

**SCHEME OF EXAMIANCTIONS FOR M.PHIL PROGRAMME IN PHYSICAL  
EDUCATION (SESSION 2014-15)**

**Semester I**

<b>Paper</b>	<b>Nomenclature</b>	<b>Written Theory</b>	<b>Internal Max Marks</b>	<b>Total Marks</b>
<b>I</b>	<b>Research Methodology</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>II</b>	<b>Statistics in Physical Education</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>III</b>	<b>Computer Application</b>	<b>80</b>	<b>20</b>	<b>100</b>
	<b>Total</b>	<b>240</b>	<b>60</b>	<b>300</b>

**Semester II**

<b>Paper</b>	<b>Nomenclature</b>	<b>Written Theory</b>	<b>Internal Max Marks</b>	<b>Total Marks</b>
<b>IV</b>	<b>Measurement Evaluation in Physical Education.</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>V</b>	<b>Optional</b> a) Sports Bio-mechanics b) Sports Psychology c) Sports Management	<b>80</b>	<b>20</b>	<b>100</b>
<b>VI</b>	<b>Dissertation</b>	<b>200 (150+50)</b>		
	<b>Total</b>	<b>400</b>		
	<b>Grand Total</b>	<b>300+400=700</b>		

**Note:-** Paper III is an optional paper, out of these three options candidate is required to choose one as per his/her choice.

**Dissertation and Viva-voce examination would be assessed by the external examiner and would be awarded grade.**

**DISSERTATION**

**The scholar will be required to write a dissertation on a selected topic in the second semester. The dissertation may include the results of original research empirical or documentary or a fresh interpretation of existing knowledge of data.**

## **Paper-I RESEARCH METHODOLOGY**

Time – 3 hours

Max. Marks = 100

External marks: 80

Internal marks: 20

### **NOTE:-**

#### **(a) For paper setter**

1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

#### **(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

### **UNIT –I**

#### **RESEARCH**

- Meaning, Need, Nature and scope of Research in Physical Education
- Characteristics of a good research
- Fundamental, applied and action research
- 

#### **REVIEW OF LITERATURE**

- Importance, location of the research material – index, books, bibliography, reviews and abstract, critical literature and allied literature
- Steps in reviewing literature
- Not taking, scanning and skimming,

### **UNIT-II**

#### **RESEARCH PROBLEM**

- Identification of area for research in Physical Education
- Selection of problem
- Delimitation and operationalization of variables

#### **HYPOTHESIS**

- Meaning and Importance
- Characteristics of good hypothesis
- Sources (iv) Types of hypothesis

### **UNIT-III**

#### **METHODS OF RESEARCH**

- Historical
- Descriptive
- Experimental
- Philosophical

#### **RESEARCH DESIGN**

- Meaning of research design and its importance
- Type of research design

### **UNIT-IV**

#### **SAMPLING**

- Concept of population and sample
- Method of sampling : Probability and non-probability

#### **TOOLS & TECHNIQUES**

- Characteristics of a good research tools
- Questionnaire, Interview, Observation, Psychological Test, Sociometric Techniques, Attitude Scale, Inventories

#### **REPORT WRITING**

- Developing research proposal (synopsis)
- Characteristics of a good research report
- General format of a research report

### **REFERENCE**

1. Aggarwal, Y.P. (1998) The Science of Educational Research, A Source book, Nirmal, Kurukshetra.
2. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.
3. Good: C.V. and Douglas, E.Scates 1954, Methods in Social Research, Mcgraw Hill, New York.
4. Kou, Lokesh (1988), Methodology of Research, Vikas, New Delhi.
5. Mouly, A.J. (1963), The Science of Educational Research Euroasia, New Delhi.

**Paper-II**                      **STATISTICS IN PHYSICAL EDUCATION**

Time – 3 hours

Max. Marks = 100

External marks: 80

Internal marks: 20

**NOTE:-**

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2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.

Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

**STATISTICS**

- Meaning and importance in Physical Education

**DATA**

- Method of organizing data through frequency distribution

**MEASURE OF CENTRAL TENDENCY** (meaning and computation)

- Mean, Median, Mode.

**UNIT-II**

**MEASURES OF DISPERSION** (Meaning & Computation)

- Range
- Quartile Deviation
- Average Deviation
- Standard Deviation

**MEASURES OF RELATIVE POSITION**

- Meaning & Computation
- Percentile
- Percentile rank

**UNIT-III**

**NORMAL PROBABILITY CURVE**

- Meaning
- Characteristics
- Application
- Skewness and Kurtosis

**CORRELATION**

- (Meaning uses and computation)
- Product Moment Correlation Rank Difference Correlation (a) Partial and Multiple (b) Phi and Tetrachoric

**UNIT-IV**

**ANALYSIS OF VARIANCE**

- Meaning, Assumption and Computation (a) One way Anova (b) Two way Anova

**CHI-SQUARE**

- tests of equality and Independence (Meaning, Assumption and Computation)

**T -TEST:**

- Significance of difference between two means (independence samples)

**REFERENCE**

1. Siegel, S. (1986), Non-parametric Statistic, Mcgraw Hill, New York.
2. Van Dalen, D.B., (1992), Understanding Educational Research, McGraw Hill, New York.
3. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.

**PAPER-III**  
**Computer Applications**  
**(SEMESTER-I)**

**Max. Marks: 80**  
**Int. Marks : 20**  
**Time: 3 hours**

**NOTE:-**

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2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
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**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

- Definition of Computer, Block diagram of computers, classification of computers, role of computer in Physical Education.
- Components of Computer  
Hardware {CPU, Monitor, Keyboard etc.)  
Software (DOS, Basic, Colbol}

**UNIT-II**

- What is an OS? Functions of an OS?
- OS as a resource manager, Types of OS, Features of OS, Concepts of warm & Cold booting, swapping, spooling and buffering.

**UNIT-III**

**MS-office and data Analysis Software**

- Word-Introduction of word processor, creating & saving documents.
- Excel- Introduction to excel, need of spreadsheet, creating, opening & saving workbook, editing worksheet, using links, applying different views, Types of functions.
- Power Point-Introduction of slides, speaker notes, media clips, graphs, picture, web pages, adding different kind of slides, working with Power Point, inserting text objects, formatting Text.
- Introduction to Data analysis software SPSS & application of t-test, Chi square and Anova through SPSS Soft-ware.

**UNIT-IV**

- Introduction
- Evaluating internet resources: Authority, Accuracy and objectivity.
- Brief note on e-books and virtual library.
- UGC-infonet, INFLIBNET and ERNET.
- What is Plagiarism and how to avoid it?

## M.Phil.

### Paper- Measurement Evaluation in Physical Education (SEMESTER-2<sup>nd</sup>)

**Max. Marks: 80**

**Int. Marks: 20**

**Time: 3 hours**

#### NOTE:-

##### (a) For paper setter

1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

##### (b) for candidates

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

#### UNIT-I

##### Measurement and Evaluation

- Measurement (Meaning and its levels)
- Evaluation
  - a) Meaning
  - b) Need and Importance
  - c) Characteristics
  - d) Formative and Summative Evaluation
  - e) External and Internal Evaluation (Advantages and disadvantages)
- Inter relationship between measurement and evaluation

#### UNIT-II

- Test Meaning & Importance
- Test for strength, Endurance, speed, flexibility & agility
- Administration of various fitness test
- **Agility test:** (a) Zigzag test (ii) Burpee test
- **Mobility & Balance:** Sit & Reach test (b) Trunk flexion test (c) Hip flexion test
- **Strength:** Chin-up test (b) Grip Strength test
- **Speed & Power:** 60 meter speed test (b) 400 meter sprint test

#### UNIT-III

##### CHARACTERISTICS OF A GOOD MEASURING INSTRUMENT

- Reliability (Concept and Procedures of Estimation)
- Validity (concept and Procedures of Estimation)
- Norms
- Usability

#### UNIT-IV

##### TEST STANDARIZATION

- Norm Referenced and Criteria Referenced
- Test, Standard Scores, T-scores
- Construction and standardization of Test
- Interpretation of Test Scores and Methods of Feedback to students.

#### References:

1. Measurement & Evaluation in Physical Education and Exercise Science – by Alan C. Lacy, Benjomin Cummings 2010

**M.Phil.**  
**Paper-II (Optional-a)**  
**BIO-MECHANICS IN PHYSICAL EDUCATION & SPORTS (a)**  
**(Semester-2<sup>nd</sup>)**

**Max. Marks: 80**  
**Int. Marks: 20**  
**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

**UNIT-I**

- Meaning Definition: functions and importance of Biomechanics in Phy. Edu and Sports
- Forms of Motion: Translatory: Rotatory and General
- Linear Kinematics: Speed and Velocity: acceleration; Acceleration due to Gravity; Vector and Scalar: Resultant Vector; Vector Components; Projectile Motion. Kinematics

**UNIT-II**

- Angular displacement and Angular distance; Torque; Angular Intertia; Angular Momentum
- Meaning of Force; Classifying Forces (Internal & External) Resolution of Forces: Static-Equilibrium
- Newtons Laws of Motion: Law of Inertia: Law of acceleration: Law of Action and Reactions
- Definition of Levers: Classes of lever and application of levers: Advantages of Lever

**UNIT-III**

- Spin and its types
- Effect of spin on speed and direction on the object on surface
- Effect of spin on Speed and direction of the object in air
- The magnus Effect
- Drag: Skin Friction; Profile Drag: Effects of Stream lining on Drag
- Terminal Velocity
- Fluid Mechanics: Buoyant Force: relative Motion: fluid Resistance

**UNIT-IV**

- Bio-mechanical Analysis and its types
- Qualitative Bio-mechanical Analysis to improve Technique
- Analysis of Sports Techniques
- Track: i) Running Basic consideration
  - ii) Sprint (Start & Running): Leg action, (Support, Drive and Recovery Phases)
  - iii) High Hurdling: Approach; take off; Flight; between hurdles
- Field (Jumping) (i) High Jump (Fosbury Flop): Run up; take off; Bar clearance and landing
  - (ii) Long Jump (Hang style) Run up: take off; Flight and Landing
- Field (Throws) (i) Shotput (O'Brain-style) Initial stance; Glide; Delivery and Reverse (ii) Javelin: Grip: Carry: Run; withdrawal: Cross Step and Reverse

**M.Phil.**  
**Paper-V (Optional)**  
**SPORTS PSYCHOLOGY (b) (Semester – 2<sup>nd</sup>)**

**Max. Marks: 80**  
**Int. Marks: 20**  
**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

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2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit. Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I INTRODUCTION OF SPORTS PSYCHOLOGY**

Definition of Psychology and Sports Psychology, Scope of sports Psychology, Methods and Utility of Psychology in Physical & Sports.

**UNIT-II TRANSFER OF TRAINING**

Various types of transfer of training.  
Different theories, importance of transfer of training  
Conditions of motor skill learning  
Competition as a social necessity  
Competition and Motivation  
Competition and Co-operation and its significance in sports.

**UNIT-III PSYCHING UP TECHNIQUES FOR SPORTS PERFORMANCE**

Goal Setting  
Pap talks  
Bulletin Boards, Mass Media, Fan Support  
Pre-competitive work out, Post competition evaluation  
Guidelines for improving sports performance.

**UNIT-IV INDIVIDUAL DIFFERENCES & ADJUSTMENT**

Various causes, Different Types, The role of a Coach/Physical Education teacher to minimize the differences  
Various level of adjustment, Home Family, School  
Environments and adjustment in sports competition

**ASSIGNMENTS**

Sociometric test, Personality Test (16 P.F.)  
Sports Competition anxiety test.  
H.S. Ashtnana's adjustments inventory.

**REFERENCE**

1. Bhatia, Hans Raj, Test Book of Education Psychology, Delhi: Macmillan,2003.
2. Rouben.B.Frost : Psychological concepts applied to Physical Education and Coaching,  
Edition, Wesley Publishing Co.London.
3. Dridge & Hung : Psychological foundations of Education. Harper and Row Publishers.
4. Jain, D.,Introduction to Psychology, New Delhi: K.S.K,2003.
5. Kamlesh, M.L.Education Sports Psychology, New Delhi, Friends Pub.,2006.



6. Kamlesh, M.L., Key Ideas in Sport Psychology, New Delhi, Friends Pub. 2007  
Kutty, S.K Foundations of Sports & Exercise Psychology, New Delhi: Sports, 2004.
7. Robert.S.Weinberg - Foundations of Sports and Exercise Psychology (Third Edition)  
Daniel Gould
8. Jack H.Liewellyn - Psychology of Coaching : Theory and Application (Surjeet  
Publisher New  
Judy A. Blucker Delhi)
9. Jashwant Kaur Virk - Psychology of Teaching and Learning (Twenty First Century  
Publication  
Pardeep Kumar Sahu Patiala.2008)

**M.Phil**  
**PAPER-V(OPTIONAL)**  
**(c) SPORTS MANAGEMENT (SEMESTER-2<sup>nd</sup>)**

**Max. Marks: 80**  
**Int. Marks: 20**  
**Time: 3 hours**

**NOTE:-**

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3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

- Scope and Concept of Sports Management, (Element or Function)
- Management, its advantages, organizing in Sports, staffing controlling in sports, Importance and Philosophy of Sports Management system and profession.
- Scope and concept of Administration, relation between administration Sports Management, Importance of Sports administration, planning, organization, resource mobilization, Principles of Planning, Pol standard practices.

**UNIT-II**

- Organizational elements, rules and regulations, procedure and attributes of an organization, delegation of authority and division of power, Destination characteristics of delegation, organization dynamics, open and close advantages and disadvantage, type of organizations, line organizational structure, their functional pattern, manpower plan features of human resources, controlling and development organizational structures and practices.

**UNIT-III**

- Designation, meaning of leadership, its personality traits, leadership managerial grid, qualities of leader, leadership and managerial behavior approach, co-ordination: its definition, Principle and techniques co-ordination. Motivation for sports, enhancement of motivation, motivation in sports organizations and participation, motivator in sports, organizations and participation, incentive as motivator sports.
- Direct and Indirect public relation, importance of public relation media, press relations, qualities of good PRO, correspondence and public relation establishment, community involvement and relations.

**UNIT-IV FINANCE AND BUDGET FOR SPORTS**

- Infrastructure, equipment, salaries, rewards, rising of funds, funds-drives, budget: functional budget, works expenses budget, performance budgeting, management of denial resources.
- Physical Education Programmers, Teaching Methods, Class Management Intramural, recreational and leisure services, planning, construct maintenance of facilities, use of computer. Inter scholastic & Inter Collegiate athletics and competitions, School Health Education.

**REFERENCES**

1. Administration of Physical Education and Athletics/Sports practices, Reubden D.Frost, Barbura Bay Lckgart, Stanlay J. Manchsal Universal Book Stall, 5 Ansari Road, New Delhi.
2. Sports Management, Sudhanca Shekhar Ray, Friends Pub. (India) Delhi 110089
3. Organization and Administration of Physical Education, S.Dher/Radhika Kamal

**PRACTICAL:            ONE PROJECT REPORT IS TO BE PREPARED BY THE CANDIDATE OUT OF THE SUBJECTS/TOPICS**

1. Organization of College/School athletic/sports tournament Report.
2. Preparation of School/College/Institutional budget & Management of Sports Material/Purchase and disposal of old material maintenance facilities and records.
3. Health Education Programmer at Institutional level.
4. Project Report on public relation of Sports Official and Preparation news bulletin report to be sent to the new pages/media electronic (Press)
5. Preparation of Physical Education Programmer for School/College viva-voce examination of the project report by the Examiner.

## **Paper-I RESEARCH METHODOLOGY**

Time – 3 hours

Max. Marks = 100

External marks: 80

Internal marks: 20

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**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

### **UNIT –I** **RESEARCH**

- Meaning, Need, Nature and scope of Research in Physical Education
- Characteristics of a good research
- Fundamental, applied and action research
- 

### **REVIEW OF LITERATURE**

- Importance, location of the research material – index, books, bibliography, reviews and abstract, critical literature and allied literature
- Steps in reviewing literature
- Not taking, scanning and sbimming,

### **UNIT-II** **RESEARCH PROBLEM**

- Identification of area for research in Physical Education
- Selection of problem
- Delimitation and operationalization of variables

### **HYPOTHESIS**

- Meaning and Importance
- Characteristics of good hypothesis
- Sources (iv) Types of hypothesis

### **UNIT-III** **METHODS OF RESEARCH**

- Historical
- Descriptive
- Experimental
- Philosophical

### **RESEARCH DESIGN**

- Meaning of research design and its importance
- Type of research design

### **UNIT-IV** **SAMPLING**

- Concept of population and sample
- Method of sampling : Probability and non-probability

### **TOOLS & TECHNIQUES**

- Characteristics of a good research tools
- Questionnaire, Interview, Observation, Psychological Test, Sociometric Techniques, Attitude Scale, Inventories

### **REPORT WRITING**

- Developing research proposal (synopsis)
- Characteristics of a good research report
- General format of a research report

### **REFERENCE**

4. Aggarwal, Y.P. (1998) The Science of Educational Research, A Source book, Nirmal, Kurukshetra.
5. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.
6. Good: C.V. and Douglas, E.Scates 1954, Methods in Social Research, Mcgraw Hill, New York.
7. Kou, Lokesh (1988), Methodology of Research, Vikas, New Delhi.
8. Mouly, A.J. (1963), The Science of Educational Research Euroasia, New Delhi.

**Paper-II                      STATISTICS IN PHYSICAL EDUCATION**

Time – 3 hours

Max. Marks = 100  
External marks: 80  
Internal marks: 20

**NOTE:-**

**(a) For paper setter**

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3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

**STATISTICS**

- Meaning and importance in Physical Education

**DATA**

- Method of organizing data through frequency distribution

**MEASURE OF CENTRAL TENDENCY** (meaning and computation)

- Mean, Median, Mode.

**UNIT-II**

**MEASURES OF DISPERSION** (Meaning & Computation)

- Range
- Quartile Deviation
- Average Deviation
- Standard Deviation

**MEASURES OF RELATIVE POSITION**

- Meaning & Computation
- Percentile
- Percentile rank

**UNIT-III**

**NORMAL PROBABILITY CURVE**

- Meaning
- Characteristics
- Application
- Skewness and Kurtosis

**CORRELATION**

- (Meaning uses and computation)
- Product Moment Correlation Rank Difference Correlation (a) Partial and Multiple (b) Phi and Tetrachoric

**UNIT-IV**

**ANALYSIS OF VARIANCE**

- Meaning, Assumption and Computation (a) One way Anova (b) Two way Anova

**CHI-SQUARE**

- tests of equality and Independence (Meaning, Assumption and Computation)

**T -TEST:**

- Significance of difference between two means (independence samples)

**REFERENCE**

1. Siegel, S. (1986), Non-parametric Statistic, Mcgraw Hill, New York.
2. Van Dalen, D.B., (1992), Understanding Educational Research, McGraw Hill, New York.
3. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.

**PAPER-III**  
**Computer Applications**  
**(SEMESTER-I)**

**Max. Marks: 80**  
**Int. Marks : 20**  
**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

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**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

- Definition of Computer, Block diagram of computers, classification of computers, role of computer in Physical Education.
- Components of Computer  
Hardware {CPU, Monitor, Keyboard etc.)  
Software (DOS, Basic, Colbol}

**UNIT-II**

- What is an OS? Functions of an OS?
- OS as a resource manager, Types of OS, Features of OS, Concepts of warm & Cold booting, swapping, spooling and buffering.

**UNIT-III**

**MS-office and data Analysis Software**

- Word-Introduction of word processor, creating & saving documents.
- Excel- Introduction to excel, need of spreadsheet, creating, opening & saving workbook, editing worksheet, using links, applying different views, Types of functions.
- Power Point-Introduction of slides, speaker notes, media clips, graphs, picture, web pages, adding different kind of slides, working with Power Point, inserting text objects, formatting Text.
- Introduction to Data analysis software SPSS & application of t-test, Chi square and Anova through SPSS Soft-ware.

**UNIT-IV**

- Introduction
- Evaluating internet resources: Authority, Accuracy and objectivity.
- Brief note on e-books and virtual library.
- UGC-infonet, INFLIBNET and ERNET.
- What is Plagiarism and how to avoid it?

**M.Phil.**

**Paper- Measurement Evaluation in Physical Education  
(SEMESTER-2<sup>nd</sup>)**

**Max. Marks: 80**

**Int. Marks: 20**

**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

4. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
5. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
6. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

**Measurement and Evaluation**

- Measurement (Meaning and its levels)
- Evaluation
  - i. Meaning
  - ii. Need and Importance
  - iii. Characteristics
  - iv. Formative and Summative Evaluation
  - v. External and Internal Evaluation (Advantages and disadvantages)
- Inter relationship between measurement and evaluation

**UNIT-II**

- Test Meaning & Importance
- Test for strength, Endurance, speed, flexibility & agility
- Administration of various fitness test
- **Agility test:** (a) Zig-zag test (ii) Burpee test
- **Mobility & Balance:** Sit & Reach test (b) Trunk flexion test (c) Hip flexion test
- **Strength:** Chin-up test (b) Grip Strength test
- **Speed & Power:** 60 meter speed test (b) 400 meter sprint test

**UNIT-III**

**CHARACTERISTICS OF A GOOD MEASURING INSTRUMENT**

- Reliability (Concept and Procedures of Estimation)
- Validity (concept and Procedures of Estimation)
- Norms
- Usability

**UNIT-IV**

**TEST STANDARIZATION**

- Norm Referenced and Criteria Referenced
- Test, Standard Scores, T-scores
- Construction and standardization of Test
- Interpretation of Test Scores and Methods of Feedback to students.

**References:**

1. Measurement & Evaluation in Physical Education and Exercise Science – by Alan C. Lacy, Benjomin Cummings 2010



**M.Phil.**  
**Paper-II (Optional)**  
**BIO-MECHANICS IN PHYSICAL EDUCATION & SPORTS (a)**  
**(Semester-2<sup>nd</sup>)**

**Max. Marks: 80**  
**Int. Marks : 20**  
**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**NOTE:-**

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1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
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**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks.

**UNIT-I**

Meaning of Bio-mechanics function & importance in sports  
Linear Kinematics, Angular Kinematics  
Linear Kinematics  
Angular Kinematics

**UNIT-II BALANCE AND EQUILISIU**

Various stages of stability on which stability depends  
Guiding principles of stability  
What is motion causes of motion, kinds of motion & factors modifying motion?  
Newton's Laws of motion and its application in sports.

**UNIT-III SPECIAL FACTOR SAFFECTING PERFORMANCE FORCE**

Nature of force, magnitude of force, point of application of direction of force  
Component of force, torque (moment) summation of movement transfer of momentum.  
Parallelogram of force, Effect of gravity, determination of location of high point of flight, optimum projection and angle for greatest distance special application for principles of projectiles. Shot-put, broad jump, high jump, javelin and shooting in Basketball.

**UNIT-IV LIVER & FLUID MECHANICS AND MECHANICAL PRINCIPLE INVOLVED**

Definition and description of elements of liver  
Advantage of liver in sports, Movement arm length specific of each pattern  
Under arm pattern, Over arm pattern side arm pattern  
Pushing and pulling pattern

**ASSIGNMENTS**

Find out the C.G. of human being in a stationary position with movements of the segments of the body.

Find out the C.G. of human being with different movement implements.

Analysis of movements. A subject will be provided to the candidate will write detail reports of his movements. The examiner will give topic of movements. Lever: Advantages of lever and demonstration of its functioning Equilibrium and demonstration of its various positions.

**M.Phil.**  
**Paper-V (Optional)**  
**SPORTS PSYCHOLOGY (b) (Semester – 2<sup>nd</sup>)**

**Max. Marks: 80**  
**Int. Marks: 20**  
**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

1. Paper setter will set 9 questions in all, out of which students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit. Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I INTRODUCTION OF SPORTS PSYCHOLOGY**

Definition of Psychology and Sports Psychology, Scope of sports Psychology, Methods and Utility of Psychology in Physical & Sports.

**UNIT-II TRANSFER OF TRAINING**

Various types of transfer of training.  
Different theories, importance of transfer of training  
Conditions of motor skill learning  
Competition as a social necessity  
Competition and Motivation  
Competition and Co-operation and its significance in sports.

**UNIT-III PSYCHING UP TECHNIQUES FOR SPORTS PERFORMANCE**

Goal Setting  
Pap talks  
Bulletin Boards, Mass Media, Fan Support  
Pre-competitive work out, Post competition evaluation  
Guidelines for improving sports performance.

**UNIT-IV INDIVIDUAL DIFFERENCES & ADJUSTMENT**

Various causes, Different Types, The role of a Coach/Physical Education teacher to minimize the differences  
Various level of adjustment, Home Family, School  
Environments and adjustment in sports competition

**ASSIGNMENTS**

Sociometric test, Personality Test (16 P.F.)  
Sports Competition anxiety test.  
H.S. Ashtnana's adjustments inventory.

**REFERENCE**

1. Bhatia, Hans Raj, Test Book of Education Psychology, Delhi: Macmillan,2003.
2. Rouben.B.Frost : Psychological concepts applied to Physical Education and Coaching,  
Edition, Wesley Publishing Co.London.
3. Dridge & Hung : Psychological foundations of Education. Harper and Row Publishers.
4. Jain, D.,Introduction to Psychology, New Delhi: K.S.K,2003.
5. Kamlesh, M.L.Education Sports Psychology, New Delhi, Friends Pub.,2006.

6. Kamlesh, M.L., Key Ideas in Sport Psychology, New Delhi, Friends Pub. 2007  
Kutty, S.K Foundations of Sports & Exercise Psychology, New Delhi: Sports, 2004.
7. Robert.S.Weinberg - Foundations of Sports and Exercise Psychology (Third Edition)  
Daniel Gould
8. Jack H.Liewellyn - Psychology of Coaching : Theory and Application (Surjeet  
Publisher New  
Judy A. Blucker Delhi)
9. Jashwant Kaur Virk - Psychology of Teaching and Learning (Twenty First Century  
Publication  
Pardeep Kumar Sahu Patiala.2008)

**M.Phil**  
**PAPER-V(OPTIONAL)(c)**  
**SPORTS MANAGEMENT (SEMESTER-2<sup>nd</sup>)**

**Max. Marks: 80**

**Int. Marks: 20**

**Time: 3 hours**

**NOTE:-**

**(a) For paper setter**

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2. Question No. 1 will be compulsory and will carry 16 marks. It will comprise of 8 short answer type questions of 2 marks each to be selected from the entire syllabus.
3. Two long answer type questions will be set from each of four units, out of which the students will be required to attempt one question from each unit. Long answer type questions will carry 16 marks each.

**(b) for candidates**

1. Attempt five questions in all, selecting atleast one question from each unit.  
Question No. 1 is compulsory. All questions carry equal marks

**UNIT-I**

Scope and Concept of Sports Management, (Element or Function) Management, its advantages, organizing in Sports, staffing controlling in sports, Importance and Philosophy of Sports Management system and profession.  
Scope and concept of Administration, relation between administration Sports Management, Importance of Sports administration, planning, organization, resource mobilization, Principles of Planning, Pol standard practices.

**UNIT-II**

Organizational elements, rules and regulations, procedure and attributes of an organization, delegation of authority and division of power, Destination characteristics of delegation, organization dynamics, open and close advantages and disadvantage, type of organizations, line organizational structure, their functional pattern, manpower plan features of human resources, controlling and development organizational structures and practices.

**UNIT-III**

Designation, meaning of leadership, its personality traits, leadership managerial grid, qualities of leader, leadership and managerial behavior approach, co-ordination: its definition, Principle and techniques co-ordination. Motivation for sports, enhancement of motivation, motivation in sports organizations and participation, motivator in sports, organizations and participation, incentive as motivator sports.  
Direct and Indirect public relation, importance of public relation media, press relations, qualities of good PRO, correspondence and public relation establishment, community involvement and relations.

**UNIT-IV FINANCE AND BUDGET FOR SPORTS**

Infrastructure, equipment, salaries, rewards, rising of funds, funds-drives, budget: functional budget, works expenses budget, performance budgeting, management of denial resources.  
Physical Education Programmers, Teaching Methods, Class Management Intramural, recreational and leisure services, planning, construct maintenance of facilities, use of computer. Inter scholastic & Inter Collegiate athletics and competitions, School Health Education.

## REFERENCES

1. Administration of Physical Education and Athletics/Sports practices, Reubden D.Frost, Barbura Bay Lckgart, Stanlay J. Manchsal Universal Book Stall, 5 Ansari Road, New Delhi.
2. Sports Management, Sudhanca Shekhar Ray, Friends Pub. (India) Delhi 110089
3. Organization and Administration of Physical Education, S.Dher/Radhika Kamal

## **PRACTICAL: ONE PROJECT REPORT IS TO BE PREPARED BY THE CANDIDATE OUT OF THE SUBJECTS/TOPICS**

1. Organization of College/School athletic/sports tournament Report.
2. Preparation of School/College/Institutional budget & Management of Sports Material/Purchase and disposal of old material maintenance facilities and records.
3. Health Education Programmer at Institutional level.
4. Project Report on public relation of Sports Official and Preparation news bulletin report to be sent to the new pages/media electronic (Press)
5. Preparation of Physical Education Programmer for School/College viva-voce examination of the project report by the Examiner.

