

**APPLICATION COURSE**  
**FITNESS, AEROBICS & GYM-OPERATIONS**

**PART A: THEORY**

**Max. Marks: 50**

**I Physical Activity and Wellness**

1. Physical Activity – Concept, Benefits of participation in physical activities with specific reference to health
2. Wellness – Meaning, Components, Need and Importance
3. Concept and Components of Health; Health-promoting behaviours; Regular exercise, Balanced Diet, Safety & Health Awareness, Prohibition- Smoking, Alcohol and Drugs
4. Type of Physical Activities – Walking, Jogging, Running, Cycling, Swimming, Camping, Adventure Sports

**II Fitness and Aerobics**

1. Physical Fitness – Concept, Components, Significance, Development and Maintenance
2. Effects of Exercise on Various Systems (Skeletal, Muscular, Circulatory and Respiratory)
3. Measurement and Evaluation of Physical Fitness – Need and Importance
4. Forms of Aerobics (Floor, Step, Weight and Aqua Aerobics); Development of Aerobic Fitness Programmes

**III Nutrition and Weight Management**

1. Concept of Nutrition, Nutrients, Balanced Diet, Dietary Aids and Gimmicks
2. Energy and Activity – Calorie Intake and Expenditure
3. Obesity and its Concept, Management of Obesity, Anorexia and other Related Health Problems
4. Weight Management – Ways and Means

**IV Stress Management**

1. Concept and Causes of Stress, Common Stressors
2. Stress prevention and Good Health; Preventing Stress
3. Methods of Stress Management – Basic Yogic Methods, Relaxation, through Sports and Recreational Activities
4. Yoga and meditation as means of stress management.

**V Gym Operations**

1. Evolution of Gym Culture;
2. Establishing a Gym – Location, Policy, Offer of Programmes, Budgeting, Marketing & Public Relations, Clientage, Record-Keeping, Public Relations, Individualized /Group Grooming Programmes(for Personnel), and Reports
3. Qualification and Qualities of Gym Instructors, Different Exercise Equipments and their Management
4. Safety Measures, Prevention and Management of Injuries in Gymnasium.

**PART B: PRACTICAL (Any Five) (25 Marks)**

1. Self-Assessment – Physical Health Risk, Mental Health Risk
2. Measurement of Fitness Components – Flexibility (Sit and Reach Test); Strength (Leg-raise for Minimal Strength); Cardiovascular Endurance (Run and Walk Test); Muscular Endurance (Sit-ups)
3. Aerobics- Performing five exercises and preparation of Exercise Schedules.
4. Measuring height, weight, waist circumference and hip circumference; Calculation of BMI (Body Mass Index) and Waist-Hip Ratio
5. Demonstration of Yogasana (Any Five Asanas)
6. Visit to a Gym, Introduction to Equipments and Preparation of a Report

Distribution of practical marks

**PRACTICAL ASSESSMENT**

(a) Practical	10 Marks
(b) VIVA	10 Marks
(c) Record Book	5 Marks

Total 25 Marks

**PART C: INTERNAL ASSESSMENT (25 Marks)**

1. Written Test (10 marks)
2. Project / Assignment (10 marks)
3. Attendance (5 marks)

## Notes for Examiners, Teachers and Students (Common for all paper):

### Part – A: Theory (50 Marks)

The examiner will set nine questions (Eight descriptive and one short note) equally distributed throughout the entire syllabus; the candidates will be required to attempt any five questions. Each question will carry ten marks.

### Part – B: Practical (25 Marks)

The candidates will be asked to perform two practicals in final practical examination (5 marks each), Viva-Voce (10 marks) and will be required to show their note book for 5 marks. Each examiner is required to give a **minimum of 15 to 20 minutes** to a candidate to provide enough opportunity for presenting his / her performance, proficiency and presentation in the listed areas of practical examination. Awards of the practical examination should be duly filled in the proforma / award sheet (specified for the purpose).

**Internal Assessment (25 Marks):** The candidates will be assessed by the concerned teacher through house examination (10 marks) assignments (10 marks) and attendance (5 marks) as per University of Delhi guidelines.

### ANNUAL CREDITS FOR THE PAPER=08

The entire course Part A, B & C will be conducted through teaching students, 5 periods per week, 3 theory periods and 2 practical periods. Each period will be of 55 minutes. Each theory paper per week in two semesters duration (one year) will earn 2 credits, while 2 practical periods per week throughout the year will earn 2 credits. Hence 3 theory periods per week= 6 credits

2 theory periods per week = 2 credits

Total = 8 credits

### SUGGESTED READINGS

#### Theory

1. ACSM'S (2001), *ACSM Fitness Book* (U.K., Human Kinetics).
2. Anspaugh, David J.; Hamrick, Michael H.; and Rosato, Frank D. (2003), *Wellness – Concepts and Applications McGraw Hill, New York*.
3. Bharihoke, Sunil (1998), *The Gym Management* (New Delhi : Khel Sahitya Kendra).
4. Bishop, J.G. (2004) *Fitness through Aerobics*, Benjamin Cummings, USA.
5. Brown, K.M. (2002) *Physical Activity and Health: An Interactive Approach*, Jones and Bartlett Publisher, Sndbury, Massachusetts, USA.
6. Department of Physical Education and Sports Sciences, University of Delhi (2007), *Draft Resource Material – Fitness, Aerobics and Gym-Operations*.
7. Girdano, Daniel A.; Everly, George S.; and Dusek, Dorothy E. (1997), *Controlling Stress and Tension – A Holistic Approach* 5<sup>th</sup> ed. (USA : Allyn and Bacon).
8. Hoeger, W. W. K. & Hoeger, S.A. (2007), *Fitness and Wellness* (Thomson, Wadsworth, Publishing Company).
9. Koley, Shyamal (2007), *Exercise Physiology – A Basic Approach* (New Delhi : Friends Publications).
10. Kumari, Sheila, S., Rana, Amita, and Kaushik, Seema, (2008), *Fitness, Aerobics and Gym Operations*, Khel Sahitya, New Delhi
11. Lau, S.K. (1999), *Great Indian players*, New Delhi, Sports Publication
12. Powers, S. K.; S.L. Dodd, and V.J. Noland (2006) *Total Fitness – Exercise, Nutrition and Wellness Benjamin Cummings, USA*.
13. Sharkey, B. J. (2002), *Fitness and Health* 5<sup>th</sup> ed. (U.K., Human Kinetics).
14. Uppal, A.K. (2004), *Fitness and Health* 5<sup>th</sup> ed. (U.K., Human Kinetics).
15. Williams, Melvin H. (1990), *Lifetime Fitness and Wellness – A Personal Choice* 2<sup>nd</sup> ed. (USA : Wm. C. Brown Publishers).

#### Practical

1. Fahey, T.D., M.P. Insel and W.T. Rath (2006), *Fit & Well: Core Concepts and Labs in Physical Fitness*, McGraw Hill, New York.
2. Kumari, S., Rana, A., and Kaushik, S. (2008), *Fitness, Aerobics and Gym Operations*, Khel Sahitya, New Delhi
3. Hoeger, W W K and S.A. Hoeger (2004). *Principles and Labs for Fitness and Wellness*, Thomson Wadsworth, California, USA.
4. Kumari, Sheila, S., Rana, Amita, and Kaushik, Seema, (2008), *Fitness, Aerobics and Gym Operations*, Khel Sahitya, New Delhi

**DISCIPLINE COURSE: Physical Education in the Contemporary Context**  
**INTRODUCTION TO PHYSICAL EDUCATION (Introduction, History and Physical Fitness)**

**PART A: THEORY**

(M.M. : 50)

**Unit-1: Introduction**

- 1.1 Meaning, Concept, Definition, Need and Scope of Physical Education.
- 1.2 Aim, Objectives, Principles and Components of Physical Education.

**Unit-2: Overview of Physical Education with reference to different disciplines**

- 2.1 Physical Education in relation to Arts and Science Disciplines: Anatomy, Physiology, Nutrition, Growth, Development, Kinesiology, Biomechanics, Psychology, Sociology, Anthropology, Philosophy, Pedagogy etc.
- 2.2 A Brief Overview of Physical Education in the Historical Perspectives.

**Unit-3: Development of Physical Education and Olympic Movement**

- 3.1 Development of Physical Education in India, U.S.A., Greece and Rome; Promotion of Physical Education and Sports: Schemes, Awards and Honours, Awardees, Trophies/Cups and Eminent Sports Persons.
- 3.2 Olympic Movement : Ancient Olympics, Modern Olympics, Objectives of Olympics, Olympic Motto, Flag, Emblem, Torch, Oath and Charter, International Olympic Committee and Indian Olympic Association, Performance of India at Olympic Games

**Unit-4: Physical Fitness**

- 1.1 Meaning, Definition, Need and Importance of Physical Fitness; Components of Physical Fitness, General and Specific Fitness.
- 1.2 Principles, Means and Methods to Develop measure and maintain different components of Physical Fitness.

**Unit-5: Diet & Posture**

- 5.1 Diet and Nutrition; Obesity, Exercise Rest and Sleep.
- 5.2 Posture : Good Posture, Factors Causing Postural Deformities, Remedial Measures for Postural Deformities (Kyphosis, Scoliosis, Lordosis, Knock Knees, Bow Legs, Flat Foot)

**PRACTICAL (M.M. : 25)**

1. Development of Physical Fitness through Calisthenics / Aerobics / Circuit-Training / Weight-Training.
2. Track & Field: To demonstrate techniques of Standing Broad Jump, Long Jump, and Vertical Jump.
3. Fundamental Skills, Rules and Regulations of any one of the following team Games: Basketball, Handball, Football, Softball, Volleyball, Korfbal, Kabaddi, Hockey, and Kho-Kho.
4. To demonstrate the techniques of starting, sprint running, middle, long distance running and finishing.
5. To demonstrate the technique of Suryanamaskar.

<b>PRACTICAL ASSESSMENT</b>	(a) Practical	10 Marks
	(d) VIVA	10 Marks
	(e) Record Book	5 Marks
	Total	<u>25 Marks</u>

**PART C: INTERNAL ASSESSMENT (25 Marks)**

1. **Written Test (10 marks)**
2. Project / Assignment (10 marks)
3. Attendance (5 marks)

Notes for Examiners, Teachers and Students (Common for all paper):

**Part – A: Theory (50 Marks)**

The examiner will set nine questions (Eight descriptive and one short note) equally distributed throughout the entire syllabus; the candidates will be required to attempt any five questions. Each question will carry ten marks.

**Part – B: Practical (25 Marks)**

The candidates will be asked to perform two practicals in final practical examination (5 marks each), Viva-Voce (10 marks) and will be required to show their note book for 5 marks. Each examiner is required to give a **minimum of 15 to 20 minutes** to a candidate to provide enough opportunity for presenting his / her performance, proficiency and presentation in the listed areas of practical examination. Awards of the practical examination should be duly filled in the proforma / award sheet (specified for the purpose).

**Internal Assessment (25 Marks):** The candidates will be assessed by the concerned teacher through house examination (10 marks) assignments (10 marks) and attendance (5 marks) as per University of Delhi guidelines.

## SUGGESTED READINGS

### **THEORY**

- Brown, J.E. (2005) *Nutrition Now* Thomson-Wadsworth.
- Corbin, C. B., G. J. Welk, W. R. Corbin, K. A. Welk (2006) *Concepts of Physical Fitness: Active Lifestyle for Wellness*. McGraw Hill, New York, USA.
- Graham, G. (2001) *Teaching Children Physical Education : Becoming a Master Teacher*. Human Kinetics, Champaign, Illinois, USA.
- Hoeger, W.W. & S. Hoeger (2007) *Fitness and Wellness*. 7<sup>th</sup> Ed. Thomson Wadsworth, Boston, USA.
- Kamlesh, M. L. & Singh, M. K. (2006) *Physical Education* (Naveen Publications).
- Kansal, D.K. (2008) *Text book of Applied Measurement, Evaluation & Sports Selection*. Sports & Spiritual Science Publications, New Delhi.
- Lumpkin, A. (2007) **Introduction to Physical Education, Exercise Science and Sports Studies**, McGraw Hill, New York, U.S.A.
- Savard, M. and C. Svec (2006) *The Body Shape Solution to Weight Loss and Wellness : The Apples & Pears Approach to Losing Weight, Living Longer, and Feeling Healthier.*. Atria Books, Sydney, Australia.
- Siedentop, D. (2004) **Introduction to Physical Education, Fitness and Sport**, McGraw Hill Companies Inc., New York, USA.
- Shaffer, D.R. (2002) *Developmental Psychology: Childhood and Adolescence*. Thomson, Sydney, Australia
- Shukla, (2000) **Mother on Education**, National Council of Teacher Education, New Delhi.
- Singh, A. et al. (2000) **Essentials of Physical Education**, Kalyani Publishers, Ludhiana, Punjab.
- Wuest, D.A. & C.A. Bucher (2006) *Foundations of Physical Education, Exercise Science, and Sports*. McGraw Hill Companies, Inc., New York, USA.

### **PRACTICAL**

- Abraham, C.C. (1989) *Basketball for Men and Women*, Y.M.C.A. Publishing House. Madras, Tamil Nadu
- Chakraborty, G. (2002) **Kho-Kho Avelokan** (In Hindi) , Khel Sahitya Kendra, New Delhi.
- Debort, J. (1987) **Modern Track and Field** (N.J. Prentice Hall Inc. : Englewood Cliffs).
- Hoeger, W.W.K. & S.A. Hoeger (2006) *Principles and Labs for Fitness and Wellness* Eighth Edition, Wadsworth Thomson Learning, Inc., Belmont, California, U.S.A.
- Jerry, V. K. (1999) *Skills and Drills in Basketball*, Leisure Press.
- Mohan, V.M. (1977) *Athletics for Beginners* (New Delhi : Metropolitan Books).
- Powers, S.K., S.L. Dodd & V.J. Noland (2006) **Total Fitness & Wellness**, Pearson Benjamin Cummings Boston, USA.
- Roberson, R. and H. Olson, (1990) *Beginning Handball* (California : Wadso H. Company Inc. Belmont).
- Thani, Y. (2002) **Coaching Successfully Hockey** (New Delhi : Sports Publications).

**DISCIPLINE COURSE: Physical Education in the Contemporary Context**

**FOUNDATIONS OF PHYSICAL EDUCATION**

**(Health Education, Anatomy, Physiology and Sports Medicine)**

**PART-A:THEORY**

**(M.M. : 50)**

**Unit-1: Health Education**

- 1.1 Health Education: Meaning and Concept of Health and Health Education; Importance of Health and Principles of Health and Health Education;
- 1.2 Role of Different Agencies in Promoting Health (WHO, UNICEF, Local Bodies); Personal Hygiene

**Unit-2: Anatomy and Physiology**

- 2.1 Basic Concept, Need and Importance of Anatomy and Physiology in Physical Education; Definition and Description of Cell, Tissue, Organ and System.
- 2.2 Introduction to and Function of Skeletal System, Muscular System, Circulatory System, Respiratory System, Digestive System, Excretory System, Nervous System and Endocrine System

**Unit-3: Anatomical and Physiological Systems, Training Effects**

- 3.1 Effect of Exercise on Skeletal System, Muscular System, Circulatory System, Respiratory System, Digestive System, Excretory System, Nervous System and Endocrine System.
- 3.2 Warming-up, Conditioning, Cooling-down, Fatigue, Stitch, Cramp, Oxygen Debt, Second Wind, Vital Capacity, Stroke Volume and Temperature Regulation, Lactate Threshold & VO<sub>2</sub> max.

**Unit-4: Sports Medicine**

- 1.1 Concept and Role of Sports Medicine & Athletic Care; Prevention and Management of Injuries: Factors causing injuries and general principles regarding prevention of injuries.
- 1.2 Common Sports Injuries : Sprain, Strain, Abrasion, Laceration, Haematoma, Fracture, Dislocation

**Unit-5: First Aid, Ergonic Aids and Rehabilitation**

- 5.1 First-Aid of Sports Injuries; Ergogenic Aids.
- 5.2 Aim and Objectives of Rehabilitation, Therapeutic Modalities, Muscle Strengthening through Active and Passive Exercises

**PRACTICAL (M.M. : 25)**

1. To mark a standard track of 200M/400M.
2. To demonstrate the Skills of Throwing Shot-Put, Discus and Javelin.
3. To demonstrate Fundamental Skills, Rules and Regulations of any one of the following Individual games: Archery, Badminton, Taekwondo, Gymnastics, Judo, Table-Tennis, Tennis.
4. Yoga : Any five asanas out of the following : *Karanpeedasana, Padmasana, Dhanurasana, Sarvangasana, Paschimottanasana, Chakrasana, Halasana, Matsyasana, Ardhamatsyendrasana, Usthrasana, Mayurasana, Shirshasana, Vajrasana*

<b>PRACTICAL EXAMINATION</b>	(a) Practical	10 Marks
	(b) VIVA	10 Marks
	(c) Record Book	5 Marks
	Total	<u>25 Marks</u>

**PART C: INTERNAL ASSESSMENT (25 Marks)**

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## SUGGESTED READINGS

### **THEORY**

- Acsm's Guidelines for Exercise Testing and Prescription (2001), American College of Sports Medicine, New York, U.S.A.
- Anspaugh, D.J., G. Ezell and K.N. Goodman (2006) **Teaching Today Health**, Mosby Publishers, Chicago (USA)
- Beotra, Alka (2001-02) **Drug Education Handbook on Drug Abuse in Sports**, Applied Nutrition Sciences, Mumbai.
- Donatelle, R.J. and Ketcham P. (2007), Access to Health, Benjamin Cummings, Boston, USA.
- Flyod, P.A., S.E. Mimms and C. Yelding (2003) **Personal Health: Perspectives and Lifestyles**, Thomson, Wadsworth, Belmont, California, USA.
- Goldberg, L. and D.L. Elliot (2000) **The healing Power of Exercise**, National Health & Wellness Club, New York, U.S.A.
- Jain, J. (2004) **Khel Dawaon Ka** (New Delhi : Delhi University Press).
- Kumar, Pradeep, (2007) **Historical Development of Track and Field**. Friends Publications, New Delhi.
- Pande, P. K. (1987) **Outline of Sports Medicine** (New Delhi : Jaypee Brothers).
- Robbins, G., D. Powers and S. Burgess (2002), A Wellness Way of Life, McGraw Hill, New York, USA.
- Roy, Steven and Richard, Irvin (1983) **Sports Medicine**, Benjamin Cummings, Boston, USA.
- Schindler, J.A. (2003) **How to Live 365 Days a Year** (Boston: Running Press).

### **PRACTICAL**

- Amarnath, M. (1996) **Learn to Play Good Cricket**, UBS Publishers, New Delhi
- Brown, E. (1995) **Better Badminton** (London: Febiger & Febiger)
- Chakraborty, S. and Sharma, L.(1995) **Fundamentals of Gymnastics**, DVS Pub., New Delhi.
- Debort, J. Monneth (1987) **Modern Track and Field** (N.J. Prentice Hall Inc. : Englewood Cliffs).
- Dubey, H.C. (1999) **DPH Sport Series: Tennis**- Discovery Pub., House, New Delhi.
- Jain, D. (2003) **Paly & Learn Judo**, Khel Sahitya Kendra, New Delhi.
- Jain, D. (2005) **Play and Learn Archery**, Khel Sahitya Kendra, New Delhi.
- Kumar, K. (1999) **DPH Sport Series: Table Tennis**- Discovery Pub., House, New Delhi.
- Shaffer, D.R. (2004), **Social and Personality Development**. Wadsworth Publishing, Boston, U.S.A.
- Yadav, Y.P. (1998) **Art of Yoga**, Friends Publishers, New Delhi.

**PROFESSIONAL INTEGRATION IN PHYSICAL EDUCATION**  
**(Sports Psychology, Administration and Management of Physical Education)**

**PART-A: THEORY**

*(M.M. : 50)*

**Unit-1: Introduction to Psychology**

- 1.1 Introduction to General Psychology; Definition, Scope and Importance of Sports Psychology.
- 1.2 Fundamentals of Growth and Development (Infancy, Childhood, Adolescence, Adulthood)

**Unit-2: Learning and Personality Concepts**

- 2.1 Learning Concept and Principles of Learning, Types of Learning, Learning Curve, Transfer of Training and Sports;
- 2.2 Personality : Meaning of Personality, Factors Affecting Personality, Development of Personality; Relation of Personality with sports performance.

**Unit-3: Sports Psychology Related Concepts**

- 3.1 Concepts of Positive Thinking, Attitudes, Emotion, Anxiety and Stress Management in Sports.
- 3.2 Motivation: Concepts of Motivation, Types of Motivation, Role of Motivation, Concepts of Incentive, Achievement, Motivation and Sports

**Unit-4: Planning, Administration and Supervision**

- 4.1 Concept and Scope of Planning, Organization, Administration and Management with reference to Physical Education, office Management and Budgeting; Maintenance of Records and Accounts.
- 4.2 Lay-out and Supervision of Physical Education Facilities; Drawing of Fixtures, Organization of Intramurals / Extra-murals and other Sports Events (Seminar, Clinic, Talk etc.).

**Unit-5: Audio-Visual Aids, Media and Careers in Physical Education**

- 5.1 Use of Audio-Visual Aids in Physical Education; Role of Media and Public Relations in Physical Education.
- 5.2 Careers in Fitness, Health, Physical Education and Sports.

***PRACTICAL (M.M. : 25)***

1. To demonstrate the markings for shot-put area.
2. To demonstrate the skills and setting-up of a vertical jump area.
3. To demonstrate the Fundamental Skills, Rules and Regulations of any one of the following games: Cricket, Chess, Carrom board.
4. To prepare a news report of a sports competition seen.
5. To draw the distance and velocity curves of given growth data of body height.

<b><i>PRACTICAL EXAMINATION</i></b>	(a) Practical	10 Marks
	(b) VIVA	10 Marks
	(c) Record Book	5 Marks
	Total	<u>25 Marks</u>

**PART C: INTERNAL ASSESSMENT (25 Marks)**

1. **Written Test (10 marks)**
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## SUGGESTED READINGS

### **THEORY**

- Chakraborty, S.(2002) *Sports Management* (Delhi : Khel Sahitya Kendra)
- Covey, S. (1989) *7 Habits of Highly Effective People*, Covey Publications, USA
- Kaushik, S. and Shaw, D. (2000) *Sharirik Shiksha Mein Paath Niyojan Va Shikshan Paddhhati Ke Siddhant* (New Delhi : Friends Publications).
- Kumar, Pradeep, (2007) **Historical Development of Track and Field**. Friends Publications, New Delhi.
- Leunes, A. and I.R. Nation (2001) *Sports Psychology (with InfoTrac)*. Wadsworth.
- Magill, R.A. (2004) **Motor Learning and Control: Concepts and Applications**, McGraw Hill, New York, USA.
- Masteralexis, L.P., C. Barr and M. Humms (2008) **Principles and Practices of Sport Management**. Jones and Bartlett Publisher, U.S.A.
- Sandhu, K.,(2006) **Trends and Developments in Professional Preparation in Physical Education** (New Delhi : Friends Publication).
- Sandhu, K., (1993), **Sports Dynamics-Psychology, Sociology and Management**, Delhi: Galgotia Publishers.
- Shaw, and Kaushik, (2001) *Lesson-Planning, Teaching Methods and Class-Management in Physical Education* (New Delhi : Khel Sahitya Kendra).
- Siendentop, P. (2003) *Introduction to Physical Education, Fitness & Sports*. McGraw Hill, New York, USA.

### **PRACTICAL**

- Martin, G.L. (2003) **Sports Psychology-Practical Guidelines from Behaviour Analysis**. Sports Press, Winnipeg, Canada.
- Parks, J. and J. Quarterman, Editors (2006) **Contemporary Sports Management**. Human Kinetics, Champaign
- Sikdar, N. (1997) **One Hundred Chess Endings**, Delhi Chess Academy, New Delhi
- Schmidt, R.A. and C.A. Wrisberg (2004) **Motor Learning Performance**. Human Kinetics, Champaign, Illinois, USA.
- Thani, L. (1995) **Target Sports**, Sports Publication, New Delhi.