

# FACULTY OF PHYSICAL EDUCATION

## SYLLABUS

FOR

### BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.) (TWO YEAR COURSE) (PART: I & II)

EXAMINATION: 2019-20



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**GURU NANAK DEV UNIVERSITY**  
**AMRITSAR**

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**Scheme for B.P.Ed. (First Year Course)**

The course of Instructions in Bachelor of Physical Education-1<sup>st</sup> year shall consist of the following parts:-

<b>B.P.Ed. (First Year Course)</b>		
<i>Programme Design</i>	<b>Division of Syllabus</b>	<b>Max. Marks</b>
Part-I	Theory	700
Part-II	Practical (Skill and Prowess)	300
Part-III	Teaching Ability	100
Part-IV	Class Room Teaching	100
<b>Total Marks</b>		<b>1200</b>

**B.P.Ed – FIRST YEAR****Part-I****Theory****700 Marks**

<b>Paper</b>	<i>Title of the Subject</i>	<b>Max. Marks</b>
Paper-I	History, Principles and Foundation of Physical Education	<b>100</b>
Paper-II	Anatomy, Physiology and Health Education	<b>100</b>
Paper-III	Organization and Administration	<b>100</b>
Paper-IV	Officiating & Coaching	<b>100</b>
Paper-V	Sports Training	<b>100</b>
Paper-VI	Yoga and Environmental Sciences	<b>100</b>
Paper-VII	Educational Technology and Computer Applications	<b>100</b>

**Part-II Practical (Skill and Prowess)****300 Marks**

<b>Practical</b>	<b><i>Contents</i></b>	<b>Max. Mark (External)</b>
<b>1. Lesson on Athletics:</b> Sprints: Start, Finish Jumps : Long Jump, High Jump Throws : Shot-put, Javelin Middle Distance Races, Race Walk	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>
<b>2. Lesson on Games :</b> Basketball, Cricket, Football, Netball, Kabaddi	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>
<b>3. Lesson on Racket/ Combat Sports :</b> Badminton, Table Tennis, Tennis, Squash Racket, Boxing, Fencing, Judo, Karate, Marshal Arts, Taekwondo, Wrestling	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>

**Contents to be covered for Athletics and Games:**

- a. Historical development of concerned Game/ Track and Field events
- b. Main tournaments organized at National and International level
- c. Records/Statistics of concerned game/track and field event at World, Olympics, Asia, National.
- d. Awardees in the game/ athletics.
- e. Books and Magazines of the games/track and Field
- f. Officiating :
  - i. Play area dimensions
  - ii. Equipment specification
  - iii. Rules and their interpretations
  - iv. Duties of concerned official
- g. Fundamental skills/ Techniques

<b>Part-III Teaching Ability</b>		<b>100 Marks</b>
<b>Teaching Ability</b>	<i>Contents</i>	<b>Max. Marks (External)</b>
<b>1. Lesson on Mass Demonstration and Allied Activities:</b> Lazium, Dumbbell, Umbrella, Tipri, Wand, Hoop, Flag Hoisting, March Past, Opening, Closing and Victory Ceremony	Teaching and Training	<b>100</b>

<b>Part-IV Class Room Teaching</b>		<b>100 Marks</b>
<b>Teaching Practice</b>	<i>Contents</i>	<b>Max. Marks (External)</b>
1. Lesson on Class Room Teaching	Use of Teaching Aids and Modern Scientific Gadgets for Class Room Teaching.	<b>100</b>

- The students have to prepare their lessons from the games/events covered in the academic session.
- Final evaluation will be done by the external examiner (appointed by the University on the recommendation of the BOC) along with an internal examiner (appointed by university HOD/ college principal).
- University HOD/College Principal will certify that all the requirement pertaining to teaching practice/officiating has been fulfilled by the candidate

**B.P.Ed – SECOND YEAR**

<i>Programme Design</i>	<b>Division of Syllabus</b>	<b>Max. Marks</b>
Part-I	Theory	700
Part-II	Practical (Skill and Prowess)	300
Part-III	Teaching Ability	100
Part-IV	School Internship	100
<b>Total Marks</b>		<b>1200</b>

**Part-I Theory**

<b>Paper</b>	<i>Title of the Subject</i>	<b>Max. Marks</b>
Paper-VIII	Contemporary Issues in Physical Education	<b>100</b>
Paper-IX	Sports Psychology and Sociology	<b>100</b>
Paper-X	Kinesiology and Biomechanics	<b>100</b>
Paper-XI	Sports Medicine, Rehabilitation & Physiotherapy	<b>100</b>
Paper-XII	Measurement and Evaluation in Physical Education	<b>100</b>
Paper-XIII	Sports Management and Curriculum Design	<b>100</b>
Paper-XIV	Research Methodology and Sport Statistics	<b>100</b>

**Part-II Practical (Skill and Prowess)****300 Marks**

<b>Practical</b>	<b>Contents</b>	<b>Max. Marks (External)</b>
<b>1. Lesson on Athletics:</b> Sprints: Relay Races, Hurdles Jumps : Triple Jump, Pole vault Throws : Discus Throw Long Distance Races, Steeple Chase	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>
<b>2. Lesson on Games :</b> Baseball, Handball, Hockey, Softball, Volleyball, Kho-Kho	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>
<b>3. Lesson on Gymnastics, Yoga and Aerobics :</b>	Teaching of Fundamentals, Measurements of the Fields, Rules and Regulations	<b>100</b>

**Contents to be covered for Athletics and Games:**

- a. Historical development of concerned Game/ Track and Field events
- b. Main tournaments organized at National and International level
- c. Records/Statistics of concerned game/track and field event at World, Olympics, Asia, National.
- d. Awardees in the game/ athletics.
- e. Books and Magazines of the games/track and Field
- f. Officiating :
  - i. Play area dimensions
  - ii. Equipment specification
  - iii. Rules and their interpretations
  - iv. Duties of concerned official
- g. Fundamental skills/ Techniques

**Part-III Teaching Ability****100 Marks**

<b>Teaching Ability</b>	<b>Contents</b>	<b>Max. Marks (External)</b>
<b>2. Lesson on Recreational Activities:</b> ➤ Minor Games, Lead-up Games, Group Games, Relay games	Teaching, Training and Organization	<b>100</b>

**Part-IV School Internship****100 Marks**

<b>School Internship</b>	<b>Contents</b>	<b>Max. Marks (External)</b>
<b>Assessment of School Internship</b>	The school internship teaching practice program shall include a minimum of 30 lessons out of which 20 shall be in the schools and 10 lessons shall be coaching lessons in college/institutions/ departments itself. Teaching of basic skills as well as coaching in sports and games	<b>100</b>

- The students have to prepare their lessons from the games/events covered in the academic session.
- Final evaluation will be done by the external examiner (appointed by the University on the recommendation of the BOC) along with an internal examiner (appointed by university HOD/college principal).
- University HOD/college Principal will certify that all the requirement pertaining to teaching practice/ officiating has been fulfilled by the candidate.
- School Internship program will be organized under the supervision of a coordinator appointed by HOD/College Principal and the same will be evaluated by the external examiner (Appointed by the University on the recommendation of BOC) along with an Internal Examiner (Appointed by HOD/College Principal).

**PAPER-I: HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION- A**➤ **Introduction**

- a. Physical Education - Meaning, Definition, Aims, Objectives and Scope
- b. Role of Physical Education in General Education, Health Education and Recreation

➤ **Historical Foundation of Physical Education**

- a. History of Physical Education in Ancient Greece: in Reference to Sparta and Athens
- b. Physical Education in Ancient Roman Empire
- c. Physical Education in Germany, Sweden and Denmark (Emphasis only on Contribution of Basedaw, Guts-Muths, Adolph Spiess, Nachtegall, Ling)

**SECTION-B**➤ **Philosophical Foundation of Physical Education**

- a. Philosophy: Meaning, functions of Philosophy,
- b. Idealism
- c. Realism
- d. Naturalism
- e. Pragmatism
- f. Existentialism

➤ **Biological Foundation of Physical Education**

- a. Biological Activity and its Need
- b. Principles of Use, Disuse and Overuse
- c. Concept of Growth and Development
- d. Effects of Heredity and Environment on Growth and Development
- e. Principles of Exercise: Normal load, Over load, Crest Load
- f. Classification of Physique

➤ **Psychological Foundation of Physical Education**

- a. Learning: Meaning and Definition, Types of learning, Laws of Learning
- b. Motor Learning, Various Phases of Motor Learning, Principles of Motor Learning
- c. Concept of Play, Theories of Play.



**SECTION- C**

- **Sociological Foundation of Physical Education**
  - a. Socialization through Physical Education and Sports
  - b. Social Values, Social Inheritance, Traditions and Customs
  - c. Influence of Group on Individual and Vice-Versa
  - d. Leadership, Types of Leadership
  
- **Physiological Foundation of Physical Education**
  - e. Effects of Exercises on Muscular System
  - f. Effects of Exercises on Digestive System
  - g. Effects of Exercises on Cardiovascular System
  - h. Effects of Exercises on Nervous System
  - i. Kinesthetic Sense and Performance

**SECTION- D**

- **Physical Education in India**
  - a. History of Physical Education in INDIA (Pre-Independence)
  - b. Post-Independence Developments of Physical Education in India:
    - i. All India Council of Sports (AICS)
    - ii. Sports Authority of India (SAI)
    - iii. Indian Olympic Association (IOA)
    - iv. Lakshmi Bai National Institute of Physical Education (LNIPE)
    - v. Neta Ji Subhash Institute of Sports (NSNIS)
    - vi. YMCA and its Contribution in Physical Education in India
  - c. National Awards:
    - i. Arjuna Award
    - ii. Rajiv Gandhi Khel Ratna Award
    - iii. Dronacharya Award
    - iv. MAKA Trophy
  
- **Major Sports Events**
  - a. Ancient and Modern Olympic Games
  - b. Asian Games
  - c. Commonwealth Games
  
- **Physical Education in Modern Era**
  - a. Changing trends in Physical Education
  - b. Professionalism in Physical Education
  - c. Scientific promotion of Physical Education

**REFERENCE:**

1. Bucher Charles A. 1983 "Foundation of Physical Education"
2. The CV Mosby Company, Missouri.
3. Barrow M. Harold- 1973 " Man & Movement: Principles of Physical Education"
4. Henry Kimpton Publisher.
5. Felson Janet -1967 "Perspective & Principle of Physical Education"
6. John Wiley & Sons, New York.
7. Frost B. Reuben 1975 "Physical Education Foundation Principles"
8. Addison- Wesley Publishing Company.
9. Freeman H. William 1982 "Physical Education & Sports in Changing Society"
10. SS Chabra for Surjeet Publications, Kohlapur.
11. Harrison M. Joyce 1983 "Instructional Strategies for Physical Education"
12. Wm. C. Brown Company Publisher.
13. Khan Ahmed Araj 1964 "Histort of Physical Education"
14. Bhargava Bhushan Press, Varanasi.
15. Singh, Gurcharan Singh 2017 "Roots of Panjab University and its Sports Archives (1882-1982), Mohindra Publishing House, Chandigarh

**Paper-II ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

- Concept, Need and Importance of Anatomy and Physiology in Physical Education, Definition and Description of Cell, Tissue, Organ and System, Physiology: Meaning, Need and Importance, Essential Properties of Living Organism, Second Wind, Oxygen Debt, Cardiac Output, Stroke Volume

**SECTION-B**

- Muscular System: Classification of Muscles, Functions and Types of Muscles, Concept of Homeostasis and its Relevance to Physical Education and Sports, Brief Introduction of the Cardiovascular System: The Heart & its Structure and Function, Cardiac Cycle, Mechanism of Blood Circulation, Composition and Function of Blood, Brief Introduction of the Respiratory System, Structure and Functions, Mechanism of Respiration, Types of Respiration

**SECTION-C**

- Brief Introduction of the Digestive System, Structure and Functions, The Process of Digestion (Ingestion, Propulsion, Digestion, Absorption and Elimination), Brief Introduction of the Nervous System: Parts of the Nervous System, Structure and Functions of the Brain and Spinal Cord Nerves: Sensory and Motor Nerves, Brief Introduction of the Excretory System: Organs of Excretory system, Structure and Function of Kidneys, Structure and Function of Skin, Sweat Glands: Temperature Regulation

**SECTION-D**

- **Health:** meaning, definition, Factors affecting health, Personal Hygiene (Care of Skin, Hair, Eyes, Ear, Nose, Teeth, Hands and Feet) Health Education: Meaning, Aims and objectives, Importance and Guiding Principles of Health Education, School and College Health Services: meaning and objectives of school and college health services and their status, First Aid, Communicable and Non-Communicable Diseases, Immunization, Community, Participation in Health Programs., Definition and meaning of Fitness and Wellness, Components of Wellness, Nutrition :- Macro Nutrients, Micro Nutrients, Weight Management/ Obesity Control

**PAPER-III: ORGANIZATION AND ADMINISTRATION****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

- Organization and Administration: Need & Importance in the Field of Physical Education and Sports, Professional Qualification and Responsibilities of Physical Education Teacher, Pupil Leadership
- Programme Planning: Meaning, Steps in Planning, Principles of Planning in Physical Education Programme, Time Table Management: Need and Importance, Factor Affecting Time Table. Preparation/ Presentation Techniques: Personal Preparation Technical, Preparation, Supervision and Inspection: - Nature, Qualities of a Supervisor, Methods of Supervision.

**SECTION-B**

- Facilities and Equipment Management: Types of Facilities/Infrastructure- Indoor, Outdoor, Playfields: Area, Location, Layout and Care.
- Equipment's: Need, Importance, Purchase Care and Maintenance, Meaning, objectives, Essential Points to Conduct Intramural, Means to Promote, Intramural, Managing Different Organizational Problems

**SECTION-C**

- Budget: Meaning, Importance of Budget Making, Criteria of a Good Budget, Sources of Income, Expenditure, Preparation of Budget.
- Records and Registers: Maintenance of Attendance Register, Stock Register, Cash Register, Physical Efficiency Record, Medical Examination Record.
- Lesson Plan: Importance of Lesson Plan, Types of Lesson Plan, General Lesson Plan and its Parts, Specific Lesson Plan and its Parts, Class Management: Meaning, Steps in Class Management, Principles of Class Management

**SECTION-D**

- Teaching Methods: Importance of Teaching Method, Factors Affecting Teaching Methods, Types of Teaching Methods, Teaching Aids: Scope and Values of Teaching Aids, Types of Teaching Aid
- Classification of Students; Methods of Classification Evaluation: Need and Importance of Evaluation, Methods of Evaluation

**REFERENCE:**

1. M.L. Kamlesh and M.S. Sangral, Methods in Physical Education, Prakash Brothers, 516, Book Market Ludhiana (19865).
2. Kazmar, H.C. and Cassidy, Methods in Physical Education, W. B. Saunder Co., Philadelphia, London, 1958.
3. Charles E. Forsy, Administration of High School Athletic, Sixth Edition, Prentice Hall, Inc. Englewood, New Jersey, 1979.
4. Charles A. Bucher, Management of Physical Education and Athletic Programmes, Louis C.B. Mosby. Co. 1987.
5. D. S. Dheer and Radhika Kamal, Organisation and Administration of Physical Education. N. Delhi Friends Publication, 1991

**PAPER-IV: OFFICIATING AND COACHING****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

- Definition, Meaning and Importance of Officiating, Principles of Officiating, Qualities of good Officials.
- Duties of Officials:- Pre-game, During Game, Post Game, Measures for Improving the Standard of Officials, Relation of Officials with Managements, Players, Coaches and Spectators.
- Lay out of Standard Track. Points to keep in mind while Laying out Track, Dimension and Marking of Standard Track.

**SECTION-B**

- Rules of Different games and Dimensions of Play fields:- Badminton, Basketball, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Softball, Volleyball.
- Method of Drawing Fixtures in the Following types of Tournaments and Competitions : Knock out, League, Combination a. Fundamentals of conditioning

**SECTION-C**

- Number of Officials and their Specific Duties in Different Sports & Games: Athletics (Track and Field Events), Badminton, Basketball, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Softball, Volleyball.
- Preparation of Score Sheets
- Warming-up and Cooling down, Principles of Training
- Methods of Conditioning and Training, Continuous Training Method, Interval Training Method, Repetition Training Method

**SECTION-D**

- Meaning of Coach and Coaching, Principles of Coaching, Qualities and Qualifications of a good coach.
- Coaching Aids and Devices, Preparation of Coaching lessons, Safety in Games and Sports, Difference between Teaching and Coaching.
- Evaluation in Coaching, Features of good Evaluation, Various Methods of Appraisal, Importance of Coach and Player in Evaluation.
- Meaning of Doping and Its Interpretation.

**REFERENCES:**

1. Brar. T.S. " Officiating Techniques in Track and Field" Gwalior bhargave Press, 2002
2. Billie J. Jones , L. Janetb Wells : Guide to Effective Coaching Principles and Practice, Liabrary of Congress Cataloging in Publication Data ( Main entry under Title ), Printed in the USA, Copyright-1982.
3. Desouza A.J. "Track Geography and Fields Sides"Chennai. DBAC Sports Envision., 1999
4. H.R.H.The Princess Anne : Coach Education, Prepration for a Profession, British Liabrary Cataloging in Publication Data, 1986.
5. John Li. Bann : Scientfic Principles of Coaching, 1972 by Prentice- Hall, INC. Englewood Cliffe, New Jersey.
6. John D. Lawther : Psychology of Coaching, Prentice- Hall, INC. Englewood Cliffe, New Jersey, Copyright-1951.
7. Jack H. Lulewellgn, Judy A. Blucker : Psychology of Coaching, Theory and Application, Surjeet Publication.
8. Leonard , Richard : The Administration Side of Coaching," West Uirginia Universty, 2005.
9. Rawat ,Ashok Kumar : Coaching in Sports"Sports Publication, New Delhi,2009.



**PAPER-V: SPORTS TRAINING****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

- a. Meaning and Definition of Sports Training,
- b. Aims and Objectives of Sports Training,
- c. Characteristics of Sports Training,
- d. Principles of Sports Training.
- e. Concept of Teaching, Training and Coaching,
- f. Qualities, Qualifications and Responsibilities of a Coach.

**SECTION-B**

- a. Definition and Meaning of Technique, Skill and Style,
- b. Technical Training and Methods of Technical Training,
- c. Definition and Meaning of Tactics, Training for Tactics.
- d. Planning: Meaning and Types,
- e. Talent Identification and its Importance

**SECTION-C**

- a. Meaning of Training Load,
- b. Principle of Training Load,
- c. Overload Causes and Symptoms of Overload.
- d. Training methods: Cross Country, Weight Training, Circuit Training, Fartlek Training, Plyometric training.

**SECTION-D**

- a. Definition and Meaning of Speed, Factor Affecting Speed, Methods of Developing Speed.
- b. Definition and Meaning of Strength, Types of Strength, Factor Affecting Strength, Methods of Developing Strength.
- c. Definition and Meaning of Endurance, Types of Endurance, Factor Affecting Endurance, Methods of Developing Endurance Definition
- d. Meaning of Flexibility, Types of Flexibility, Factor Affecting Flexibility, Methods of Developing Flexibility

**REFERENCES:**

1. Daniel, D. Arnheim & William E. Prentice “Principles of Sports Training” Morby–Year Book Inc. St. Louis, 1993.
2. Hardayal Singh, Science of Sports Training, ND: D.A.V. Pub., 1993.
3. Herre, D., Principals of Sports Training, London: Grafion Book, 1982.
4. Lee, E.brown & Vance A.Ferrigna. (Editors). Training for speed, Agility and Quickness, Human Kinetics, Champaign, Ilc., USA, 2005.
5. Marney, B. Simon & Steren R. Levisohn. The Athlete within A Personal Guide To total Fitness. Little Brown Company, Boston, 1987.
6. Matveyew, L.P. Fundamentals of Sports Training (Translation from Russian) Mir. Publisers, Moscow, 1991.
7. Novich, Max M. & Taylor, Buddy Training Conditioning of Athletes. Lea & Febiger, Philadelphia, 1983.
8. Willmore, J.H. Athletic Training & Physical Fitness. Allyand Bacon, Inc. Sydeny, 19

**PAPER-VI: YOGA AND ENVIRONMENTAL SCIENCES****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

- Definition, Meaning, Aims and Objectives of Yoga, Streams of yoga-Karma Yoga, Bhakti Yoga, Gyana Yoga, Raj Yoga, Hatha Yoga, Mantra Yoga, Kundalini Yoga, Eight limbs of Astang Yoga - Yama, Niyama, Prahayama, Pratyahara, Dharana, Dhyana, Samadhi, Patanjali Yoga, Sutra.
- Surya Namaskar guiding Principles of Surya Namaskar, Techniques, Benefits and Applications of the following Asanas: Meditative Asana- Sukh Asana, Sidha Asana, Padam Asana, Relaxative Asana- Shav Asana, Makar Asana, Culture Asana- Bhujang Asana, Chakar Asana, Dhanur Asana, Gomuk Asana, Hal Asana, Matsya Asana, Salab Asana, Ardhamatsyendra Asana, Mayur Asana, Virkh Asana

**SECTION –B**

- Meaning and Methods of Meditation, Benefits of Meditation, Forms of Meditation, Mantra Meditation, Breathing Meditation, Silent Meditation
- Yoga and Diet: Classification and Importance of food: Tamestic foods, Rajasic foods, Satic foods, Diet and its Importance in Cure of diseases

**SECTION -C**

- Pranayama, Varieties, Techniques and Benefits Pranayama, Techniques of Bhadhas: Jhiva, Jalandhar, Uddiyan, Mool.
- Shudi Kriyas- Techniques and Effects of Jal Neti, Sutra Neti, Kapal Bhatti, Nauli and Vaman Dhauti

**SECTION –D**

- Meaning, Scope and Importance of Environmental sciences, Earth, Man and Environment, Environmental Education and Awareness, Environmental Problems: Ozone Depletion, Global Warming and Climate Change
- Air Pollution: Major Sources of Air Pollution, Air Born Diseases and their Effects on Health, Water Pollution: Major Sources of Water Pollution, Diseases from Water Pollution and their Effects on Health, Noise Pollution: Sources of Noise Pollution, Effects of Noise Pollution on Health, Role of Individual in Prevention of Pollution

**REFERENCE:**

1. Alader Kogler: Yoga for every Athlete (Secrets of an Olympic Coach), Jaico Publishing House, Delhi, 1999.
2. Bedi Yaspal: Social and Preventive Medicine, New Delhi ; Atmaram and Sons, 1985.
3. F.Yeast Brown: How to use Yoga and Sports, Publication by Durga Ganj New Delhi, 2006.
4. K.Chandra Shekar: Yoga for Health, Publication by Khel Sahtya, Kendra New Delhi, 2007.
5. Kumar Amresh (Prof.): Yoga for Health and Body, Publisher by Khel Sahitya Kendra, Delhi, 2007.
6. Rana Asha: Yoga and health promotion in Schools, Sports Publications, New Delhi, 2006.
7. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
8. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad - 380013, India.
9. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p.
10. Clerk B.S., Marine Pollution, Clarendon Press Oxford (TB).
11. Cunningham, W.P.Cooper, T.H. Gorhani, E & Hepworth, M.T.2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196.

**PAPER-VII: EDUCATIONAL TECHNOLOGY AND COMPUTER APPLICATIONS****Time: 3 Hours****Max. Marks: 100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A****Interacting with the Computer:**

Introduction to computer, Applications of computer, Components of computers, Computer Generations, Types of Computer, Control Unit, ALU, Input/output function characteristics, Computer Architecture & Design.

**Input / Output Devices & Storage Devices:**

Keyboard, mouse, pens, touch screens, Bar Code reader, joystick, (MICR, OMR, OCR), screen assisted data entry: portable / handheld terminals for data collection, Monitor, TFT, LED/LCD, printers, plotters, voice response units. Storage Fundamentals, Primary & Secondary storage (Cache, Register, RAM, ROM, EPROM, Hard Disk, Flash Drive, Magnetic storage devices and Optical Storage Devices)

**SECTION –B****Audio-Visual Aids in Education:**

Meaning, significance and advantages of AV Aids, Projected Aids: Films, Filmstrips, OHP & slides, Non-projected Aids, Graphic, display, 3-D, Audio aids viz., Radio, TV, CCTV and Activity aids, Criteria for selection of appropriate AV aids.

**Applications of Educational Technology:**

Distance Education: A conceptual framework, Open Universities, Schools and virtual universities Education through print, radio, TV, multimedia and Internet, Experiments and projects in Educational Television, Development of self-instructional materials in distance education.

**SECTION -C****MS–Word:**

Overview, creating, saving, opening, importing, exporting and inserting files, formatting pages, paragraphs and sections, indents, creating lists and numbering. Headings, styles, fonts and font size Editing, positioning and viewing texts, Finding and replacing text, inserting page breaks, page numbers, book marks, symbols and dates. Using tabs and tables, header, footer and printing.

**Concept Educational Technology & Communication:**

Educational Technology: definition, meaning, scope education, Technology of education & technology in education, Foundations of educational technology, Communication definition, meaning and importance, Communication process, communication and management Mass communication, meaning and media.

**SECTION –D****MS–Power Point & MS Excel:**

Presentation overview, entering information, Presentation creation, opening and saving presentation, inserting audio and video, Overview of Excel Spread Sheet, Creating, Selecting, Opening, Viewing, Closing, Printing Workbook, Creating Tables & Charts, Formatting & Editing features of Cells, Creating Formulas

**Internet:**

About internet and its working, Internet Advantage and disadvantage, Services offered by Internet, evaluation of internet, E–Mail, Introduction to WWW, Web Browser, Search Engine.

**References:**

1. Introduction to Computers – N. Subramanian.
2. Computer Fundamentals – P.K. Sinha.
3. MS–Office \_ BPB Publications.
4. “Internet Technologies”, S. K. Bansal, APH Publishing Corporation (April 1, 2002).
5. Dececo, John, P (Ed.) (1964) Educational Technology. New York, Holt Rinebert Winston.
6. Kumar, K.L. (1997) Educational Technology. New Delhi: New Age International (P) Ltd.
7. Skinner, B.T. (1968) The Technology of Teaching. New York: Appletton Century Crofts.

**PAPER-VIII: CONTEMPORARY ISSUES IN PHYSICAL EDUCATION****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION – A**

1. Developments in Physical Education.
2. Challenges in Physical Education in Current Scenario.
3. Professionalism in Physical Education and Sports.
4. Misconceptions about Physical Education.
5. Physical Activity and Its Importance.
6. Factors Affecting Physical Activity: Demographic, Cognitive, Behavioral and Community.
7. Associations between Physical Activity and CVD Risk Factors.

**SECTION – B**

1. Meaning, causes and consequences of childhood obesity.
2. Eating Habits and obesity, obesity Prevention: Role of Schools and Parents.
3. Women in Sports and Gender Biases, Diversity in Women's Sports.
4. Meaning of Term Trans Gender, Effects of Trans Genders in Sports Competition.
5. Meaning and Interrelationship between Sports and Violence.
6. Protective Sports Environment, Causes of Sports Violence.

**SECTION – C**

1. Meaning, Need and Importance of Adapted Physical Education and Sports.
2. Purpose, Aims and objectives of Adapted Physical Education and Sports.
3. Program organization of Adapted Physical Education and Sports.
4. Adapted Sports-Para Olympics, Role of Games and Sports in Adapted Physical Education.

**SECTION – D**

1. Various modes of passive recreation used by children and Adults, Effects of Inactive Life Style on Health.
2. Role of Physical Education Agencies in Creating Awareness about the three effects of Passive Recreation.
3. Increasing Influence of Politics in Sports in Modern Era, Role of Religious Factors in Physical Education and Sports.
4. Socialization through Physical Education and Sports.

**References:**

1. D. Margaret Costa & Sharon R. Guthrie. Women and Sports; Interdisciplinary Perspectives. Human Kinetics; 1994.
2. Winnick, J.P. Adapted Physical Education and Sports. Human Kinetics (4<sup>th</sup> Edition), 2005.
3. Cratty, B.J. Adapted Physical Education in the Mainstream. (4<sup>th</sup> Edition) Love Publishing Company.
4. Paul Beashel & John Taylor. Advance Studies in Physical Education and Sports, Thomas Nelson & Sons Limited, UK, 1996.

**PAPER-IX: SPORTS PSYCHOLOGY AND SPORTS SOCIOLOGY****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A****1 Introduction**

- a. Sports Psychology, Nature, Scope and Importance in Physical Education
- b. Methods of Sports Psychology

**2. Learning**

- a. Concept of Learning, Theories and Laws of Learning,
- b. Principles of Motor–Skill Acquisition,

**3. Motivation**

- a. Definition, Meaning and Types
- b. Dynamics of Motivation in Sports
- c. Techniques of Motivation

**SECTION-B****1. Stress**

- a. Definition, Meaning and Types
- b. Causes of Stress
- c. Stress Related to Sports Competitions

**2. Personality**

- a. Meaning, Types and Personality Traits
- b. Characteristics of Personality

**3. Intelligence**

- a. Definition and Meaning of Intelligence
- b. Theories of Intelligence
- c. Role of Intelligence in Sports

**SECTION-C****Sports sociology****1. Introduction**

- a. Meaning, Definition and Scope of Sports Sociology
- b. Issues and Controversies in Sports Sociology

**2. Sports and Micro Social System**

- a. Study of Sports Groups
- b. Group Interaction, Competition and Co–Operation



**SECTION-D****1. Sports and Culture**

- a. Culture: The Pattern, Traditions, Rituals, Habits, Values and Briefs of a Society
- b. How Culture Influences Sports

**2. Social Factors Concerning Sports**

- a. problems Regarding Professionalism in Sports for women
- b. Sociological Links Between different Aspects of Society: Family, Economics and Politics etc.
- c. Social values and Sports

**References:**

1. Ann. Lowlin. Women's Fitness Program Development Human, Kinetics. 2002.
2. Bengt O. Eriksson et al, Sports Medicine, Guinness Publication, 1990.
3. ChristineM. Drews, Physiology of Sports and Exercise, Human Kinetics, USA, 1999.
4. David R. Mottran, Drugs in Sports (4th Ed) Routledge Taylor and Francis Group, 2005.
5. Erikson, B.O. et al, Sports Medicine, Guinness Pub. Great Britain, 1990.
6. Jain, Rachna, Sports Medicine, KSK, New Delhi, 2002.
7. Jeyaprakash, C. S., Sports Medicine, J.P. Brothers Pub., New Delhi, 2003.
8. Khanna, G.L., Exercise Physiology & Sports Medicine, Lucky Enterprises, Delhi, 1990.
9. Mathew D.K. & Fox E.L, Physiological Basis of Physical Education and Athletic

**PAPER-X : KINESIOLOGY AND BIOMECHANICS****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A**

1. Meaning of kinesiology, aims and objectives of kinesiology
2. Importance of kinesiology in physical education
3. Meaning, structure and chemical composition of bones
4. Functions and types of bones
5. Meaning and types of joints
6. Fundamental movements around the joints
7. Pain and axis ,Modern concept of balance posture
8. Common postural deformities i.e. flat foot, bow legs, knock knees, lordosis, scoliosis, kyphosis, and round shoulders, their causes and remedial measures
9. Causes of bad posture
10. Therapeutic exercises (active, passive, resistive, stretching and their application for rehabilitation)

**SECTION-B**

1. Meaning and types of muscle
2. Properties of muscles
3. Types of muscle contraction-isotonic, isometric, isokinetic, agonists, antagonists, stabilizers, neutralizers, synergists
4. Reciprocal innervations, all or none law, angle of pull, reflex- action, muscle tone
5. Shoulder girdle: (structure,, origin, insertion, innervations, action ) trapezius, pectorals minor, serratus anterior, subclavius, rhomboid, levator scapula,
6. Shoulder joint (structure, origin, insertion, innervations, action) pectorals major, subscapularis, deltoid, supraspinatus, latissimus dorsi, teres major, infraspinatus, and teres minor.
7. Hip joint and pelvic girdle (structure,, origin, insertion, innervations, action ) iliopsoas,sartorius,rectus femoris, gluteus medius,gluteus minimus,tensor fascia latae,gluteus maximus,biceps femoriesand semi-tendinosus
8. Knee and ankle joint: (structure,, origin, insertion, innervations, action ) gastrocnemius,soleus,peroneusgroup, extensor digitorum longus, extensor hallucis longus, tibialis anterior and tibialis posterior

**SECTION-C**

1. Meaning and importance of biomechanics for physical education teacher, coaches and athletes
2. Motion and types of motion
3. Newton's law of motion
4. Application of kinesiology in daily life
  - Walking
  - Lifting and carrying
  - Pushing and pulling
  - Sitting
  - Stair climbing

**SECTION-D**

1. Linear kinematics
  - Distance and displacement
  - Speed and velocity
  - Acceleration and deaccelerations
2. Angular kinematics
  - Angular distance and displacement
  - Angular speed and velocity
3. Linear kinetics
  - Inertia, mass and force
  - Momentum and impulse
  - Friction and elasticity
  - Pressure, work, power and energy
4. Angular kinetics
  - Eccentric force and couple
  - Moment inertia and moment of force
  - Equilibrium and stability
  - Lever
  - Center of gravity

**Reference books**

Bunn, john w. scientific principles of coaching , second edition (englewood)

**PAPER-XI: SPORTS MEDICINE, REHABILITATION AND PHYSIOTHERAPY****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A****1. Introduction**

- a. Definition and Concept of Sports Medicine and Physiotherapy
- b. Aims and Objective of Sports Medicine and Physiotherapy
- c. Role of Sports Medicine and Physiotherapy in Physical Education & Sports

**2. Energy Transfer for Physical Activity**

- a. Energy Transfer in Body
- b. Energy Transfer in Exercise
- c. Energy Expenditure During Various Activities
- d. Fatigue

**SECTION-B****1. Sports Injuries**

- a. Sports Injuries: Common Sports Injuries (Sprain, Strain, Contusion, Abrasions, Laceration, Fractures and their Causes, Prevention and Treatment. P.R.I.C.E

**2. Cardio Vascular System and Exercise**

- a. Athletes Heart
- b. Cardio Vascular Adaptations to Sustained Aerobic Exercises
- c. Sudden Cardiac Death in Sports
- d. Regulation of Circulation during Exercise

**SECTION-C****1. Rehabilitation**

- a. Definition, Goals and Objectives of Rehabilitation
- b. Classification- Active Movement (Free, Assisted, Resisted), Passive Movement (Relaxed & Forced)

**2. Exercise and Respiratory System**

- a. Second Wind
- b. Oxygen Debt
- c. Athletes Lung
- d. Regulation of Respiration during Exercise

**SECTION-D****1. Massage**

- a. Historical Development of Massage
- b. Definition and Classification of Massage Technique
- c. Physiological Effects of Massage
- d. Description of the Techniques of the Massage

**Therapeutic Modalities**

- a. Therapeutic Modalities: Cold Therapy, Infrared, Contrast Bath, Wax Bath
- b. First Aid: Meaning, Definition, Principles. First Aid in Drowning, Snake Bite, burns, Electric Shock

**REFERENCES:**

1. Reider Bruce, "Sport Medicine" (W.B. Saunders Company: A division of Hurcourt race & Company, Philadelphia 1996).
2. Million B. Morris "Office sports Medicine" (Hanley & Belfins Inc. Philadelphia, 1996).
3. Scuderi R. Giles and Mc. Cann D. Peter "SportsMedicine a comprehensive approach" (ElsevierMosby, Burtis Center, Philadelphia, 2005).
4. Scuderi R. Giles, Mc. Cann D. Peter and Brun J. Peter "Sports Medicine: Principles of Primary Cure" (Mosby A Harcourt Health Science Company St. Louis, 1997).
5. Erikson, B.O. et al, "Sports Medicine", Guinness Pub. Great Britain, 1990.

**PAPER-XII MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A****Introduction**

- a) Meaning and Definition of Test, Measurement, Evaluation
- b) Principle and Scope of Test, Measurement and Evaluation
- c) Importance of Measurement and Evaluation in Physical Education

**Motor Fitness Tests**

- a) Philip's J.C.R Test
- b) AAHPER Youth Fitness Test

**SECTION-B****Test**

- a) Construction of Knowledge Tests and Sports Skill Tests
- b) Criteria for Test Selection: Reliability, Validity, Objectivity, Feasibility and Precision
- c) Administrative Protocols (Administrative Guidelines)

**Cardiovascular Test**

- a) Tuttle Pulse Ratio Test
- b) Harvard Step Test

**SECTION-C****Somatotyping**

- a) Meaning of Somatotyping
- b) Brief Account of Kretchmer's Body Type
- c) Brief Account of Sheldon Body Classification

**Sports Skill Test Basket Ball:**

- a) Johnson Basketball Test
- b) Knox Basketball Test

**SECTION-D****Body Composition Measurements**

- a) Height and Weight Measurement, BMI
- b) Methods for Assessing Body Composition: Anthropometric, Hydrostatic Weighing, Bod Pod)

**Volleyball Skill Test:**

- a) Modified Brady Volleyball Test
- b) Russell-Lange Volleyball Test

**Soccer Skill Test:**

- a) Johnson Soccer Test
- b) b. McDonald Test

**References:**

1. Marrow James R., A.W., Jackson, Measurement and Evaluation in Human Performance
2. Human Kinetics Publisher, Urban Champaign, Illinois, U.S.A., 1995.
3. Kansal, D.K., Test and Measurement in Sports and Physical Education, D.V.S Publications, New Delhi, 1996.
4. Johnson, B.L and Nelson, J.K, Practical Measurement for Evaluation in Physical Education, Delhi, Surjeet Publications, 1988.
5. Clarke, H.H and Clarke, D.H. Application of Measurement to Physical Education, Englewood Cliffs, NJ, Prentice Hall, 1991.
6. Phillips D.A and Honark, J.S Measurement and Evaluation in Physical Education, New York, John Wiley and Sons, 1979.
7. Kansal, D.K, Textbook of Applied Measurement Evaluation and Sports Selection. Sports and Spiritual Science Publication: New Delhi, 2008.

**PAPER-XIII      SPORTS MANAGEMENT AND CURRICULUM DESIGN****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION – A**

- a. Introduction, Meaning and definition of sports management.
- b. Need, Importance and scope of sports management?
- c. Skills of Management: Personal Skills, Human Skills, Conceptual Skills, Technical Skills and Conjoined Skills.
- d. Basic Skills of Management: Making Decision, Effective Communication, Managing time and setting priority.
- e. Functions of Management: Planning, Organizing, Staffing Managements, Directing, Controlling in Activity Based Programme.
- f. Theories of Management: Authoritarian, Laissez – Faire, Democratic

**SECTION – B**

- a. Manager – Roles of Manager: Interpersonal roles, Informational Roles, Decisional Roles, Qualities of a Manager.
- b. Managerial Skills and procedure: Effective Communication, Staff Meetings, Committees and office Management.
- c. Management of Physical Education and Sports at.
  - i. School
  - ii. Colleges
  - iii. University

**SECTION – C**

- a. Meaning Definition and Modern concept of curriculum, steps and factor effecting curriculum development.
- b. Public relation: Meaning, definitions, principles, planning and organizing public relations;
- c. Conflicts in management of physical education.
- d. Financial Management: Need and Principles of Financial Management.
- e. Budget – Preparation, Sources of funds and expenditure of Budget.

**SECTION – D**

- a. Tournament organization: Types of tournament (i) knockout (ii) league (iii) combination (iv) consultation (v) challenge.
- b. Process of organizing sports events, notification, invitations, selection of officials, monitoring, writing reports.
- c. Use of computer application in the management of physical education and sports.
- d. Maintain records in computer.

**References:**

1. Frost, B. and Lockhart, B.D. Marshall Stanley, J. Administration of Physical Education and Athletics Concepts and Practices (New Delhi: University Book Stall, 1992) 2<sup>nd</sup> Ed.
2. June Walker; Modern methods in secondary school, physical education, Allyn and Bacon, Inc. Boston.
3. Charles E. Forsythe, Irvin A. Keller; Administration of High School Athletics Prentice Hall, Inc. New Jersey.
4. Clyde Knapp. Teaching Methods of Physical Education Mc. Grew Hil Inc.



**PAPER-XIV: RESEARCH METHODOLOGY AND SPORT STATISTICS****Time: 3 Hours****Marks:100****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**SECTION-A****1. Introduction**

- a. Definition, Meaning, Aims and Objectives of Research
- b. Need and Importance of Research in Physical Education
- c. Types of Research

**2. Research Problem**

- a. Meaning of Research Problem, Formulation of Research Problem
- b. Criteria of a Research Problem
- c. Limitations and Delimitations

**SECTION-B****1. Hypothesis**

- a. Meaning and Definition of Hypothesis
- b. Significance of Hypothesis
- c. Types of Hypothesis
- d. Testing of Hypothesis

**2. Review of literature**

- a. Need of Review of Literature
- b. Sources of Literature
- c. Planning of Review Work
- d. Note-Taking

**3. Data collection**

- a. Collection of data through questionnaires and interview
- b. Observation Method
- c. Case Study Method

**SECTION-C****1. Sampling**

- a. Meaning and Types of Sampling
- b. Sample Size
- c. Sampling and Non-Sampling Error
- d. Importance of Sampling

**2. Research Design**

- a. Meaning and Definition of Research Design
- b. Need and Importance of Research Design

**SECTION-D****1. Statistics**

- a. Meaning of Statistics. Need and Importance of Statistics in Physical Education,
- b. Meaning and advantage of Graphical Representation of Data, Principle of Graphical Representation of Data. Histogram, Frequency Polygon, Cumulative-Frequency Graph, Bar-Diagram and Pie Diagram.
- c. Meaning of the Measures of Central Tendency, Computation of Measures of Central Tendency i.e. Mean, Median and Mode.
- d. Meaning of Variability, Computation of Measures of Variability: Range, Quartile -Deviation, Average Deviation and Standard Deviation

**2. Research proposal**

- a. Research Proposal
- b. Research Report: Precautions for writing Research Reports
- c. Format:
  - i. Preliminary Section
  - ii. Main Body
  - iii. Supplementary material

**References:**

1. Author's Guide: "Research Methods Applied to Health Physical Education and Recreation", Washington, D.C., 1991.
2. Best J.W., "Research in Education", Prentice Hall, New Delhi 1982.
3. Clarke H. David, "Research Processes in Physical Education, Recreation and Health", Prentice Hall Inc, Englewood Cliffs, New Jersey, 1985.
4. Kamlesh M.L., "Methodology of Research in Physical Education and Recreation", AHPER, Washington D.C., 1973.
5. Kamlesh M.L., "Methodology of Research in Physical Education and Recreation", AHPER, Washington D.C. 1973.