/Revised Syllabus For Course Work
Of M.Phil./Ph.D. programme**

**1. Title: Subject ---Physical Education
Optional/Compulsory under the Faculty of Education
(Physical Education)**

2. YEAR OF IMPLEMENTATION New/Revised Syllabus will be implemented from June **2011** on Wards.

3. PREAMBLE

The M.Phil/Ph.D. course work shall involve Three Papers Viz

I) Research Methodology in Physical Education.

II) Recent Trends in Physical Education

III) Optional Papers (Fields of Specialization) 1 to 5

A) Sport Medicine

B) Sports Physiology

C) Psychology of Sports

D) Yoga and Sports Science

E) Scientific Approach to Techniques in Advance Coaching and Training

4. DURATION

- The M.Phil./Ph.D. programme shall be a Full time regular course.
- The duration of M.Phil/Ph.D. programme shall be of One year.

5. PATTERN

Pattern of Examination will be Annual in respect of M.Phil and Semester in respect of Ph. D.

FEE STRUCTURE

As per the Shivaji University Rules & Regulations

6. ELIGIBILITY FOR ADMISSION

- i) For admission to the M.Phil. Programme in the subject Physical Education Under the Faculty of Education, the applicant should fulfill the following conditions:

Candidate should have minimum 55% marks for open category and 50% for SC/ST category at the post graduate examination.

OR

Candidate should have the Post-graduate degree with equivalent grade/grade points in faculties where there is no provision of Class.

and

- ii) The students admitted to M.Phil. shall apply for Eligibility Certificate within 15 days from the date of admission by paying prescribed fees along with the Migration, Degree Certificates, and Statement of Marks in original and photo copy etc. Admission to the course is subject to the fulfillment of the Eligibility criteria.

7. MEDIUM OF INSTRUCTION

The medium of instruction shall be in English or Marathi.

8. STRUCTURE OF THE COURSE WORK FOR M.Phil/Ph.D.

Sr. No.	Subjects/Papers)	Marks
I.	Research Methodology in Physical Education.	100
II.	Recent Trends in Physical Education.	100
III.	Optional Paper (Field of Specialization) 80 + 20	100
	Total	300

9. SCHEME OF TEACHING AND EXAMINATION

Sr. No.	Subjects/Papers (Hrs/Week)				Examination Schemes(Marks)		
	L	F/S	P	Total	Theory	Term Work	Total
I.	02	01	01	04	100	-	100
II.	02	01	01	04	100	-	100
III.	02	01	01	04	80	20	100

10. SCHEME OF EXAMINATION

- The examination shall be conducted at the end of each academic year.
- Each Theory paper shall carry 100 marks
- The evaluation of the performance of the students in theory papers shall be on the basis of Annual Examination of 300 marks.
- Question paper will be set in the view of the /in accordance with the entire Syllabus and preferably covering each unit of syllabi.

11. STANDARD OF PASSING

Evaluation of Theory papers, Dissertation and Viva-Voce

- i) The following procedure and tables shall be applied for allotting Grades. Each theory paper shall be assessed by two examiners, one internal and one external.
- ii) The Dissertation will be evaluated by one external referee, who will have to give his/her acceptance within 30 days from the date of receipt of letter otherwise, it will be treated as non-acceptance and the next referee will be approached.
- iii) After receiving the report, viva-voce should be conducted within one month's period.
- iv) The viva-voce will be conducted in University Department only.
- v) The student shall have to attend the viva-voce at his/her own cost.
- vi) The student shall collect a copy of his/her Dissertation immediately after the viva-voce from the University office. If the student fails to collect the same, it will be sent to the concerned Department for Departmental Library/University Library.

vii) **PHYSICAL EDUCATION UNDER FACULTY OF EDUCATION**
Notation, Equivalent numerical scores and Grade Points

Notation	Equivalent numerical scores	Grade Points
O	65-100	6
A	60-64	5
B	51-59	4
C	41-50	3
D	31-40	2
E	21-30	1
F	00-20	0

viii) The answer books should be first sent to the external examiner who, after evaluation, shall forward the answer books to the internal examiner. The internal examiner shall submit the Marks and Grades on separate sheets supplied to them. They should not enter the Marks and Grade on the answer books.

ix) If there is a difference of more than 2 Grades between the assessment of two examiners, i. e. for example if one examiner allots “A” Grade and the other “D” Grade, the paper/Dissertation shall be referred to the third external examiner, appointed by the Vice-Chancellor from the panel already prepared.

x) In the cases where the answer books/Dissertation are sent to the third examiner, the Grades allotted by him/her and the Grades closer to the third examiner’s Grades shall be considered for working out average Grade, even if, by chance, there remains the difference of two Grades in their assessment.

xi) a) The marks allotted by Two examiners for each paper/ Dissertation shall be averaged and calculated upto two places.

b) Seminars will be assessed in marks (out of 50), which shall be added to the Marks of the viva-voce (out of 50) for calculating the Grade.

c) At the time of the consolidation, the Grade points allotted to each paper/Dissertation, worked out according to (vii) will be added together upto two decimal places and shown on the result sheet. For giving the final grade, the grade point average shall be rounded off to the next digit if the fraction is $\frac{1}{2}$ or more than half.

Example	External	Internal
I	A 5 Paper Average 4.50	B 4
II	B 4 Paper Average 3.50	C 3
III	A 5 Paper Average 4.00	C 3
IV	Dissertation B - $4 \times 2 = 8.00$ Viva-voce A -5 Total = $\frac{4.50+3.50+4+8+5}{6}$ = $\frac{25}{6}$ = 4.16 - B	

Suppose, the total is 4.50 or more, then it shall be awarded “A” grade.

- xii) The candidate who secures a grade lower than the minimum passing grade (D) in any paper/Dissertation be informed of the same and he/she be allowed to reappear for the papers. The candidates availing of these concessions shall have to get through the examination within six years. Such candidates will be permitted to continue with their Dissertation in the meantime and their result of the examination will be declared according to the standard of passing.
- xiii) The final result will be declared after working out the overall Grades of
 - a) Written Examination
 - b) Dissertation
 - c) Seminars and
 - d) Viva-voce.

12.NATURE OF QUESTION PAPER AND SCHEME OF MARKING

Paper No. I and II

i) Long answers – 20 + 20	– 40
ii) Short answers – 15 + 15	– 30
iii) Short notes – 10 + 10 + 10	– 30
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Total =	100

Paper No. III

i) Long Answers	= 20
ii) Short Answers 15 + 15	= 30
iii) Short notes 10 + 10 + 10	= 30

13.EQUIVALENCE IN ACCORDANCE WITH TITLES AND CONTESENTS OF PAPERS-(FOR REVISED SYLLABUS)

M.Phil (Physical Education) Old Syllabus of June 2008 cannot be equated with that of June 2012 syllabus hence equivalence is not given. Those admitted before 2011 have to appear as per the June 2008 syllabus.

14.SPEDCIAL INSTRUCTIONS, IF ANY. -- Nil

Shivaji University, Kolhapur
M.Phil (Physical Education & Sport)
Compulsory Paper -I

Research In Physical Education & Sports

Objective:

- 1) To familiarizes the students with the nature of Research in general & Research in Physical Education in particular.
- 2) To familiarizes the students with different Research Designs.
- 3) To train the students to design and to conduct his own Research.
- 4) To enable the students to analysis, interpret of to draw the conclusions from the data collected.
- 5) To enable the students to prepare a short research paper for presenting in a seminar, conference and.in a journal.
- 6) To enable the students to evaluate the research report.

COURSE OUTLINE

Unit I : Introduction :

- 1) Research and science
- 2) Research and scientific thinking.
- 3) Nature of science and scientific method
- 4) Methods of acquiring knowledge.

Unit II : Research Language :

- 1) Distinction between concept and construct. Limitation and delimitation. Assumption and Hypothesis. Statement and definition.
- 2) Distinction, among Nominal definition conceptual definition and operational definition.
- 3) Different variables: dependent, independent, intervening, and extraneous.
- 4) Significance of 'Law of single variable' in research.

Unit III: Hypothesis :

- 1) Meaning and Importance of 'Hypothesis'
- 2) Sources of Hypothesis
- 3) Characteristics of a good Hypothesis.
- 4) Forms and uses of Hypothesis.
- 5) Steps in formulation of Hypothesis
- 6) Difficulties in formulation of Hypothesis
- 7) Testing of Hypothesis.

Unit IV : Research Designs :

- 1) Meaning of Research Design.
- 2) Need for Research Design.
- 3) Features of Good Research Design.
- 4) Different Research Designs.
- 5) Basis Principles of experimental Design.
- 6) Important experimental designs.
 - a) Informal experimental designs.
 - i) Before and after without control design
 - ii) Before and after with control design,
 - iii) After only with control design.
 - b) Formal Experimental Designs.
 - i) Completely randomized design (C.R. Design)
 - ii) Randomized Block Design (R.B. Design)
 - iii) Latin Squate Design (L.S. Design)
 - iv) Factorial Design.

Unit V : Library Technique :

- 1) Library Systems
- 2) Card catalog
- 3) Working Bibliography
- 4) Card system
- 5) Locating the Source
- 6) Critical Reading
- 7) Note taking

Unit VI: Sampling :

- 1) Fundamental concepts-Universe, population, sampling frame-sampling error. Sample, levels of confidence and significance.
- 2) Steps in sampling designs criteria for selecting sampling procedure, characteristics of good sampling design.
- 3) Types of sampling-probability & Non-probability.
- 4) Statistical Treatment-Estimating Population mean. Sampling error, standard error & central limit theorem.
- 5) Arrears of research in physical Education. From which a Research problem can be developed.

Unit VII : Use of Statistics in educational research :

- 1) Descriptive and inferential statistics.
- 2) Parametric tests and their applications.
- 3) Non-Parametric test and their application
- 4) Construction of Norms
- 5) Use of Microsoft Office – Word, Excel, PowerPoint
- 6) Use of computers in data analysis (SPSS software)
- 7) Interpretational and generalization of results.

Unit VIII : Ethics of Research in Human Subject :

- 1) The importance of ethics in Research in Human subject.
- 2) The basic dilemma.
- 3) The subject as a person The right of self-determination
 - Voluntarism.
 - Informed consent.
 - Equal opportunity
 - Delivery of promises.
 - Maintaining self-respect.
 - Protecting privacy
- 4) Ethical No's
 - Fabrication of Data
 - Plagiarism
 - Exploitation of Assistance 85/or subject.
- 5) Ethical Guidelines.

Unit IX : Communication and Evaluation of Research

- 1) Preparation of research Proposal
- 2) Writing of research papers for the Journal conferences and seminars.
- 3) Evaluation of educational Research.
- 4) Pitfalls in educational research.
- 5) Accessing information on-line and off-line for Research.

Books Recommended:

1. Best J.W. V. Kahn : Research in Education.
2. Butcher H.J. Sampling in Educational Research.
3. Kothari C.R. : Research Methodology : Methods 85 Techniques.
4. Agrwal J. C. Education Research An Introduction.
5. Clarke - Research processes in Physical Education Recreation and health.
6. Clarke - Research processes in Physical Education.
7. Robson M, A.K. Uppal, T.S. Brar - Thesis format.
8. Kamlesh Sen - Research methodology.
9. Bloomer & Linguist - Statistical methods in psychology 85 Education.
10. Garrett - Statistics in Psychology.
11. Clarke - Practical Measurement in Physical Education.

SHIVAJI UNIVERSITY, KOLHAPUR

M.Phil (Physical Education & Sport)

Compulsory Paper - II

Recent Trends in Physical Education and Sports

Objective:

- i) To help the students to understand the changing needs and demands of the modern society through physical education and sports.
- ii) To help the student to develop the concept of movement education.
- iii) To help the student to develop the concept of sports for high excellence.
- iv) To help the students to develop the concept of lifelong health education and it's various aspects.
- v) To clear the concept of students & regarding modern technology.

Unit: I Professional preparation

- a) Teacher training programme in India - Certificate course undergraduate course. Higher education (Research) comparison of different course content.
- b) Professional organization in India.

Unit: II Socialization and social control through sports :

- i) National and international Integration through sports
- ii) Women in sports
- iii) Yogic practice a way of Life.
- iv) Social culture through sports
- v) Group activities for Healthy social life.
 - a) Modern Gymnasium
 - b) Sports arenas
 - c) Games and sports. Clubs and association
 - d) Recreational values of sports
 - e) Aerobic clubs.

Unit: III Life long Physical Education and Sports

- i) Physical Education for all-Exercise for disabled mentally retarded.
- ii) Need for continuous physical Education and sports.
- iii) Exercise and sports for keep fit for various age group (keep fit nation)
- iv) Physical and Health awareness for all communities (Professional)

Unit: IV Modern Technology in sports and Physical Education

- a) New apparatus and equipments.
- b) New Techniques in different sports and games.
- c) Use of new audio-visional Teaching in Physical Education and sports.

Unit: V Talent identification and Training :

- a) Junior training programme- Principle task.
- b) Early recognition of talent - screening and selection with performance factor.
- c) Specific characteristics of anatomic, Physiological psychological and motor development of children and adults.

Reference Books :

- 1) Bucher : Foundation and Physical Education.
- 2) Barrow : Man and Movement.
- 3) Sunder Raj an : Bio-machanics of Sports and Games.
- 4) Bucher : Bio-Mechanics of Sports technique.
- 5) Adaws William C : Foundation of Physical Education Exercise and sports science.
- 6) Hay, James and R.J. Gaish : the anatomical and mechanical Basis of Human motion.
- 7) B.K.S Iyenkar - Lighten Yoga.
- 8) B.K.S. Iyenkar - Pranayama.
- 9) Kamlesh - Psychology in Physical Education and Sports
- 10) Butler - fRecreation
- 11) R.L. Anarid - Playing field Manual.

Optional Paper - III
A) Sports Medicine -1 (60 Hors)

Unit: I a) Concepts and content of sports medicine (15 Hors)

b) Duties of athletic trainer.

c) Role of Sports physician

Unit: II a) Concept of Doping (15 Hors)

i) Doping classes:

Stimulant

Narcotic analgesic

Anabolic Steroids

Beta Blockers

Diuretics

ii) Doping methods

Blood Doping

Pharmacological, chemical and physical manipulation,

iii) Classes of drugs subject to certain restriction

Alcohol

Marijuana

Local anesthetics

Cortico steroids

b) Smoking and its bad effects.

Unit: III Therapeiicmodalities: (15 Hors)

Hydrotnerapy : Treatment and rehabilitation in the following

Electro therapy : Conditions

Heat therapy : Sprain, Strain, low lack problem and Remedial exerciser

Unit: IV A) Specific sports injuries of shoulder Elbow, wrist and fingers, Abdomen, thigh, knee, ankle and foot.

B) Nutrition:

a) Preparation of diet for various games and sports- Body weight, and caloric need of sports and games.

b) Caloric value of different food items

c) Body height and weight index.

Reference:

- 1) Leonard Lorson - Foundations of Muscular activity
- 2) Williams J.G.P. - Sports medicine
- 3) Alok Ghosh - Hand book of sports medicine and Physical fitness.
- 4) Park J.E. - Preventive and social medicine
- 5) Eriksson B.O and - Sports medicine, Health and Others Medication.
- 6) Berger R.A. - Applied Exercise Physiology

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|-------------------------------------|---|--|
| 7) Sundararajan G.S | - | Sports medicine |
| 8) Herbert A De vries | - | Physiology of Exercises |
| 9) Khanna G.C. &
Jayprakash C.S. | | Exercise physiology and Sports
medicine |
| 10) Clarke D.H. | - | Exercise Physiology |
| 11) Pacharui S.K. | - | Sports medicine |
| 12) Dr. Sharma N.P. | - | Handbook of sports medicine |
| 13. Shaver L.G. | - | Essentials of exercise physiology |
| 14. Appenzellar Otto | - | Sports medicine-fitaess-Training |
| 15. Dr. Pande P.K. | - | Out line of sports medicine |
| 16. Dr. Pande P.K. | - | Know How sports medicine |
| 17. Roy 85 Irwin | - | Sports medicine |

Optional Paper - III

B) Sports Physiology (60 Hors)

Objective:

- Unit: I Structure and function of Muscle :** Classification of muscles, structure of muscle tissues, various theories of muscular contraction, Hypertrophy of muscle in relation to physical, activity. (15 Hors)
- Unit: II Neuromuscular Physiology :** Neuro Motor units, Neuro muscular junction, Bioelectric potential, Muscle tone, posture and equilibrium. (15 Hors)
- Unit: III Bio-Energetic :** Fuel for muscular work and energy for muscular contraction. Aerobic and Anaerobic system. Interrelationship of Aerobic and anaerobic system with special reference to different activities. Anaerobic. Threshold training. (15 Hors)
- Unit: IV Physiological Changes due to exercise and training :** Effect ,ot exercises and training in relation to oxygen dept. second wind. Micro-circulation : Effect of exercise on carbohydrate, fat and protein metabolism. „ Fluid balance and electrolyte- Sports anemia. (15 Hors)

Books for Reference:

1. Guyton A.C. Text Book of Medical Physiology. W.B. saunder company, Philadelphia, 1976.
2. De. Varies H.A.: Physiology of exercise for physical Education and Athletics, staples, press London.
3. Karopovich P.V.: Physiology of muscular Activity.
4. Bourne G.M. The structure and function of muscle Academic of press. London: 1972.
5. Morehouse L.E. and miller A.T. physiology of exercise. C.V. Mosbey company saint Louise 1976.

6. P.O. Astrand and K. Rodahl text-book of work physiology, M.C. graw-hill kogakusha Ltd., 1970.
7. Mathew D.K. F Fox E.L. Physiological basic of physical education and athletics. W.B. Saunders co-philadelphia, 1976.
8. Katch: Exercise Physiology, Energy, nutrition and human performance-Henery kimpson U.K. 1981.
9. Berger A.R. Applied exercise Physiology, Lea and febiger. . Philadelphia, 1982.
10. Shaver L.G. Essentials of exercise physiology sarjeent publication, New Delhi-1982.
11. Carola Robert, Harley J.P.'Noback C.R. Anatomy and physiology.
12. Rasch and Burke - Applied Anatomy and Kinesiology.
13. Khanna G.L. Jayprakash C.S. Exercise physiology and sports medicine.
14. Biomechanics - E. Kreighbaum K.M. Barthels
15. Sports Medicine - Erikson and others.

Optional Paper - III

C) Psychology of Sports (60 Hors)

Units I : Psychology of education and sports : (15 Hors)

- B) History, development & importance of sports, Psychology.
- C) Future of psychology in physical educational & Sports

Units II : Personality : (15 Hors)

- A) Definitions
- B) Dimensions of personality
- C) Physique-mind and intellect, emotional stability social stability.
- D) Factors affecting the development of personality. -Traits of sportsman through sports participation.
- E) Assessment of sports personality.

Units III : Principles in sports psychology : (15 Hors)

Psychology and sports performance

- a) Principles and application.
- b) Coaching, Decisions and Research in sports psychology.

Units IV 1- : Intelligence : (15 Hors)

- A) Intelligence of sports performance

2- : Motivation

- a) Definition
 - b) Motives, Drive, Need.
- Organic motives-Emergency motives-objectives motives.

3: Learning

Theories of Learning

- 1) Association Theories of Learning.
- 2) Cognitive Theories of Learning
- 3) Cybernetic Theories of Learning

Reference:

1. Psychology in sports- by Richard in suinn, Published by- Surjeet publications T.K. Kolhapur Road, Kamala Nagar, Delhi:
2. Psychology in P.E and Sports by Dr. M.L. Kamalesh Published by Metropolitan Book Co. Pvt. Ltd. 1 Netaji Subhash Marg New Delhi. .
3. Alderman R.N. Psychological behavior in sports, Philadelphia London : Saunder Company, 1974.
4. But Dorcessusan, Psychology of sports, New York.
5. Cratty Byant J Movement behaviour and motor learning, Philadelphia : Law and Febiger, 1975.
6. Cratly, Brant J. Psychology and physical Activity anglewood : Glifs New Jesey, Prentice Hall Inc. 1978.
7. Kane J.Ed. Psychological Aspects of physical education and sports : London : routedge and Keger Paul - 1972.
8. Runi A Sports Psychology, Patiala N.S. N.I.S. 1980.
9. Singer, Rober N. Motor Learning and Human Performance, New York : Mc-Millan Publishing co-Inc. 1975.
10. Singer, Robert New coaching Athletics and psychology New-York: Mc-Macillan publishing co. Inc.
11. Tut ko and Richards , Psychology of coaching allyu iind Bacon, Inc 1971.
12. Harton D.L. & Turnage T.W. : human Learning Prendce Hall, 1976.
13. Hules S.H. Doase, James & Egeth Howard : The Psychology of Learning IV Education Mc-Graw-Hill 1979.
14. Linda K , Bunkar, Robert J. Reteils Anns Reilly : Sports, Psychology sandy sharp I thaca, New York, 3 985.
15. H.T.A. Withing K. Harmon & Others : Personality and performance. Henry Kempt on Publishers, London, 1973.

Optional Paper - III**D) Yoga and Sports Science (60 Hors)****Units I: Yoga and Scientific Research : (15 Hors)**

- d) Concept 1) Yoga 2) Chitta 3) Mind
- 4) Scientific Research
- e) Need, Importance, functions and Attainment of Yoga.
- f) Yoga and the future research

Units II: Different Schools of Yoga : (15 Hors)

- a) Raja-Yoga, b) Ashtang-Yoag c) Hath - Yoga d) Japa-Yoga e) Bhakati-Yoga f) Karma Yoga G) Integral Yoga.

Units III : Yoga and Physical Education : (15 Hors)

- a) Various systems in the body.
- b) Effect of Asans on Various Systems of the body
- c) Contribution of yoga in the field of Physical education.

Units IV : Yoga and Health (15 Hors)

- a) Definition of Health
- b) Guidelines for diet
- c) Tradition and therapy
 - 1. Yoga and Aging
 - 2. Yoga for Handicapped people
 - 3. Yoga as a Remedy for addictions
 - 4. Yoga and social problem.

Reference:

- 1. Applied Yoga : Dr. M.L. Charote. Published by Kaivaladham Lonawala.
- 2. Yoga and Research 1st Inter-rational conference, Published.
- 3. Yoga : Its various Aspects-Published by the president. Sri Ramkrishan Math- Mylapore- Madras.
- 4. Yoga-Written by Earnestwood
- 5. Raja-Yoga by Swami Vivikanand
- 6. Bhakti- Yoga by Swami Vivikanand
- 7. Karma-Yoga by Swami Vivikanand
- 8. Shri Arvind on Yoga-Edited by Rd. Indarsen Published By Orient Paper Back.
- 9. Teaching Methods for yogic practices by M.L. Gharote & S.K. Ganguly Published by Kaivalyadham- Lonavala.
- 10. Anatomy and physiology of Yogic practices by M.M. Gore published by Kaivalyadham- Lonavala.
- 11. The complete book of Yoga-by Shri Anand Published by orient paper Back, Madraja Road-Kasmirguate Delhi.
- 12. Yogendra Yoga in Physical - Education (Santarize Bombay-The Yoga institute)
- 13. Yogendra Hathyoga (Santrize Bombay- The Yoga institute)
- 14. Swami Shivanadnd Sahadana (T. Garhwal- The Devine Life Society)
- 15. Swami Shivanadnd Japa Yoga i T. Garhwal- The Devine Life Society)
- 16. Swami Shivanadnd Mcentration and meditation iyan Yoga (T Garhent) - The Devine Life Society
- 17. Sarwati Satyanand Asans, Pranayam, Bundh's Mudras, (Man diya - Shivanand Ashram)
- 18. Gherand - Uherand Samiti (Yoga Minianga)
- 19. Kuvalayana - Asanas (Yoga Mimansa)

20. Kuvalayana - Pranayam (Yoga Mimansa)
21. Yogic Theraphy- Swami Kuvalyanand & Gharote M.L. and Soli parri. Jaico Publication , Bombay.
22. Yoga and your heart-Datey K.K. Gharote M.L. and Soil parri. Jaico Publication, Bombay.
23. Light on Yoga- B.S. Lyangar.
24. Stress Management Through youga and Medition by-Panditnath, Published by sterling ublishere private Limited (10 Green park extn., New Delhi.
25. Yoga Philosophy- By S.C. Vasu. Published by Takshila Hard Bounds At & P.o. Sammspur Dist L. Jailundar. (Panjab)

Optional Paper - III

E) Scientific Approach to Techniques in Advance coaching and Training

(60 Hors)

Unit: I Identifying and development of sports talent in children and adolescents.

The skill- Acquisitions years, the aerobic and muscle development years, Identifying sports talent in children

(15 Hors)

Unit: II A- Conditioning methods to improve the motor components like, strength, speed, Endurance, flexibility, co-ordinative abilities.

B -Preparation for competitions in relation to improve various performance factors, Physical prepration technical preparation. Tactical preparation. Psychological preparation and sociological preparation.

(15 Hors)

Unit: III Analysis of sports movement in relation to sports performance (movements of Running. Jumping Throwing, Games. Like basket ball, volley-ball, loot-ball, hockey, Hand-Ball, Gymnastics, Wrestling, Table-Tennis: Lawn-Tennis, Badminton & sports activities.

(15 Hors)

Unit: IV Corrective lead up games and exercise. Remedial exercise and rehabilitation procedure after finding out the special sports injuries related to each game.

(15 Hors)

Books Recommended :

1. Sports Selection : Dr. Robert Arnot and Charles Gaines.
2. Science of sports training Hardayal Singh Ph.D.
3. Biomechanics in Sports techniques-Hay.
4. Scientific Principles of Coaching J.W. Bunn.
5. Sports medicine- Dr. P.K. Pandey
6. Psychology of Coac hing theory and application Jack H. Liewllyn and Judy A Blucker.
7. Psychole gy of coac ling-Lu ther
8. Biomechanics : E. :<riaighoam , K.M. Barthels.

Optional Paper - III

F) Tests, Measurement and Evaluation in Physical Education and sports sciences (60 Hors)

- Unit: I** a) Brief historical overview in the areas of physical education test and measurements and evaluation.
b) Need and Importance of Test and Measurements and evaluation in physical education and sports. (15 Hors)

- Unit: II** A- Criteria for selecting test:
Validity, Reliability, Objectivity, feasibility & norms.
B- The Measurements of sports skills :
• Service, smash, forehand and back hand test in badminton.
• Russel lounge Volley ball test.
• Johnson Basketball ability test.
• Dyer Tennis test.
• Macdonald Soccer test.
• Goal shooting test in Hockey.
• Skills test in Hand ball.
• Skill test in wrestling.
• Skill tests in Kabaddi.
• Skill test in Softball.
• Skill test in Kho-Kho. (15 Hors)

- Unit: III** Physical fitness test:
a) Strength test:
Kraus- Weber test, Sergeant test, Rogers strength test,
b) Motor fitness test:
J.C.R. Test, AAHPER Youth fitness Test., N.P.F.D.
c) Cardio Vascular Test:
Harward Step test, Tuttle pulse.Ratio test, Coppers 12 minutes run & Walk test, Blood pressure measurements, Treadmill test. (15 Hors)

- Unit: IV** General Motor Ability tests :
Barrow Motor ability test, Iowa Brace test, cozens test for general Athletic ability. (15 Hors)

REFERENCE:

- 1) Johnson B.C., Nelson J.K. - Practical Measurements for Evaluation in Physical Education.
- 2) Clarke H. - Application of Measurements in Physical Education.
- 3) Mathaw D. - Measurements in physical Education.
- 4) Barrow - Practical Approach to measurements in Physical Education.