

20/12/23

ORDINANCE

MASTER OF PHYSICAL EDUCATION (M.P.Ed.-I & II)
SEMESTER SYSTEM EXAMINATION 2019- 2020 and 2020-2021 3

Applicability of Regulations for the Time Being in Force

Notwithstanding the integrated nature of a course spread over more than two academic years, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of each semester. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amendment regulations, if any, shall apply to the entire student whether old or new.

1. Intake:

There shall be a basic unit of forty students for each year.

2. Eligibility:

Candidates who have obtained at least fifty five percent marks in the B.P.Ed. four years integrated degree/ B.P.Ed. Two years/B.Sc. degree in Physical Education, Health Education and sports / are eligible for admission.

3. The examination for the degree of Master of Physical Education (M.P.Ed.) shall be held in four semesters to be called Semester-I, II, III and IV. The examination for the I and III semester shall be held in the month of November/ December and for the II and IV semesters in the month of April/May or on such other dates as may be fixed by University.

4. The last dates by which admission forms and fees for Semester-I, II, III and IV examination should reach to the Controller Examination, Punjabi University Patiala on dates as notified from time to time. No examination form will be accepted after the notified date.

5. The candidate will be required to pay examination fees as prescribed by the University from time to time.

6. The medium of examination, including writing of thesis will be English, Hindi or Punjabi.

7. The examination will consist of papers according to syllabus as prescribed by the concerned Board of Study.

8. The option of Dissertation in Semester-III can be availed only by those students who have secured at least 60% marks in theory in Semester-I and II.

9. The title of the research has to be approved by the Board of Studies in Physical Education on the recommendation of the Principal/Head of the Department. The last date for:

- (i) Receipt of application regarding the topic of the thesis along with the synopsis shall be October 30 of the year preceding the examination.
- (ii) When a candidate has failed in the examination but has obtained pass marks in the thesis, the marks obtained in the thesis may be carried forward at his option for the subsequent years.
- (iii) Fee for submission of dissertation will be as prescribed by the University from time to time.
- (iv) Receipt of dissertation in the office of the Head of the Department shall be one month before the commencement of the theory examination; in exceptional cases,

the Vice Chancellor shall have the power to extend on the recommendation of the Principal/Head of the Department the last date for receipt of thesis.

10. The marks required to pass the examination shall be 40% marks in internal assessment in each paper separately in theory and practical and 40% in aggregate of internal, external, theory and practical.
11. There will be no condition of passing papers for promotion from odd semester to even semester in an academic session. To qualify for admission to Semester-III of the course, the candidate must have **Passed 50% of total papers of two Semesters in the first year.**
12. A Candidate placed under reappear in any paper, will be given two chances to clear the reappear, which shall be available within consecutive two years/chances i.e. to pass in a paper the candidate will have a total of three chances. One as regular student and two as reappear candidate.

Provided that he/she shall have to qualify in all the papers prescribed in M.P.Ed. course within a period of three years from the date he/she joined the course. In case he/she fails to do so within the prescribed period of three years as aforesaid he/she shall be declared fail. He/she may, however seek fresh admission to the first semester on Merit with the New Applicants.

13. The examination of reappear papers of Odd Semester will be held with regular examination of the Odd Semester and reappear examination, of the Even Semester will be held with regular examination of Even Semester. In case a candidate is placed under reappear in third (odd) semester, he/she will be given chance to re-appear in the fourth semester. But if a candidate is placed under reappear in the last semester of the course, he will be provided chance to pass the reappear with the examination of the Next Semester. It is understood that a reappear or failed candidate shall be allowed to take the examination in papers not cleared by him according to the date sheets of the semester examinations in which such papers may be adjusted.
14. After completing two years of studies (i.e. Four Semester Course); he shall not be admitted to any semester of the same course and will not have any privilege of a regular student.
15. Three weeks after the termination of the examination or as soon as thereafter as possible the Controller of Examination shall publish a list of candidates who have passed the examination of each semester. Each successful candidate in Semester-I, II, III and IV examinations shall receive a certificate of having passed that examination.
16. The examination shall be open to any person who:
 - (a) Has passed B.P.Ed. Four years Integrated Program after 10+2 from this University or any other statutory University.
 - (b) Or has passed Two Years B.P.Ed. Course (B.P.Ed. Two Years) after graduation from this University or any other statutory University.
 - (b) Candidate must have passed English as one of the subject in Graduation course.
 - (c) Satisfies the following requirements:
 - i. has been on the rolls of the University/College throughout the academic year preceding the Part-I i.e. Semester-I & II examination.
 - ii. has his name submitted to the Registrar by the Head of the Department/Principal of the College having attended not less than 75% of

Handwritten signature/initials

Handwritten signature

the total number of lectures delivered in each paper and 75% of the lectures held in Practical Work/ Activities in each paper during the academic year.

- iii. the candidate shall be required to attend at least 75% of the total number of lectures prescribed for each paper, provided that a deficiency in the number of lectures or seminars or practical's may be condoned for special reasons, subject to ordinance framed on the subject.
- iv. Of having obtained in the Monthly/ House Examinations held before the preceding semester at least 35% marks in the aggregate of all subjects and 20% marks in each of the subject prescribed.

In case a candidate could not appear in the Monthly/House Examination owing to unavoidable circumstances or fails to secure the marks indicated and desires to appear in the University Examination as a regular student, the Head of Department / Principal may at his discretion hold a special test for the candidate(s). Such a candidate would be required to obtain at least 35% marks in the aggregate of all subjects and 20% marks in each of the subjects prescribed.

OR

has completed the prescribed course of instruction for the examination, but has not appeared or having appeared has failed and is recommended by the Principal of the College for the admission to such examination without attending a fresh course of instruction within a period of three years from the date of completion of the course.

17. The grace marks shall be allowed according to the General Ordinance relating to "**Award of Grace Marks**" of the university.

18. (a) If a candidate fails in not more than 50% of theory paper subjects and secure at least 40% marks in the aggregate of the remaining theory papers/subjects, he shall be allowed Exemption in such paper/subjects to get admission in next Semester.

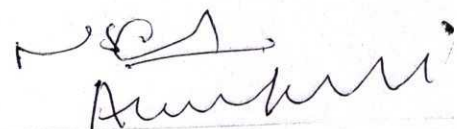
A candidate who is provided exemption shall be allowed provisionally to join the next Semester and the result of the higher class (next semester) of such a candidate shall be kept in abeyance till he clears the lower examination.

Provided that a candidate placed under Re-appear shall be allowed two subsequent chances to clear the Re-appear Theory Paper failing which his result for the examination will be shown as Fail and such a candidate will be required to report the course **de-novo**.

- (b) The candidate will have to pass the M.P.Ed. Examination within the period of three years.
19. Students undergoing a Two Year Master Course shall be awarded the Master of Physical Education Degree on the basis of their combined score of Semester -I , II, III and IV examination.

University Gradation norms on percentage performance bases are as under:

- | | | |
|-------|---------------------------------|--------------|
| (i) | First Division with Distinction | 75% & above |
| (ii) | First Division | 60% & above |
| (iii) | Second Division | 50% to 59.9% |
| (iv) | Third Division | Below 50% |
| (v) | Fail | Below 40% |



Handwritten note:
2025 or 2026

20. A candidate who has passed Master of Physical Education (M.P.Ed.) Examination from this university may be allowed to re-appear as a private candidate for improving his/her division/score of marks as under

- (i) A candidate can improve two theory papers in each part(part- I i.e. Semester I & II and Part –II i.e. Semester III & IV), where the course has five papers.
- (ii) A candidate can improve three theory papers in each part, where the course has more than five papers.

For this purpose he/she will be given two chances within a period of two years from the date of passing the examination.

For the purpose of improvement, under the above ordinance a candidate may appear in both the Part-I (Semester-I & II) and Part-II (Semester-III & IV) examination, simultaneously or separately but he must complete the examination within the prescribed period. Such a candidate shall have to submit separate admission form and fee for each part. Such a candidate shall be allowed to, appear in Semester Examination.

The result of such a candidate shall be declared only if the candidate improves his division/score, otherwise his result will be declared P.R.S. (Previous Result Stands).

Upto 1% of the total marks of Part-I (Semester-I & II) and Part-II (Semester- III & IV) examinations shall be given to a candidate for passing the examination and also in aggregate of both Part-I and/or Part-II examination as the case may be to award a higher class 55% marks and also for the purpose of Improvement/ Division/ Score of 55% marks only.

- 21. One credit is equal to one hour of teaching or practical.
- 22. Teaching (Skill and Prowess) activities for each game or athletics events will be of 21 days each.

Handwritten signature

Handwritten signature

Scheme for M.P.Ed. Session 2019-2020 and 2020-2021

PART – A	Theory Papers	2000 Marks
PART – B	Teaching (Skill and Prowess)	210 Marks
PART – C	Practice of Teaching and Coaching lesson	250 Marks

Total – 2460 Marks
Total Credits -162

M.P. Ed.- (Semester-I)

Total Marks : 560
500 Marks

Part-A

Theory

Paper code	Paper	External	Internal	Practical (External)	Total	Credits
MPET-101	Introduction to Research Methodology	80	20	-	100	05
MPET-102	Exercise Physiology	80	-	20	100	05+ (02 Practical)
MPET-103	Kinesiology	80	20	-	100	05
MPET-104	Sports Training	80	20	-	100	05
MPET-105	Measurement and Evaluation in Physical Education	80	20	-	100	05
				Total	500	

Part-B Teaching (Skill and Prowess)

(Internal) 60 Marks

Game

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-201	Basketball	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP-202	Kho Kho/Swimming	-do-	10	
MPEP-203	Hockey	-do-	10	

Athletics

Athletics				
Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-204	Sprints	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 205	Triple jump	-do-	10	
MPEP-206	Shot Put	-do-	10	
	Picnic	Institute should organize picnic for students		

Contents to be covered for Games & Athletics:

- Historical development of the concerned game/track and field event.
- Main tournaments organized at National and International level.
- Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- Awardees in the game/athletics.
- Books and magazines of the game /track and field.
- Officiating.
 - Play area dimensions/track and field.
 - Equipment specifications
 - Rules of the game/track and Field and their interpretation.
 - Duties of the concerned officials.
- Fundamental skills /Techniques.

Note: 10 Marks for each game (4 for skill and 6 for proficiency in game situation)

Each activity will be continued for 21 working days.

[Handwritten Signature]

M.P.Ed. (Semester-II)**Part-A****Theory****Total Marks-640
500 Marks**

Practical Code	Paper	External	Internal	Practical (External)	Total	Credits
MPET-106	Statistics in Physical Education	80	20	-	100	05
MPET- 107	Research Methods in Sports	80	20	-	100	05
MPET-108	Science of Coaching	80	20	-	100	05
MPET-109	Health and Wellness	80	20	-	100	05
MPET-110	Computer Application in Physical Education	80	-	20	100	05+(02 Practical)
				Total	500	

Part-B Teaching (Skill and Prowess)**40 Internal****Game**

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-207	Kabaddi	Teaching of Fundamentals, Rules and Regulations and Measurements of Field	10	05
MPEP- 208	Football	Teaching of Fundamentals, law of the game and Measurements of Field	10	

Athletics

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-209	Discus Throw	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 210	Long jump	-do-	10	

Contents to be covered for games & athletics.

- Historical development of the concerned game/track and field event.
- Main tournaments organized at National and International level.
- Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- Awardees in the game/athletics.
- Books and magazines of the game /track and field.
- Officiating.
 - Play area dimensions/track and field.
 - Equipment specifications
 - Rules of the game/track and Field and their interpretation.
 - Duties of the concerned officials.
- Fundamental skills /Techniques.

Note : 10 Marks for each game (4 for skill and 6 for proficiency in game situation).
Each activity will be continued for 21 working days.

Part-C Practice of Teaching and Officiating lesson**100 Marks**

Practical code	Teaching and Officiating lesson	External	Internal	Credits
MPEP-211	Game	40	10	02
MPEP- 212	Athletics	40	10	02

Note:

- The students will be required to prepare a file pertaining to each lesson given above in support of their evaluation of lesson plan and viva-voce. Candidates are required to take 10 practice lessons for each part separately. Sessionals marks will be awarded on the basis of their performance in practice lessons, 10 Marks for each game (4 for skill and 6 for proficiency in game situation.)
- Evaluation of lesson plan will be done by one external examiner in each case.

- Practice of lessons will be done during the teaching practice organised by the college and their lessons will be supervised by the internal faculty member.
- Principal/H.O.D. will certify that all the requirements pertaining to practice of teaching and Officiating has been fulfilled by the candidate.

M.P.Ed. Semester –III

**Total Marks- 570
500 Marks**

Part-A

Theory

Paper Code	Paper	External	Internal	Practical	Total	Credits
MPET-111(A)/ 111(B)/111(C)	Dissertation* /Yoga	80 (50Research Report 30 Viva Voce)	20	-	100	05
MPET- 112	Anthropometry	80	-	20	100	05+ (02 Practical)
MPET-113	Foundation of Sports Psychology	80	20	-	100	05
MPET-114	Sports Management	80	20	-	100	05
MPET-115	Sports Medicine	80	-	20	100	05+ (02 Practical)
				Total	500	

Note : * Students who will opt dissertation paper in semester-III will submit two copies of their research report through their respective Principal to Head, Dept of Physical Education , Punjabi University, Patiala. The viva voce of the student will be conducted in the Dept. of Physical Education, Punjabi University, Patiala.

Part-B Teaching (Skill and Prowess)

80 (Internal)

Game

Practical Code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-213	Volleyball	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 214	Gymnastics/ Aerobics	-do-	10	
MPEP- 215	Handball	-do-	10	
	Leadership Training Camp	One camp for students related to leadership qualities development has to be organized by the concerned institute under the aegis of government or semi-government body and certificate for this has to be issued to the participants (atleast for 3 days)	10	

Athletics

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-216	High Jump	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 217	Javelin Throw	-do-	10	
MPEP- 218	Hurdles	-do-	10	

Handwritten signature and initials

Contents to be covered for games & athletics.

- Historical development of the concerned game/track and field event.
- Main tournaments organized at National and International level.
- Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- Awardees in the game/athletics.
- Books and magazines of the game /track and field.
- Officiating.
 - Play area dimensions/track and field.
 - Equipment specifications
 - Rules of the game/track and Field and their interpretation.
 - Duties of the concerned officials.
- Fundamental skills /Techniques.

Note: 10 Marks for each game (4 for skill and 6 for proficiency in game situation.)

Each activity will be continued for 21 working days

M.P.Ed.- (Semester-IV)

Part-A		Theory			Total Marks –690 500 Marks	
Paper Code	Subjects	External	Internal	Practical	Total	Credits
MPET-116	Biomechanics	80	-	20	100	05+(02 Practical)
MPET- 117	Applied Psychology	80	-	20	100	05+(02 Practical)
MPET-118	Teaching Pedagogy and Curriculum Design	80	20	-	100	05
MPET-119	Sports Journalism	80	20	-	100	05
MPET-120	Theory of Athletic s	80	20	-	100	05
				Total	500	

Part-B : Teaching (Skill and Prowess)

40 Marks

Game				
Practical Code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-219	Softball	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP-220	Badminton/ Tennis/ Table Tennis	-do-	10	

Athletics				
Practical Code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-221	Hammer Throw	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP-222	Marking of Athletic Track	-do-	10	

Contents to be covered for games & athletics.

- Historical development of the concerned game/track and field event.
- Main tournaments organized at National and International level.
- Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- Awardees in the game/athletics.
- Books and magazines of the game /track and field.
- Officiating.
 - Play area dimensions/track and field.
 - Equipment specifications

Handwritten signature and date 8

- iii) Rules of the game/track and Field and their interpretation.
- iv) Duties of the concerned officials.
- g) Fundamental skills /Techniques.

Note : 10 Marks for each game (4 for skill and 6 for proficiency in game situation .)
Each activity will be continued for 21 working days.

Part-C Coaching lesson of Game & athletics and Class room theory lessons 150 Marks

Practical Code	Coaching lesson	External	Internal	Total	Credits
MPEP-223	Game	40	10	50	02
MPEP-224	Athletics	40	10	50	02
MPEP-225	Theory lesson*	40	10	50	02
			Total	150	

***Note:**

- The students will be required to prepare a file pertaining to each lesson given above in support of their evaluation of lesson plan and viva-voce. Candidates are required to take 10 practice lessons for each part separately. Sessionals marks will be awarded on the basis of their performance in practice lessons, 10 Marks for each game (4 for skill and 6 for proficiency in game situation.)
- Evaluation of lesson plan will be done by one external examiner in each case.
- Practice of lessons will be done during the teaching practice organized by the college and their lessons will be supervised by the internal faculty member.
- *Principal/H.O.D. will certify that all the requirements pertaining to practice of teaching and Officiating has been fulfilled by the candidate.*
- * Internal Evaluation of theory lesson will be based on the students attending / organizing conferences, seminars, workshop and Symposia.

[Handwritten signature]

M.P. Ed.- (Semester-I)**Part-A****Theory****Total Marks: 560
500 Marks**

Paper code	Paper	External	Internal	Practical (External)	Total	Credits
MPET-101	Introduction to Research Methodology	80	20	-	100	05
MPET- 102	Exercise Physiology	80	-	20	100	05+(02 Practical)
MPET-103	Kinesiology	80	20	-	100	05
MPET-104	Sports Training	80	20	-	100	05
MPET-105	Measurement and Evaluation in Physical Education	80	20	-	100	05
				Total	500	

Part-B Teaching (Skill and Prowess)**(Internal) 60 Marks****Game**

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-201	Basketball	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 202	Kho Kho/Swimming	-do-	10	
MPEP-203	Hockey	-do-	10	

Athletics

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-204	Sprints	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 205	Triple jump	-do-	10	
MPEP-206	Shot Put	-do-	10	
	Picnic	Institute should organize picnic for students		

Contents to be covered for Games & Athletics:

- h) Historical development of the concerned game/track and field event.
- i) Main tournaments organized at National and International level.
- j) Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- k) Awardees in the game/athletics.
- l) Books and magazines of the game /track and field.
- m) Officiating.
 - i) Play area dimensions/track and field.
 - ii) Equipment specifications
 - iii) Rules of the game/track and Field and their interpretation.
 - iv) Duties of the concerned officials.
- n) Fundamental skills /Techniques.

Note: 10 Marks for each game (4 for skill and 6 for proficiency in game situation)

Each activity will be continued for 21 working days.

INTRODUCTION TO RESEARCH METHODOLOGY

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. ($2 \times 10 = 20$ Marks)
- Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. ($15 \times 4 = 60$ Marks)

UNIT-I

- Introduction to Research:** Science and scientific method; Research - definition, the process, importance, nature and types.
- Qualities and Characteristics:** Qualities and Characteristics of good research and good researcher; Need and scope of research in physical education and sports.
- Research Problem:** Definition of and developing a research question; Identifying, locating and selecting a research problem; Characteristics of a good research problem.

UNIT-II

- Research Proposal:** Structure of research proposal and methodology of preparing research proposal.
- Literature Review:** Purpose and importance of literature review.
- Basic literature search strategies:** Steps in literature search; writing literature review.

UNIT-III

- Hypothesis:** Definition, importance and types of hypothesis: Formulating and stating hypothesis; Characteristics of a good hypothesis; Testing the hypothesis.
- Sampling:** Defining population and sample and their characteristics; Sampling theory; Importance of sampling.
- Technique and Designs:** Sampling techniques; Sampling designs; Sample size.

UNIT-IV

- Data Collection Tools:** Its Use and Importance in Research.
- Questionnaire:** types of questionnaire; constructing and administering a questionnaire; questionnaire standardization procedure.
- Interview:** planning interview, preparing question schedule, conducting interview, summing up.
Observation: observational procedure, recording observation i.e. check list, score card and Rating Scale.

References

- Best, W. J. & Kahn, J.V. (1998). *Research in Education*. USA: Allyn and Bacon publisher.
- Clarke, H. (1958). *David Research Processes in Physical Education Recreation & Health*. New Delhi: Prentice-Hall of India Pvt. Ltd.
- John W. Best (1959). *Research in Education*. USA: Prentice-Hall, INC. Englewood Cliffs, N.J.
- Kamlesh, M.L. (2014). *Methodology of Research in Physical Education and Sport (4th ed.)*. New Delhi: Sports Publication.
- Kothari, C. R. (2004). *Research methodology methods & techniques (2nd ed.)*. New Delhi: New Age International Publishers.
- Koul, L. (2002). *Methodology of Educational Research*. New Delhi: Vikas Publishing House.
- Lipman, H. (2009). *Sports Research*. India: Friends Publications.

- Sharma, Y. P. (1997). *Physical Education and Research Methodology*. New Delhi: Reliance Publishing House.
- Shinde, B.S. (2011). *Research Methods in Physical Education*. New Delhi: Sports Publication.
- Sivaramakrishnan, S. (2004). *Research Methods in Physical Education*. India: Friends Publications.
- Thomas, J.R., Nelson, J. K. & Silverman, S.J. (2001). *Research Methods in Physical Activity* (6th ed.) United State of America: Human Kinetics.
- Yobu (2008). *Research Process in Physical Education and Sports*. New Delhi: Friends Publications.

Paper Code –MPET-102
EXERCISE PHYSIOLOGY

Time allowed: 3 Hours

Max Marks: 100
(External: 80)
Credit-5+ (2 Practical)

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- Rest of the paper shall contain four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

Unit-I

- Exercise Physiology:** Meaning, Nature, Scope and Importance of Exercise Physiology in Games and Sports.
- Energy Source:** Adenosine tri-phosphate (ATP), Sources of ATP system, (Anaerobic Glycolysis (acid system), Aerobic Glycolysis cycle, The Aerobic and Anaerobic systems during rest and Exercise.
- Energy Production:** Carbohydrate Metabolism, Fat Metabolism & Protein Metabolism.

Unit-II

- Recovery Process:** Introduction, Restoration of Muscle Phosphagen Stores, Replenishment of Myoglobin with Oxygen, Restoration of Muscle Glycogen, Removal of Lactic Acid from Muscle and Blood.
- Exercise and Systems:** Effect of Exercise on Respiratory and Cardiovascular.
- Exercise and Environment:** Effect of exercise on Hot, Cold and High Altitude.

Unit-III

- Neurons:** motor unit and Bio-Electric Potentials, Neuro-Muscular Junction and Transmission of Nerve Impulse, Kinesthetic Sense Organs and Neural Control of Motor Skills.
- Muscle movement mechanism:** Sliding filament theory.
- Exercise and Systems:** Effect of Exercise on Hormonal and muscular.

Unit-IV

- Ergogenic Agents:** Pharmacological agents (Alcohol, Amphetamines, Caffeine, Cocaine, Diuretics, Morphine) Hormonal Agents (Anabolic steroids, Human Growth Hormone) Doping and its types, Blood doping, Oxygen supplementation, carbohydrate loading, phosphate loading, balanced diet and its components, nutritional deficiencies, understanding of malnutrition and nutritional supplements for athletes.
- Exercise and Aging:** Physiological changes, Training adaptation in aged, Guidelines for constructing exercise programme, healthing aging.
- Exercise and Females:** Physiological gender differences, Physical trainability and Gynecological disorders

Practical

(20 Marks External)

- Assessment of resting physiological parameters- Heart rate, respiratory rate and blood pressure.
- Assessment of flexibility (Lab and Field test)
- Assessment of cardio respiratory fitness- Harvard step test, Cooper's 12min

run/walk.

4. Assessment of skill related fitness components
5. Assessing heart rate response to selected exercise (maximal and sub-maximal).
6. Assessment the steady state of oxygen consumption
7. Assessment anaerobic power. (Sargeant Jump).

References

- Adams M. (1998). *Gene Exercise Physiology: Laboratory Manual*. New York: WCB McGraw-Hill Companies, Inc.
- Ahuja, V. M. (2005). *Text Book of Physiology*. India: Modern Publishers.
- Astrand, P.O. & Karre, R.(1979). *Text Book of work Physiology*. Tokyo: Mc Graw. Hill Xogakusha, Ltd.
- Bourne, G. H. (1973). *The Structure and Function of Muscles*. London: Academic Press.
- Frank, M. C. & Kalas, V. (2005). *Molecular and cellular exercise physiology*. New Zealand: Human Kinetics, Division of sports distributory Nz Ltd.
- Jack, W.H.& Costill L. P.(2004). *Physiology of Sports and Exercise*. USA: Human Kinetics.
- Karpovich, P.V. & Sinning, W. E. (1971). *Physiology of Muscular Activity (7th Edition)*. Philadelphia: W.B. Saunders Company.
- Katch L. V., Katch I. F. & William, M. D. (1996) *Exercise Physiology*. Philadelphia: Williams & Wilkins, A Waverty Company.
- Majumdar, P. (2011). *Physiology of Sports and Exercise*. India: New central Book Agency (P).
- Mathew. D.K. and Fox, E.L. (1980). *Physiological Basis of Physical Education and Athletics*. Philadelphia: W.B. Saunders Company.
- McArdle, W. D., Katch, F. I. & Katch, V. L. (2010). *Exercise Physiology: Nutrition, Energy and Human Performance (7th ed.)*. London : Lippincott Williams & Wilkins.
- Morehouse, L. E. & Miller, A.T. (1980). *Physiology of Exercise*. Missouri: St. Louis Mousby Company.
- Robert, R.A. & Scott, R.O. (2000). *Fundamental Principles of Exercise Physiology*. New York: Mc. Graw Hill Companies, Inc..
- Rowland, T. W. (1996). *Development Exercise Physiology*. Champaign (USA): Human Kinetics.
- Shaver, L. G. (1982). *Essentials of Exercise Physiology*. Delhi : Surjeet Publications.
- Tipton, C.M. (2003). *Exercise physiology*. New York City: Springer Publishing Company.
- Tiwari, S.(1999). *Exercise Physiology*. Delhi: Sports publication Ashok Vihar,.

Paper Code –MPET-103 KINESIOLOGY

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS

- a) There shall be **nine** questions in all.
- b) First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- c) Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

UNIT-I

1. **Kinesiology**: Meaning, Need & importance of Kinesiology in Physical Education and sports.
2. **Bones and Joints**: Structure of bones, types of bones, Types and structure of Joint, Planes and Axis, Kinds of joint movement.
3. **Skeletal Muscles**: Microscopic Structure of muscles, Factors effecting Muscle strength, Muscle Name.

UNIT-II

1. **Muscles:** Structural classification of muscles, characteristics of muscle tissue, muscles fiber types, reciprocal innervation, all or none law, Types of muscles contraction, Role of muscles, Angle of pull, Two-joint muscles, Reflex-action, Muscle tone.
2. **Shoulder Girdle:** Structure, bones. Ligaments and Movements. Muscles: (Structure, origin, Insertion, Innervations, Action), Pectorals minor, Serratus anterior, subclavius, trapezius, Rhomboid, Levator scapula.
3. **Shoulder joint:** Structure, bones, ligaments and Movements. Pectorals major, subscapularis, deltoid, supraspinatus, latissimus dorsi, Teres major, infraspinatus, Teres minor.

UNIT-III

- 1 **Elbow joint:** structure, bones, ligaments and movements. Muscles: (Structure, origin, insertion, Innervations, Action) Biceps Brachii, Brachialis, Brachioradialis, Pronator Teres, Pronator Quadratus, Triceps brachii.
- 2 **Radio-ulnar joint:** structure, bones, ligaments and movements. Muscles: (Structure, origin, insertion, Innervations, Action) Biceps Brachii, Brachialis, Brachioradialis, Pronator Teres, Pronator Quadratus, Triceps brachii.
- 3 **Hip joint :** Bones, Joints, ligaments and Movements. Muscles: (Structure, origin, insertion, Innervations, Action) Iliopsoas, Sartorius, Rectus Femoris, Gluteus Medius, gluteus minimus, tensor fascia latae, gluteus maximus, Biceps Femoris, Semi-membranosus, Semi-Tendinosus, adductor group.

UNIT-IV

- 1 **Ankle Joint:** Bones, joints, ligaments and movements Muscles (Structure, origin, insertion, Innervations, Action) Vastus group, Gastrocnemius, Soleus, Peroneus Group, extensor digitorum longus, Extensor hallucis longus, Tibialis anterior, Tibialis Posterior.
- 2 **Knee Joint:** Bones, joints, ligaments and movements Muscles (Structure, origin, insertion, Innervations, Action) Vastus group, Gastrocnemius, Soleus, Peroneus Group, extensor digitorum longus, Extensor hallucis longus, Tibialis anterior, Tibialis Posterior.
- 3 **Kinesiological Analysis:** Principles and Analysis of following movement (Throwing, Striking, Jumping Squat, Dead Lift).

References

- Bindal, V.D. (2018). *Textbook of Kinesiology*. India: Jaypee Brothers Medical Publishers.
- Brower, M. R. (1978). *Efficiency of Human movements*. Philadelphia, W.E. Saunders Company.
- Floyd, R. T. & Clem W. T. (2006). *Manual of structural Kinesiology*. Boston: McGraw Hill.
- Hamilton, N. & Luttgens, K. (2002). *Kinesiology Scientific Basis of Human Motion (10th ed.)*. America: McGraw-Hill.
- Hoffman, S. J. (2009). *Introduction to Kinesiology: Studying Physical Activity*. United States of America: Human Kinetics.
- Houglum, P. A. & Bertoti, D. B. (2012). *Brunnstrom's Clinical Kinesiology*. India: Jaypee Brothers Medical Publishers.
- Kahari, W. & Kathryn, F. I. (1992). *Kinesiology Scientific basis of Human Motion (8th ed.)*. Philadelphia: Sunder Publishing.
- Khan, S. A. (2010). *Synopsis of Muscle Testing*. CBS Publishers: India.
- Lippert, L.S. (2002). *Clinical Kinesiology for Physical Education (3rd ed.)*. India: Jaypee Brothers Medical Publishers.
- Muscolino, J. E. (2006). *Kinesiology: The Skeletal System and Muscle Function*. United States: Mosby Elsevier.
- Muscolino, J. E. (2008). *The Muscle and Bone Palpation Manual with Trigger Points, Referral Patterns and Stretching*. United States: Elsevier Health Sciences.
- Muscolino, J. E. (2013). *Know the Body: Muscle, Bone, and Palpation Essentials - E-Book*. United States: Elsevier Health Sciences.
- Rasch, P. J. & Burk, R. K. (1995). *Kinesiology & Applied Anatomy*. Philadelphia: Lee & Febiger.
- Scott, M.G. (1970). *Analysis of human Motion*. New York: Meredith Publishing Company.
- Wells, K. (1984). *Kinesiology*. Philadelphia: W.B. Saunders Company.

Paper Code –MPET-104
SPORTS TRAINING

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS

- a) There shall be **nine** questions in all.
- b) First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. ($2 \times 10 = 20$ Marks)
- c) Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. ($15 \times 4 = 60$ Marks)

Unit-I

- 1 **Sports Training:** Meaning, Aims, Characteristics, Need and Principles.
- 2 **Training Load:** Meaning, Characteristics, Principles, Symptoms, Causes and tackling of overload.
- 3 **Recovery:** Recovery Phases, Means of Recovery and Factors Affecting Recovery.

Unit-II

- 1 **Methods of Training:** Importance, Principles, Types of training - Weight training, Circuit training, Interval training, Fartlek training, Cross-Country and Plyometric training.
- 2 **Training means and methods:** Types, Classification of Physical Exercise, Basic Methods of Conditioning.
- 3 **Muscular Adaptations to Aerobic and Anaerobic training:** Fiber Composition, Oxygen Delivery, Energy Production.

Unit-III

- 1 **Flexibility:** Meaning, Importance, Types, Factors determining them, Methods of training and precautions.
- 2 **Coordinative abilities:** Meaning, importance, types, factors determining Coordinative abilities, methods of training and precautions.
- 3 **Strength:** Types, Factors Determining Strength, Importance, Methods of training and Precautions.

Unit-IV

- 1 **Endurance:** Meaning, Types, Factors Determining Endurance, Importance, Methods of training and Precautions.
- 2 **Speed:** Meaning, Factors Determining Speed, importance, Methods of training and precautions.
- 3 **Agility:** Meaning, Factors Determining Agility, importance, Methods of training and precautions

References

- Beith, P., Remedios, R. D., Smith, B., Livesey, P., Taft, J.L., Feit, A., Fleming, W., Boyle, M., Gleason, D. & Wentworth, S. (2018). *Complete Sports Training: Speed, Strength and Conditioning for Today's Athlete*. Lubbock: Chaplain Publishing, LLC.
- Dabas, S. (2016). *Theory of Scientific Sports Training*. New Delhi: Sports Publication.
- Dick, F. W. (1980). *Sports Training Principles*. London: Lepus Birkst.
- Donald, A. C. (1972). *Jumping into Plyometrics*. USA: Publisher Champaign, Ill. : Leisure Press.
- Frank, W. D. (2002). *Sports Training Principles (4th ed.)*. London: A & C Black Publishers.
- Jenson, R. & Fisher, A. G. (1979). *Scientific basis of Athletic conditioning*. Philadelphia: Lea and Febiger Publisher

- Mathew, D. K. and Fox, E. L. (1980). *The Physiological basis of Physical Education and Athletics*. Philadelphia: W.B. Saunders Company.
- Matveyev (1981). *Fundamentals of Sports Training (Translation from Russian)*. Moscow: Mir Publishing.
- Satyanarayana, V. (2016). *Sports Training*. New Delhi: Sports Publication.
- Shepherd, J. (2007). *Sports Training: The Complete Guide*. Canada: Firefly Books Publisher.
- Singh, A. B. & Qureshi, D. R. (2012). *Encyclopedia of Sport straining*. New Delhi: Sports Publication.
- Singh, H. (1995). *Science of coaching*. New Delhi: D. V.S. Publications.
- Thomas, R. and Baechle (1972). *Essentials of Strength training and conditioning*. Philadelphia: Lea and Febiger Publisher.
- Uppal, A.K. (2013). *Scientific basis of Sports Conditioning*. New Delhi: Friends Publications.

Paper Code –MPET-105

MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

Time allowed: 3 Hours

Max Marks: 100

(External: 80, Internal: 20)

Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- Rest of the paper shall contain four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

UNIT – I

- Test, Measurement and Evaluation:** Meaning, Scope and Importance.
- Methods:** Common Methods of Test & Measurement in the Field of Physical Education and Sports.
- Modern Trends:** History and Modern Development in Physical Education Measurements.

UNIT – II

- Test:** Classification of tests, Criteria of a good test: Validity, Reliability, Objectivity, Economy, Standard and Norms, Levels of Measurement, Types and Principles of Evaluation.
- Construction of Test:** Physical fitness test, Knowledge tests, Sports skill tests, Organization and administration of tests results.
- Test for Measuring Motor Fitness:** - AAHPER Youth Physical Fitness Test, Roger Strength Test, Scott Motor Ability Test, Borrow Motor Ability Test.

UNIT – III

- Endurance Test:** Harvard Step Test, Cooper's 9/12 Minutes run/ walk Test.
- Agility Test:** - Quadrant jump, Semo test, Side step test & LSU obstacle course test.
Flexibility Test: - Sit & reach test, Side split test.
- Balance Test:** - Stork stand test (Static), Bass stick test (Static), Nelson balance beam test (Dynamic).

UNIT IV

- Test for Measuring Sports Skill:- Basketball :** Johnson Basketball Test, Knox Basketball Test, AAPHERD Basketball Test Battery
Badminton test: Lockhart and Mc Pherson Badminton Test, French Short and Long Service Test, Miller Wall-Volley Test.
- Field Hockey test :** Friedel Field Hockey Test, Schmithals-French Field Hockey Skills Test, SAI Hockey Skill Test, Chapman Ball Control Test.
- Soccer skill test:** Johnson Soccer Test, Mc. Donald Soccer Test, SAI Football Skill Test,
Volleyball skill test: Brady's Volleyball Test, Russel Lange Volleyball Skill Test, AAHPER Volleyball Test, SAI Volleyball Test.

[Handwritten signature]

[Handwritten signature]

References

- Barrow, H.M. and McGee, R. and Tritschler, K. A.(1989). *Practical measurement in physical Education and Sports (14th ed.)*. London: Lea & Febiger.
- Baumgartner, T.A, Jackson, A. S. & Mahar, M. T. (2003). *Measurement for Evaluation in Physical Education Exercise Science (7th ed.)*. America : McGraw-Hill.
- Charles Harold McColy (2004). *Test and measurement in Health and Physical Education*. Friends publications: India.
- Clake, H.H & Clarke, D.H. (1991). *Application of Measurement to Physical Education*. United States: Englewood Cliffs, NJ, Prentice Hall.
- Johnson, B.L. & Nelson, J.K. (2007). *Practical Measurements for Evaluation in Physical Education(3rd ed.)*. New Delhi: Surjeet Publications.
- Kansal, D.K. (1996). *Test and Measurement in Sports and Physical Education*. New Delhi: D.V.S Publications.
- Kansal, D.K. (2012). *A practical approach to test measurement & evaluation*. New Delhi: Sports and Spiritual Science Publication.
- Lacy, A.C,(2015) *Measurement & evaluation in physical; education and exercise science*. New York: Daryl fox.
- Lipman, H. A. (2009). *Measurement and Evaluation in Physical Education*. India: Friends publications.
- Marrow, J. R. & Jackson, A.W. (1995). *Measurement and Evaluation in Human Performance*. U.S.A: Human Kinetics Publisher, Urban Champaign, Illinois.
- Mathews, D.K. (1973). *Measurement in Physical Education*. Philadelphia: W. B. Saunders Company.
- Naidu, B. G. N. & Mohan, N. V. (2017). *Test, Measurement & Evaluation in Physical Education & Sports Sciences*. United Kingdom : LAP Lambert Academic Publishing
- Yobu, A. (2010). *Test, Measurement & Evaluation in physical education and sports*. India: Friends publications.

[Handwritten signature]

M.P.Ed. (Semester-II)**Part-A****Theory****Total Marks-640
500 Marks**

Practical Code	Paper	External	Internal	Practical (External)	Total	Credits
MPET-106	Statistics in Physical Education	80	20	-	100	05
MPET- 107	Research Methods in Sports	80	20	-	100	05
MPET-108	Science of Coaching	80	20	-	100	05
MPET-109	Health and Wellness	80	20	-	100	05
MPET-110	Computer Application in Physical Education	80	-	20	100	05+(02 Practical)
				Total	500	

Part-B Teaching (Skill and Prowess)**40 Internal****Game**

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-207	Kabaddi	Teaching of Fundamentals, Rules and Regulations and Measurements of Field	10	05
MPEP- 208	Football	Teaching of Fundamentals, law of the game and Measurements of Field	10	

Athletics

Practical code	Practical	Contents of Games and Sports	Internal Assessment	Credits
MPEP-209	Discus Throw	Teaching of Fundamentals, Rules and Regulations and Measurements of Fields	10	05
MPEP- 210	Long jump	-do-	10	

Contents to be covered for games & athletics.

- h) Historical development of the concerned game/track and field event.
- i) Main tournaments organized at National and International level.
- j) Records/Statistics of the game /track and field event at world, Olympic, Asia, National.
- k) Awardees in the game/athletics.
- l) Books and magazines of the game /track and field.
- m) Officiating.
 - i) Play area dimensions/track and field.
 - ii) Equipment specifications
 - iii) Rules of the game/track and Field and their interpretation.
 - iv) Duties of the concerned officials.
- n) Fundamental skills /Techniques.

Note : 10 Marks for each game (4 for skill and 6 for proficiency in game situation).

Each activity will be continued for 21 working days.

Part-C Practice of Teaching and Officiating lesson**100 Marks**

Practical code	Teaching and Officiating lesson	External	Internal	Credits
MPEP-211	Game	40	10	02
MPEP- 212	Athletics	40	10	02

Note:

- The students will be required to prepare a file pertaining to each lesson given above in support of their evaluation of lesson plan and viva-voce. Candidates are required to take 10 practice lessons for each part separately. Sessionals marks will be awarded on the basis of their performance in practice lessons, 10 Marks for each game (4 for skill and 6 for proficiency in game situation.)
- Evaluation of lesson plan will be done by one external examiner in each case.

- Practice of lessons will be done during the teaching practice organised by the college and their lessons will be supervised by the internal faculty member.
- *Principal/H.O.D. will certify that all the requirements pertaining to practice of teaching and Officiating has been fulfilled by the candidate.*

Paper Code –MPET-106
STATISTICS IN PHYSICAL EDUCATION

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. ($2 \times 10 = 20$ Marks)
- Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. ($15 \times 4 = 60$ Marks)

UNIT-I

- Statistics:** Meaning and Classification, Importance of Statistics in Physical Education.
- Data analysis:** Meaning and types, Presentation of Data through Graphs and Tables.
- SPSS:** Introduction to Statistical Package for the Social Sciences and Its uses in the field in Physical Education.

UNIT-II

- Measure of Central Tendency:** Properties, Merits and Demerits, Calculation of Mean, Mode and Median.
- Measure of Variability:** Merits and Demerits and calculation of Range, Quartile and Standard Deviation.
- Correlation:** Properties and Uses of Correlation, Calculation of Karl Pearson Product Movement and Spearman's Rank Methods.

UNIT-III

- Chi-Square χ^2 :** Properties, Importance and Calculation.
- ANOVA** (one way and two way analysis).
- Mean Differences among group only 't' test. Characteristics of 't'-test.

UNIT-IV

- Normal Probability Curve:** Properties and Uses.
- Scales:** Sigma Scale and Hull Scale. Standard Score: Z score, T Score and Sigma Score.
- Parametric and Non Parametric tests:** Meaning, its types and differences between Parametric and Non-Parametric tests.

References

- Best, J.W. (1982). *Research in Education*. Prentice Hall, Inc.
- Clarke, H. D. (1985). *Research Processes in Physical Education*. Recreation & Health, Prentice Hall, Inc.
- Gupta, S.P. (2011). *Statistical Methods*, Sultan Chand & Sons. Fortieth revised Edition. New Delhi: Educational Publishers.
- Kamlesh, M. L. (1986). *Methodology of Research in Physical Education and Sports*. New Delhi: Metropolitan Publication.
- Moorthy, A.M. (2000). *Research Methods in Physical Education*. Sports and Exercise Sciences, New Delhi: Friends Publication.
- Bennett, J.O., Briggs, W.L. & Triola, M.F. (2001). *Statistical Reasoning*. United State of America: Addison Wesley Longman, Inc.
- Gaur, A.S. & Gaur, S.S. (2009). *Statistical Methods for Practice and Research*. New Delhi: SAGE Publication India Pvt Ltd.

[Handwritten Signature]

- Koul, L. (2012). *Methodology of Educational Research* (4th ed.). New Delhi: VIKAS Publishing House Pvt Ltd.
- Rajaretnam, T. (2016). *Statistics for Social Sciences*. New Delhi: SAGE Publication India.
- Thomas, J. R. & Nelson, J. K. (1996). *Research Methods*. Physical Activity Human Kinetics, Champaign.
- Verma, J.P. (2015). *A Test Book on Sports Statistics*. Darya Ganj, New Delhi: SPORTS Publication.
- Weimer, J. (1994). *Research Techniques in Human Engineering*. New Jersey: Prentice Hall.

Paper Code –MPET-107
RESEARCH METHODS IN SPORTS

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15x 4= 60 Marks)

UNIT-I

- Descriptive Research Methods:** Survey - definition, purpose, types, scope and nature, importance, criteria and major steps;
- Case Study** - objectives, basic methodology, values and limitations.
- Philosophical Research Method:** Meaning, nature, steps and pitfalls.

UNIT-II

- Historical Research Method:** Purpose and scope of history in physical education; procedure;
- Sources:** Historical data; Historical Criticism;
- Principles:** General principles of historical criticism.

UNIT-III

- Experimental Research Method:** Planning the experiment, principles of experimentation;
- Experiment Designs:** (simple and complex), Setting up a human performance laboratory.
- Correlation research strategy:** concept, characteristics, cause and effect.

UNIT-IV

- Ethical issues in Research:** Areas of scientific dishonesty; Ethical issues regarding copyright; methods for considering scientific misconduct; protecting human participation.
- Writing of Research Report:** Basic writing guidelines; Thesis and Dissertation format.
- Mixed research approach to sport:** characteristics, design and analysis.

References

- Best, J.W. (1982). *Research in Education* (4th ed.). New Delhi: Prentice Hall, Inc.
- Best, W. J. & Kahn, J.V. (1998). *Research in Education*. USA: Allyn and Bacon Publisher.
- Clarke, H. D. (1985). *Research Processes in Physical Education Recreation & Health*. New Delhi: Prentice-Hall of India Pvt. Ltd.
- John, W.B. (1959). *Research in Education*. Englewood Cliffs, N.J: USA. Prentice-Hall, Inc.
- Kamlesh, M.L. (2014). *Methodology of Research in Physical Education and Sport* (4th ed.). New Delhi: Sports Publication.

- Kothari, C.R. (2004). *Research methodology methods & techniques* (2nd ed.). New Delhi: New Age International Publishers.
- Koul, L. (2002). *Methodology of Educational Research*. New Delhi: VIKAS Publishing House.
- Lipman, H. (2009). *Sports Research*. New Delhi: Friends Publications.
- Mark, F.S. (2010). *Research Methods in Sports*. BEBC Distribution, Albion Close, Parkstone.
- Scott, M.G. (1968). *Research Methods in health, physical education and recreation*. Washington: D.C., American Association for Health, Physical Education and Recreation.
- Sharma, Y.P. (1997). *Physical Education and Research Methodology*. New Delhi: Reliance Publishing House.
- Shinde, B.S. (2011). *Research Methods in Physical Education*. New Delhi: Sports Publication.
- Sivaramakrishnan, S. (2004). *Research Methods in Physical Education*. New Delhi: Friends Publications.
- Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2001). *Research Methods in Physical Activity* (6th ed.). Human Kinetics: United State of America.
- Yobu (2008). *Research Process in Physical Education and Sports*. New Delhi: Friends Publications.
- Weimer, J. (1994). *Research Techniques in Human Engineering*. New Jersey: Prentice Hall.

**Paper Code –MPET-108
SCIENCE OF COACHING**

Time allowed: 3 Hours

Max Marks: 100
(External: 80, Internal: 20)
Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS:

- There shall be **nine** questions in all.
- First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

UNIT-I

- Technical Training:** Meaning, Skill, Style, Motor co-ordination, Aims, Phases, Implications and Methods.
- Tactical Training:** Meaning, Aims, Tactical Action, Training for tactics, Principles.
- Acclimatization:** Effect of high altitude training on sports performance.

UNIT-II

- Sports Talent Identification:** Meaning, Process and Procedures.
- Plyometric Training:** Meaning, Programme Design and Safety considerations.
- Isokinetic Training:** Meaning, Programme Design and Safety considerations

UNIT-III

- Planning:** Importance, types, Steps in formulation of plan, training sessions.
- Periodization:** Meaning, Types, Aims and Contents of different periods.
- Top form and Periodization:** Relationship of top form and periodization.

UNIT IV

- Long Term Training:** Meaning, Aims and Characteristics, Nature and Training Schedules of Games & Athletics.
- Nutrition and Athletic Performance:** Nutrition and Training components of diet, Nutrition for competition.
- Training Schedules:** Preparation Of Training Schedule in reference to Age, Gender and sports.

References

- Dabas, S. (2016). *Theory of Scientific Sports Training*. New Delhi: Sports Publication.
- Dick, F.W. (1980). *Sports Training Principles*. London: Lepus Birkst.
- Donald, Chu. (1972). *Jumping into Plyometrics*. Illinois: Leisure press Champaign.
- Frank, W.D. (2002). *Sports Training Principles*. (4th ed.). London: A & C Black Publishers.
- Harre, Dietrich. (1982). *Principles of Sports training Berlin*. Sportverlag.
- Jenson, R. & Fisher, A. G. (1979). *Scientific basis of Athletic conditioning*. Philadelphia: Lea and Febiger.
- Mathew, D. K. & Fox, E. L. (1980). *The Physiological basis of Physical Education and Athletics*. Philadelphia: W.B. Saunders Company.
- Matveyev. (1981). *Fundamentals of Sports Training* (Translation from Russian) Moscow: Mir Publishing.
- Satyanarayana, V. (2016). *Sports Training*. New Delhi: Sports Publication.
- Singh, A.B. & Qureshi, D.R. (2012). *Encyclopedia of Sports Training*. New Delhi: Sports Publication.
- Singh, Hardyal. (1995). *Science of Coaching*. New Delhi: D.V.S. Publications.
- Thomas, R. & Baechle. (1972). *Essentials of Strength training and conditioning*. Philadelphia: Lea and Febiger.
- Uppal, A.K. (2013). *Scientific basis of Sports Conditioning*. New Delhi: Friends Publications.

Paper Code –MPET-109

HEALTH AND WELLNESS

Time allowed: 3 Hours

Max Marks: 100

(External: 80, Internal: 20)

Credit-5

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS

- a) There shall be **nine** questions in all.
- b) First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- c) Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

UNIT-I

1. **Health Education:** Meaning, Scope, Objectives and Spectrum, Principles and Importance of health education, Planning and evaluation in health education programmes.
2. **Personal Hygiene:** The concept of hygiene and personal hygiene. Importance of rest, sleep, diet and exercise.
3. **Pollution:** Definition, effects and control measures of Air pollution, Water pollution, Noise pollution and Radiation. Natural hazards and their mitigation.

UNIT-II

1. **Community Health Program:** Health Appraisal and Health Instructions, International and National health promoting government and private agencies.
2. **School Health Service:** History, School Health Problems. Health appraisal, healthy school environment, nutritional services, mental health, school health programmes/services, school health records, Safety measures in the playfields – first aid and emergency care
3. **Communicable Disease:** Meaning, causes, symptoms, prevention, diseases cycle, modes of disease transmission and immunization.

UNIT-III

1. **Psychosomatic disorders/sedentary life style diseases:** Causes, symptoms and prevention.
2. **Obesity:** Meaning, Obesity related health problems, body weight control and its significance on health, role of exercise, dieting and combination of exercise & dieting on weight control.

UNIT-IV

1. **Eating Disorders:** Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorders.
2. **Posture:** meaning, Concept of balance Posture & Causes of bad posture.
3. **Postural Deformities & their Correction** (Spinal deformities: Kyphosis, Lordosis, Scoliosis) (Foot deformities: Knock knee, bowlegs, Flat foot), Evaluating techniques of Posture.

References

- Dheer, S., Basu, M., & Kumar, R. (2005). *Introduction to Health Education*. India: M/S Friends Publications.
- Edlin Gorden & Golenty Eric. (2007). *Health and Wellness*. USA: Jones and Bartlett Publishers.
- Hoeger, W.W.K. & Hoegar, S.A. (2007). *Fitness and Wellness* (7th ed.). United State of America.
- Howley, E. T. & Franks, B.D. (1997). *Health Fitness Instructor's Handbook* (3rd ed.). United State of America.
- Kang, G.S. & Deol, N.S. (2008). *An Introduction to Health & Physical Education* (1st ed.). Patiala, Punjab: Twenty First Century Publications.
- Pandey, P.K. & Gongopadhyay, S. R. *Health Education for School Children*. Mukerjee Tower, Dr. Mukerjee Nagar-Delhi: Friends Publication.
- Park, J.E. & Park, K. (1985). *Text Book of Preventive and Social Medicine*. Jabalpur: Bnasidar 91, Bhanot Publisher.
- Park, J.E. and Park, K. (1982). *Text Book of Community Health for Nurses*. Jabalpur: Asrani Publisher.
- Sharkey, B.J. & Gaskill, S.E. (2007). *Fitness and health* (6th ed.). United State of America.
- Singh, A., Bains, J, Gill, J.S. & Brar, R.S.(2007). *Essential of physical Education* (3rd ed.). Rajinder Nagar Ludhiana, Punjab: Kalyani Publisher.
- Youngson, R. (2001). *Health Encyclopedia*. London: Bloomsbury Publishing.

Paper Code –MPET-110

COMPUTER APPLICATION IN PHYSICAL EDUCATION

Time allowed: 3 Hours

Max Marks: 100

(External: 80, Internal: 20)

Credit-5+ (2 Practical)

INSTRUCTIONS FOR THE PAPER-SETTER AND STUDENTS

- a) There shall be **nine** questions in all.
- b) First question is **compulsory**. It will contain **10** short answer type questions, spread over the whole syllabus to be answered in brief. It will carry **20 marks** i.e., two marks each question. All questions are compulsory. (2×10 = 20 Marks)
- c) Rest of the paper shall contain Four units for descriptive questions. Each unit shall have **two** questions and the students shall be given internal choice i.e. the students shall attempt **one** question from each unit. (15× 4= 60 Marks)

UNIT-I

1. **Computer:** Introduction, Definition, Generation of computers, Classification of Computers (Analog, Digital, Hybrid), Characteristics of Computer, Architecture of computer, Limitation and Importance in Physical Education and Sports.
2. **Computer Hardware:** Input Devices and Output Devices
3. **Computer Memory**(i)Primary memory- RAM, Types of RAM, ROM, Types of ROM
(ii)**Secondary Memory:** Magnetic Tape, Disk (Hard Disc), CD, DVD, Cache Memory

UNIT-II

1. **Computer Software:** Meaning, types, operating system, function of operating system
2. **Network:** Meaning, advantages, types, LAN, WAN, MAN, Topologies, Bridge, router, Switch
3. **Internet Basic:** Evolution of Internet, Meaning, Importance, world wide web(www)

UNIT-III

- 1 **Electronic mail:** Meaning, features, advantage
- 2 **Windows (OS):** Booting (Hot Booting, Cold Booting), Meaning, features, starting windows, parts of windows, wall papers and screen saver.

- 3 **Window Accessories:** Entertainment, system tools, calculator, Notepad, Paint, word pad, Keypad shortcuts.

UNIT-IV

- 1 **M.S.Word:** Meaning, features, component, different views of word document, creating new document, opening, saving, closing, editing of existing document, creating tables, inserting pictures, Mail Merge, keyboard shortcuts
- 2 **M.S.Excel:** Meaning, features, entering data into excel sheet, Mathematical Functions, keyboard shortcuts.
- 3 **M.S. PowerPoint (P.P.T.):** Meaning, features, preparation of slides, slideshow, keyboard shortcuts.

PRACTICAL

(20 Marks External)

Working on Windows- M.S Office

1. Working on MS Word
2. Working on Excel
3. Working on PowerPoint Presentation
4. Basics of E-mail and Internet
5. Search Engines

References

- Boyce, Jim. et.al. (2007). *Microsoft office system inside out*.
- Barrett, Ron. et. al. (2007). *Administrator's guide to Microsoft office 2007 servers*.
- Jayachitra, M. (2013). *Computer Application in Physical Education* (1st ed.) India: Friends Publication.
- Microsoft. (2003). *Microsoft office 2003 editions resource kit*.
- Murray, Katherine. (2007). *Faster smarter Microsoft office XP: Take charge of your Microsoft office programme*.
- Wempen, Faithe. et. al. (2007). *Microsoft office 2007 bible*.

[Handwritten signature]