

UNIVERSITY OF PUNE

Relevant Rules for Degree of Master of Philosophy (M.Phil)

1. Status:

The M.Phil degree shall have the status of an intermediate degree between the first post-graduate and Doctorate degree. It will give both research and course components and will give the student adequate background for advanced research.

2. Eligibility & Admission:

- An applicant seeking admission to the M.Phil course must have obtained a Master's degree in the concerned subject of the faculty from this or any other university.
- Admission to the M.Phil course shall be made on the basis of:
 - Satisfactory performance at the Master's Degree examination and the performance test conducted by the Department/College concerned.
- Admission to the M.Phil course shall be made at the beginning of either the 1st term or the 2nd term depending upon the convenience of the concerned department / college.

3. Duration of the course:

The M.Phil course can be done either on the full-time or on vocational basis depending upon the availability of the programme in the Department/ College.

a. Full-time course:

1. The duration of the full-time M.Phil course shall be 12 months (two terms of six months each). If an M.Phil student is unable to complete his dissertation within this period. He will be allowed to do so within additional period of one year. 1+1
2. A full-time M.Phil student shall attend lectures, tutorials, practicals and seminars and must complete to the satisfaction of the M.Phil committee the assignment prescribed for the course.

b. Vocational course:

1. The vocational M.Phil course shall extend over a period of 24 months. Such a vocational M.Phil student shall have to devote a minimum period of 4 months for his studies at the M.Phil Centre of his registration. Like a regular student, a vocational student also may be permitted to complete his dissertation within the additional period of one year. 2+1
The facility of vocational M.Phil course shall be restricted to full time teachers of colleges/Universities.
2. A vocational student must stay at the M.Phil center for at least two months in a year and must attend lectures, tutorials, practicals and seminars must complete to the satisfaction of the M.Phil committee the assignments prescribed for the course.

4. The criteria for granting admission to the vocational M.Phil programme in all the faculties will be as follows:

- a) Top preference will be given to the senior college lecturers working in Poona University colleges who need M.Phil degree in order to earn their future increments.
- b) Second preference to senior college lectures working in Poona University college who do not need M.Phil degree but want to improve their qualification.
- c) Third preference to Junior college lecturers working in Poona University colleges.
- d) Senior college lecturers working in colleges affiliated to the universities other than Poona University who need M.Phil degree for earning their increments.
- e) Senior college lecturers working in colleges affiliated to universities other than Poona University who do not need M.Phil degree but want to improve their qualification.
- f) Junior college lecturers working outside Poona University area.

The admission under the above categories will be given only on the basis of merit in each category and only when after filling the seats in the higher categories seats are vacant that the vacant seats be filled in by candidates from the lower categories.

5. The maximum period of registration for M.Phil course:

The maximum period of registration for M.Phil student shall be 3 (three) years and four years for vocational students after which the registration shall stand cancelled. If candidate's dissertation is ready the completion of 3 years period he/she may be allowed to submit his/her dissertation by registering his/her name afresh by paying the normal tuition fees due for one year for fresh registration. However, such a candidate shall be exempted from doing the M.Phil course work.

6. Content:

The M.Phil course programme shall consist of:

1. Three courses on advanced topic, including Research Methodology.
2. A dissertation based on the project work assigned to an individual student.

7. Evaluation:

- I. The evaluation of the candidate's course work and his performance at seminars will be continuous process.
- II. The evaluation of the performance of the students in the M.Phil course shall be done by the course in-charge.
- III. The dissertation will be evaluated by the guide of the candidate and an external referee appointed by the university authorities on the recommendation of the M.Phil committee.
- IV. The evaluation of the final seminar and the viva-voce test will be done by a committee consisting of the following:
 - a) A research guide to be nominated by head/Professor-in-charge of the University Department, Dean of the faculty by the dissertation supervisor-chairman;
 - b) The dissertation supervisor-Chairman
 - c) A member of the M.Phil committee to be appointed by the M.Phil committee.
- V. The evaluation of candidates for M.Phil degree shall be done according to the following grading system:

Letter Grade	Quality	Grade Points	Equivalent Numerical scale (Out of 100)
O	Outstanding	6	75-100
A	Very good	5	60-74
B	Good	4	50-59
C	Average	3	43-49
D	Below Average	2	35-42
E	Poor	1	25-34
F	Fail	0	0-24

The Examiner will award only the Letter Grade:

- VI. The performance of the candidate will be evaluated under the following heads of passing. The weight age given to each head of passing and the maximum final grade-points are as below:

Heads of passing	Weight age Factor	Maximum Final Grade Points
Group I		
Course 1	2	12
Course 2	2	12
Course 3	2	12
Group II		
Dissertation	4	24
*Seminar	1	6
*Viva-Voce	1	6
		72

* Seminar and Viva-Voce will be based on the dissertation.

- VII. Minimum final grade-points for passing: To pass a candidate should get the following minimum final grade points: Page 2 of 2

Total	Minimum Final Grade-Points
Total	.. 36
Group I	.. 16
Group II	.. 18
Course 1	.. 4
Course 2	.. 4
Course 3	.. 4
Dissertation	.. 12
Seminar	.. 3
Viva-Voce	.. 3

- VIII. In the case of dissertation the average or the total final grade points given both by the internal and external referee shall be taken as the final score. If either of the referees award a letter-grade D, E or F to a dissertation. He may resubmit the dissertation after suitable modification within a period of one year from declaration of the first result. *Only one resubmission of the dissertation is allowed.*
- IX. If the candidate has secured minimum final grade points in all the Heads of passing, then the final seminar and the viva-voce test will be arranged.
All interested persons can attend the seminar and the viva-voce test which will constitute the defence of the dissertation and they shall have the right to ask questions and participate in discussion on the dissertation. The chairman appointed in the manner prescribed above will exercise his discretion to allow or not to allow a question. However, the member of the audience at the defense shall have no right to express their opinion on the suitability or otherwise of the dissertation for the award of the M.Phil Degree.
- X. In the case of course work, a student who does not get the minimum final grade point (i.e. 4) will have to reappear for the examination in that course.
- XI. A student who have to give another seminar if he does not get the minimum grade-point (i.e. 3) in the seminar.
- XII. A student will have to reappear for viva-voce if he does not get the minimum grade-point (i.e. 3) in the viva-voce.
A student can repeat the seminar and viva-voce only once.
- XIII. Overall Grades: A candidate who is declared as passed, will be placed in Grade "O", "A" or "B" depending upon the total final grade points he secures according to the following table:

Overall Grade	Total Final Grade-Points out of 72
"O"(Outstanding)	64 to 72
"A"	50 to 63
"B"	36 to 49

A candidate securing fewer than 36 final grade points will be declared "Failed"

SYLLABUS
MASTER OF PHILOSOPHY (PHYSICAL EDUCATION) COURSE
(University of pune)

COURSE OF STUDY:

A) Vacational Course:

Although the course of study shall be of 2 years, the students must attend the same only for 4 months. The students must stay in the institute at least 2 months in 1st year and rest 2 months in 2nd year. The course of the study shall be organized as follows:

1st Year: Two compulsory theory papers:

Paper - I: Research Methodology in Physical Education;

Paper - II: Advanced statistics and computer Application to Physical Education

2nd Year:

1) Optional paper (Select only one)

2) Research work (Dissertation and viva-voce)

(N.B: - The course shall be conducted during summer and winter vacations, every year)

B) Regular Course

Although the course of study shall be of 1 year, the students must attend the same through 2 semesters of 6 months each. The students must attend the course for 6 months in 1st semester and another 6 months for 2nd semester in 1 academic year.

The course of study shall be organized as follows:

1st Semester: Two compulsory theory papers:

Paper-I: Research methodology in Physical Education

Paper-II: Advanced Statistics and computer Application to Physical Education

2nd year:

1) Optional paper (Select only one)

2) Research Work (Dissertation and viva-voce)

PAPER – I: RESEARCH PROCESSES IN PHYSICAL EDUCATION

Unit I: Introduction:

Meaning, Nature and Scope of Research. Importance of research in General and with special reference to physical education and sports. Characteristics of research and research worker.

Unit II: Basic, Applied and Action Research-their relationship and differences. Importance and methodology of Research.

Unit III: Place of Research in university, Historical perspective, relation to graduate study, organization and financing of research, problems of university sponsored research.

Unit IV: THE PROBLEM

Locate the problem – selection of the problem.

Developing problem statement.

Meaning and significance of hypothesis

Types of hypothesis.

Unit V: NON-LABORATORY RESEARCH TECHNIQUES

Historical Research:

Meaning and significance of Research.

Examining validity of historical data

Principles of Historical criticism.

Pitfalls in Historical Research

Unit VI: Philosophical studies.

Meaning and significance.

Methodology of philosophical Research

Critical thinking continuum

Unit VII: Descriptive studies-Broad survey

Questionnaire, Opinionaire and Interview Techniques.

Case studies and profiles.

Unit VIII: Laboratory Research

Experiment Designs

Unit IX: Experimental Methods

Control of experimental factors

Principles of Experimental Enquiry (Mill's Canons)

Establishing a Research Laboratory

Unit X: Research Report

Difference between Abstract, Research proposal and Research report.

Format of Research Report.

Tables and figures

Footnotes and Bibliography.

Unit X: The effects of drugs, Alcohol and smoking on performance.

Unit XI: Effect of climatic changes and high altitude on human performance.

REFERENCE BOOKS:

- ❖ John W Best, *Research Education* (Fourth Ed.) New Delhi, Prentice Hall of India, 1981.
- ❖ M.L Kamalesh – *Methodology of Research in Physical Education*. Metropolitan, New Delhi-1994
- ❖ R.H Whitney, *Techniques of Research*.
- ❖ Good, Bar, Gates, *Research in Education*
- ❖ Clarke, David H Clar Harison H; *Research processes in physical Education*, Englewood Cliffe New Jersey (Second Edition) Prentice Hall Inc. 1984
- ❖ Veit, Richard, *Research – The Student's Guide*. New York Macmillan publishing company, 1980
- ❖ Sadhu A.N Singh Amarjith; *Research Methodology in social sciences* (Fourth Ed.) Bombay Himalaya Publishing house, 1988.

Paper II: ADVANCED STATISTICS AND COMPUTER APPLICATION TO PHYSICAL EDUCATION

Unit I: Introduction to statistics: Meaning – Importance and need of statistics – Parametric and non-parametric statistics.

Unit II: Measure of central tendency – Specific characteristic and uses of central tendency.

Unit III: Percentiles and quartiles – meaning and importance - computation of percentiles and deciles

Unit IV: Measures of variability – Quartile deviation, mean deviation and standard deviation – specific characteristics and uses.

Unit V: Normal probability curve – Principals and properties of normal curve.

Unit VI: Analysis of variance: Need for analysis of variance – standard deviations of combined samples – one way analysis of variance – two way analysis of variance – post Hoc tests of significance.

Unit VII: Analysis of co-variance: Need for analysis of co-variance. Application of analysis of co-variance, control of covariates.

Unit VIII: Partial and multiple Correlations: Meaning of partial correlation. First order partial correlation – computation of partial standard deviation.

Meaning of multiple correlations – computation of multiple correlations – Difference between multiple correlation.

Unit IX: Prediction and wherry-Doolittle method: Meaning of prediction-Two variables regression equation-multiple regression equations.

Unit X: Wherry Dolittle methods of multiple correlations.

Unit XI: Special co relational and parametric methods:

Chi – Square

Rank – Difference method of correlation.

Biserial Correlation

Phi-Coefficient, contingency coefficient, curvilinear relationship.

Unit XII : Computer programming with basics; use of key boards, mouse, printing, Jumping, Branching, Looping, programmes of mean, SD, Coefficient of variation range, Largest & smallest number, correlation coefficient one way ANOVA, two-way ANOVA, Chi-square test etc.

REFERENCE BOOKS:

- ❖ Ferguson, George A. *Statistical Analysis in Psychology and Education* (Fifth Ed. Singapore, Mc Graw-hill International Book Co., 1985.
- ❖ Walpole Ronald E. *Introduction to statistic* (Third Ed.) Macmillan publishing Co., Inc., New York, 1982
- ❖ Mendenhal, Ott *Understanding statistics* (Second Ed) Belmont California Wadsworth Publishing Company Inc., 1976
- ❖ Garrett, Henry E Woodworth, R.S; *Statistics in Psychology and Education*, Bombay, Vakil & Sons Ltd. India, 1981
- ❖ *Advanced statistics* by Clark & Clarke
- ❖ Steel Robert, G. Dr and Torrid, James A,. *Principles and procedures of statistics*, New york; Mc Graw Hill Book Com, 1960.
- ❖ Garret, Harry E. and Woodworth R.S *Statistics in Psychology and Education*, Bombay, Allied Pacific private Ltd. 1981

OPTIONAL PAPER

TRAINING METHODS AND APPLIED MECHANICS

Part – 'A' TRAINING METHODS

Unit I: Principles of training and conditioning: Type of training weight training – Circuit training, Interval training – Times running, Wind sprints – Jogging miles - Fartlek training

Other factors:

Diet, Sleep-Rest muscle tone and Readiness

Unit II: Fitness: Basic of physical fitness, Basic principles in training – Basic physical characteristics fitness and training emotional fitness and psychological training.

Unit III: Strength development strength – Maximum strength – Elastic strength, Strength endurance – absolute and relative strength – external resistance and the athletes ability to express force – static muscular activity - Dynamic muscular activity – Strength development training.

Unit IV: Speed development: Speed in sports, Speed development training for speed development – the speed barrier endurance and speed training.

Unit V: Endurance development: Training methods – duration – repetition competition and testing endurance sports.

Unit VI: Mobility development: Mobility classification factors influencing mobility role of mobility.

Mobility training: Mobility unit construction – Mobility derivation.

Unit VII: Physiological effect of training.

Unit VIII: Training schedules – seasons and levels – concept of trainer system role of trainer in programme implementation.

Unit IX: Testing processes & Tools: Strength speed – Endurance vital capacity blood pressure – pulse rate. Apparatus spirometer – spignomonmeter – Leg Dynamo meter – Intra pulse apparatus.

Unit X: Measurement of social efficiency – Mc Cloy's behavior rating scale, Blarchand's scale, Cowell social behavior trend index, social acceptance evaluation – Socio metric questionnaire. Measurement of general social efficiency – Bell adjustment Inventory, Cattails sixteen personality factor questionnaire & California psychological Inventory.

Unit XI : Measurement programmes – Suggestion for administering tests. Test personnel, time for testing – Economy of tables, graphic exhibit preparation of reports – C-operative measurement projects – Central New York state projects, Oregon Pilot Physical fitness project.

Unit XII: Use of tests in meeting the individual needs.

- a) Presentation, Interpretation and use of test results.
- b) The teacher
- c) The student
- d) The parent
- e) The Administrator

PART-B APPLIED MECHANICS

Unit I: Nature and scope of applied mechanics in Physical Education movement mechanics in the Body.

Unit II: a. Concepts of applications of mechanics in sports static and dynamic balance. (Equilibrium)

Force-moment of force-centripetal and centrifugal.

Force of gravity, spin and friction, impact elasticity-levers, Newton's laws of motion velocity and acceleration types of motion-rotatory and linear motion-Angular kinetics-Linear Kinetics, Kinetics Linear Kinematics center of gravity falling bodies. Path of projection –work power and energy.

b. Guiding principles derived from the applications of above mechanical concepts.

Unit III: Hydrodynamics constructions:

Concepts and application of mechanics in sports in the aqua media-flotation. Buoyant force – specific gravity center buoyancy – Rotative motion – Fluid resistance – Gyros coping action – Guiding principles derived from the application of the above mechanical concepts in the aqua media.

Unit IV: Aerodynamic constructs:

Concepts and application of mechanics in the air media. Wind resistance, spin and gyration surface drag from drag lift the minus effect.

Guiding principles derived from the application of above mechanical concepts in the air media.

Unit V: Analysis of sports techniques:

Principles of cinematographic analysis-application of cinematographic and vedio analysis – Motor ideograms avoidance of errors of measurement.

REFERENCE BOOKS:

- ❖ Johnson C.R Fisher, A.G. *Scientific basis of Athletic conditioning Philadelphia: Lea and Febiger 1972.*
- ❖ Singh, H. *Sport training General Theory and Methods, NIS, Patiala, 1984.*
- ❖ Singh, Hardayal, *Science of sports training New D.A.V publications*
- ❖ Frances Wand Field, Dorothy Markins and John N. Cooper *Track and Field Fundamental for girls and women. London C.V. Mosby Company' 70*
- ❖ L.Matevan. *Sports training U.S.S.R publications New Delhi*
- ❖ Frank N Dich *Sports Training principles London M Lepus Book Co.*
- ❖ Arnot, Robert & Gaines, *Charles sport Talent New Zealand, Penguin Books.*
- ❖ Bunn, John W *Scientific Principles of coaching Eaglewood Cliffs N.J Prentice Hall, Inc.*
- ❖ Harre, *Diwtrich principles of sports Training Berlin, Sportsverlag.*

OPTIONAL PAPER

MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Unit I: Meaning of the term measurement and evaluation. Basic Principles and functions of measurement and Physical Education – Place of measurement and evaluation in Physical Education.

Unit II: Criteria of test selection – Scientific Authenticity, Reliability, Validity, Objectivity, Norms – Administrative feasibility and Educational application.

Unit III: Tests classification – standard test – Objective and Subjective tests.

Construction of tests: Knowledge tests (written tests) and skill tests. (Evaluation of knowledge test steps in construction of knowledge and skill tests)

Unit IV: Maturity, Nutrition, Body size and form-Nutrition – Evaluating Nutrition – Nutritional test evaluation body Dimension – Somato types – posture values – tests of Antero posterior posture – Lateral Deviation and spine foot measurement.

Unit V: Determination of center of gravity of human body – Graphic method, and Analytical method. Measurement of blood pressure, pulse rate, Respiratory rate, Respiratory volume, Tidal volume – vital capacity, Auditory and visual reaction time, body fat, Grip strength, Leg strength and flexibility.

Unit VI: Strength test – Kraus weber muscular tests – Rogers physical fitness Index – suggested changes in the PFI test.

Physiological fitness – Mc Curdy Larson test of organic efficient crampton blood – piosis test, Harvard step test cooper's 12 minutes continuous Run/Walk test.

Unit VII: Testing Instruments - Expiro graph, Peak flow meter chromatograph, Duckle method and Analytical method.

Unit VIII: Motor fitness – Oregon motor fitness test, California Physical performance tests, revised AAHPER youth fitness tests, Motor fitness tests of the armed forces. The JCR test, New York state Physical fitness test, Shafer girls motor fitness test – Evaluation of motor fitness test – sit-ups and chins. Inter relationships and self scoring.

Unit IX: General motor abilities – the concept of general motor ability equating by specific activities, equating by General abilities, strength Index –strength abilities of girls. Mc cloy's general motor ability and capacity tests. Motor educability – IOWA – Brace test. Explosive muscular vertical jump and standing broad jump.

Unit IV Operational Dynamics

Physiological changes due to Exercise and training: Effect of exercise on various systems – Oxygen debt, second wind, micro circulation. Effect of exercise and training on carbohydrates, fat and protein metabolism – control of variables in training.

Unit V Sports Ergonomics:

Work capacity under different environmental conditions such as hot humid, cold and high altitude.

Unit VI Sports Nutrition:

Physiological consideration of diet in relation to components, quantities and significance, sports and diet, Diet before during and after competition – Glycogen boosting – calorie calculator. Determination of energy cost of various activities.

Unit VII: Sex differences and sports.

Unit VIII: Effect of smoking, drinking, drugs and athletic performance, Dope Testing.

Unit IX: Aging and exercise, Basic principles and guidelines for construction of cardio-respiratory endurance exercise for the aged.

Unit X: Physical conditioning: General principles of physical training, development of Aerobic and anaerobic endurance.

Unit XI: Functional tests E.M.G.

Instrumentation

Unit XII: Physiology for the physically handicapped.

Neuro Muscular condition.

Skeleto – Muscular condition.

Cardio – Muscular condition.

REFERENCE BOOKS:

- ❖ *Clarke, Harrison, Application of measurement to physical Education, Englewood cliffs, New Jersey; Prentice Hall'76.*
- ❖ *Mathews, Donald K Measurement in Physical Education Philadelpia London W.B Saunders Co. '58*
- ❖ *Margaret H Safrit, Evaluation in Physical Education Englewood Cliffs, New Jersey; Prentice Hall Inc. ' 81*
- ❖ *Barry L. Jonson and Jack N nelson practical measurement for Evaluation in Physical Education. Delhi Surjeet publication.*
- ❖ *Barrow, Harold M, McGee Rosemary A practical approach to measurement in physical education Philadelphia Lee and Febiger, 1979.*
- ❖ *Philips, Allen. D and Bearnat James E, Measurement and evaluation in Physical Education; New York; John Willey and sons.*

OPTIONAL PAPER

SPORTS MEDICINE

Unit I: History of sports medicine – its definition aims and objectives nature and functional utility-preventive, curative and rehabilitative aspects.

Unit II: Concepts of Physical fitness – Specific fitness – definition and components of physical fitness.

Unit III: Physiological, Pathological and Pscological problems of sports-men before, during and after competition.

Unit IV: Thermoregulations and sports: Fluid balance, Climatic extreme and their possible effects on the Physiological function – Heat Exhaustion, Heat cramp, Heat stroke, exposure, Mountain sickness-High altitude and effects on performance.

Unit V: Nutrition and Hygiene: Athletic Nutrition and malnutrition High calorie diets, Role of vitamins, minerals, salts carbohydrate protein, fat loading before tournament. Hygiene of sportsmen; Athletes foot, ringworm etc. Importance and need of immunization.

Unit VI: Roll of skills, rules and regulations in the prevention of sports injuries and early rehabilitation.

Unit VII: Regional and specific injuries in track and field and other major games and their management.

Unit VIII: Common injuries and their management.

Unit IX: Somato types, Physique and performance.

Unit X: Women in sports: Special problems of female athlete.

Unit XI: Aging and Sports.

Unit XII: Sports physiotherapy; History of massage, Definition, Muscle relaxation as an aid to massage-factors to be considered in inducing relaxation-points to be considered in giving massage – classification, contra indication – effects and uses – Hydrotherapy, Sauna bath, Electrotherapy and Exercise therapy – sports therapy.

Unit XIII: Strapping and supports – Safety gadgets in sports and games.

Unit XIV: Drugs and doping medicine: Erogenic – Artificial aids, Anabolic substances – its use and misuses in sports its effects and dangers.

Unit XV: Evaluation in sports medicine-Biometric-measurement analysis interpretation for evaluation & performance – selection – prediction.

REFERENCE BOOKS:

- ❖ *Peter G Stroke A Guide to sports Medicine Churchill Livingston, Edinburg, London' 79*
- ❖ *Armstrong and Tucker Injuries and sports London Stample press.*
- ❖ *Dolan J.P Treatment and prevention of Athletic Injuries.*
- ❖ *Johnson W.R Science and Medicine of Exercise and sports, New York, Harper and Brother Publishers.*
- ❖ *Encyclopedia of Sports Science and Medicine New York Macmillan Co.*
- ❖ *Williams J.G.P. Sports Medicine, London: Edward Arnold publisher.*

OPTIONAL PAPER

EXERCISE PHYSIOLOGY

Unit I: Structure and functions of muscles:

Classification of muscles, structure of muscle tissue, various theories of muscular contraction, Hypertrophy of muscles in relation to Physical activity.

Unit II: Neuromuscular Physiology:

Neuron, Motor Unit Neuro Muscular junction, Bio-electric potential, Kinesithesis, tone moisture and equilibrium.

Unit III: Bioenergies:

Fuel for muscular work, Energy for muscular contraction, Aerobic and anaerobic system. Inter-relationship of Aerobic & Anaerobic system with special reference to different activities. Anaerobic – Threshold training.

Unit IV: Operational Dynamics

Physiological changes due to exercise and training; Effect of exercise on various systems – oxygen debt, second wind, micro circulation. Effect of exercise and training on carbohydrates, fat and protein metabolism – Control of variables in training.

Unit V: Sports Ergonomics:

Work capacity under different environmental conditions such as hot, humid, cold, and high altitude.

Unit VI: Sports Nutrition:

Physiological consideration of diet in relation to components, quantities and significance, sports and diet, diet before, during and after competition-Glycogen boosting-calorie calculator. Determination of energy cost of various sports activities.

Unit VII: Sex differences and sports.

Unit VIII: Effect of smoking, drinking, drugs and athletic performance, dope testing.

Unit IX: Aging and Exercise, Basic principles and guidelines for construction of Cardio-respiratory endurance exercise for the aged.

Unit X: Physical conditioning.

General principles of physical training, development of muscular strength and local endurance, development of aerobic and anaerobic endurance.

Unit XI: Functional tests EMG., Instrumentation.

Unit XII: Physiology for the physically handicapped.

- a) Neuro Muscular condition.
- b) Skeleto-Muscular condition.
- c) Cardio- Muscular condition.

REFERENCE BOOKS:

- ❖ *Astrance, P.O and K. Rodhal Text Book of work physiology. New York, McGraw Hill Book company.*
- ❖ *Berger, A.R Applied Exercise Physiology, Philadelphia lea and Febiger.*
- ❖ *Clarke, David M. Exercise Physiology. Englewood Cliffs, New Jersey, Prentice Hall Inc.*
- ❖ *Curtain T.K The Physiological Effects of Exercise programme on Adults, Springfield; Charles C Thomas publisher.*
- ❖ *De Vriv V.A Physiology of exercise for physical Education and Athletic, staples press, London, 1976.*
- ❖ *Karpovich, P.V and siuning W.F. Physiology of Muscular Activity.*
- ❖ *Shaver L.G. Essential of exercise Physiology, New Delhi: Surjeet publications.*

- ❖ Noble, Bruce J. *Physiology of exercise and sports*, Saint Louis; Time/Mirror/Mosby College publishing.
- ❖ Sundarajan G.S *sports medical lecture*, Madras, Rasha publication.
- ❖ Welsh R. Peter and Roy, J. Shafer (Eds). *Current therapy in sports medicine*. Toronto: B.C. Becker Inc.

OPTIONAL PAPER

SPORTS PSYCHOLOGY

1. The history and development of sports Psychology.
2. Psychology of play
 - Traditional theories of play
 - Twentieth century theories of play
3. Psychology of motor learning
 - Measuring of the term, perceptual motor learning, the retention of motor skills, transfer of skill, measurement of learning curve. Attention and its role in learning motor skill.
4. Children in Sports
 - Early Psychological experience, motivation of children in sport emotions of children in sport, Child and Coach, Children and competitive sports.
5. Women in sport-issues and controversies.
6. Physical activity and the psychological development of the handicapped.
7. Personality of sportsmen and coach:
 - Nature of personality, the issue of heredity in personality, personality traits and sportsmen, assessment of personality traits the coach and his personality.
8. Motivation in Sports:
 - Theories in/or/motivation, achievement motivation, Level of aspiration and achievement, methods and assessing aspiration level, motivation and participation in the Physical activity dropouts in sports.
9. Socio psychological dimension of sport:
 - Sport performance in groups, team cohesion, socio – metry in sport, leadership in sport, sport audience and their effect on performance.
10. Psychology of competition:
 - Psychological characteristics of pre-during and post competition (Anxiety, Fear, Frustration) Mental training.
 - Psychological preparation for competition – autogenic training.
11. Psycho dynamics in sports
12. The evaluation of superior Athlete
 - a) A typology of Athletics activities based upon their Psychological demands.
 - b) Personality assessment.
 - c) Assessing the Athlete through field tests.
 - d) Motives of superior athletes.
 - e) Psychological preparation of the superior athlete.
13. Aggression and performance:
 - a. Theories of Aggression
 - b. Aggression in Athletic competition
 - c. Sex differences in Aggression
 - d. Instruction in Aggression
14. Activation:
 - b. Basic research findings.
 - c. Activation in sports, research findings.
 - d. Method of adjusting activation levels of athletes.

REFERENCE BOOKS:

- ❖ *Vanke Microlave: Bryant Cratty J. Psychology and the Superior Athletic, The Mamillian Co., London.*
- ❖ *Craty Bryant, J. Psychology in contemporary Leadership. Englewood Cliffs; Prentice-Hall Inc. New Jersey.*
- ❖ *Suin Richard, M. Psychology in sports Methods and Application. Collarado state University, Fort Williams, Colorado, Surjeet publications, Delhi.*
- ❖ *Lee Wekyn Tackh, Judy Al Bliner Psychology of coaching, Theory and Application. Florida International University, Miami Florida Reprinted by surjeet publications, New Delhi.*
- ❖ *Gratty Bryant, J. Movement Behaviour and motor Learning. Philadelphia: Lea and Febiger, 1989.*
- ❖ *Gratty Bryant, J. Career potential in Physical Activity. Englewood Cliffs, New Jersey's, Prentice Hall Inc.*
- ❖ *Gratty Bryant, Psychology in Contemporary sports. Englewood Cliffs, New Jersey, Prentice Hall Inc.*
- ❖ *Singer Robert N. Motor Learning and Human Performance. New York: Mc Millian Company, 1975.*
- ❖ *J.H Schultz and W.Luther "Autogenic Therapy "Grune and Staratton New York and London.*
- ❖ *Cox, Richard H. (1985) Sport Psychology concepts and Application Wmc Brown Publishers.*
- ❖ *Welsh R. Peter and Roy J.Shafer (Eds) Current Therapy in Sports and Medicine, Toronto: B.C Becker Inc.*

OPTIONAL PAPER

YOGA, HHEALTH AND FITNESS

Unit I: Understanding of Yoga

Yoga – Definition of Yoga – Steps, Asanas: Definitions of objectives, aims

Pranayama – Definition, Aims & Objectives, Mechanism of Pranayama.

Kriyas, Bandhas, Mudras.

Cardinal principals of Yoga practices.

Unit II: Philosophical Foundation of Yoga

Yogic texts & Yoga Philosophy.

Patanjali Yoga

Yoga, Mysticism & Cultural Synthesis.

Unit III: Scientific Foundation of Yoga

Various physiological systems in the body

Deep breathing, Normal breathing – Pranayamic breathing.

Scientific explanation of Asanas & Exercises

Physiological implications of different yogic practices.

Unit IV: Yoga Psychology & Mental Health

Meaning & Nature

Characteristic of mental health in Western Psychology and Yoga.

Interpretation of Psychological disturbance in terms of yoga.

Mechanism of Patanjala Yoga in controlling psychosomatic disorders.

Unit V: Yoga, Health & Fitness

Health related fitness

Role of yoga in health & fitness.

Nostril dominance in relation to health, fitness and performance.

Injuries in yoga and remedies.

Unit VI: Yogic Diet

Philosophy of yogic Diet

Process of eating

Balance diet & concept of Ahara (Svattik, Rajasik & Tamsik)

Diet & Behaviour

Unit VII: Yoga practicals (as suggested by Swami Kuvalyananda)

Short course in Yoga

Easy course in yoga

Full course in Yoga

Unit VIII: Yoga Practicals

Methods of Teaching & Learning

Yoga Lesson Planning

Practice Teaching (one lesson)

REFERENCE BOOKS:

- ❖ Gharote M.L., & Ganguly, S.K. "Practice Teaching in Yoga". Lonavla (India): Kaivalyadhama S.M.Y.M.Samiti.
- ❖ Karambelkar, P.V. "Patanjala Yoga Sutra". Lonavla (India): Kaivalyadhama SMYM Samiti.
- ❖ Kuvalayananda, Swami. "Asanas". Lonavla (India): Kaivalyadhama SMYM Samiti.
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- ❖ Bera, T.K. et al. "Yoga Education: Teaching, Learning & Therapy". Kolkata (India): Vidyasagar Tech. Institute of Physical Education & Sports, Nazir Bazar, Kismat Bajkul-721 655, Purba Medinipur, West Bengal.