

KANNUR UNIVERSITY

SCHOOL OF PHYSICAL EDUCATION AND SPORTS SCIENCES

REGULATION, SCHEME AND SYLLABUS

FOR

DIPLOMA IN KALARIPPAYATTU



SCHOOL OF PHYSICAL EDUCATION AND SPORTS SCIENCES

Regulation, Scheme of Examination and Syllabus for Diploma in Kalarippayattu

1. **NAME OF THE COURSE**: Diploma in Kalarippayattu

2. AIMS AND OBJECTIVES OF THE COURSE

- a) To teach the students the basic skills for becoming an excellent Kalarippayattu expert
- b) To provide an Academic base for Kalarippayattu training and conduct research
- c) To use Kalarippayattu as means for developing health and fitness of the individual
- d) To use Kalari method of training in sports training
- e) To use Kalari training, for training of Classical Art Forms
- f) To study the principles of training related to Kalarippayattu
- g) To understand the basic structure and function of human body.
- h) To study the kinesiology aspects of Kalarippayattu
- i) To understand the use of Kalari First Aids for sports injuries.
- 3. **NATURE OF THE COURSE:** The course shall be full time regular and coeducational.
- 4. **DURATION OF THE COURSE:** The duration of the course shall be one academic year consisting of two semesters. Each semester shall have 90 working days.

5. ELIGIBILITY FOR ADMISSION

- (i) Candidates for admission to the Diploma course in Kalarippayattu shall have passed HSC/+2/VHSC/10+3 Diploma or any other higher examinations recognized by the Kannur University.
- (ii) Should be below 40 years as on the date of notification of the course. Age relaxation as per University Rules in the case of deserving candidates be given for maximum 5 years.
 - (iii) Should be physically and mentally fit to undergo Kalarippayattu training

6. **RESERVATION OF SEATS**

Reservation of seats shall be as per rules framed by the Government/University from time to time.

7. SELECTION CRITERIA

The course shall have 20 (Twenty) seats in a batch. The selection of candidates for admission to the course shall be based on the merit determined by the following criteria:

i) Entrance examination * 50 marks
 ii) Physical Fitness test specific to Kalarippayattu norms 25 marks

iii) Marks of the qualifying examination 25 marks

Total - 100 marks

8. MEDIUM OF INSTRUCTION AND EXAMINATION

The medium of Instruction and Examination of the course shall be English.

9. COURSE CONTENT AND SCHEME OF EXAMINATION

SEMESTER I

Course Code	Course Content	Marks		Total Teaching hours	
		Internal	External	Total	
KP001	Foundations Principles and Methods of Kalarippayattu	40	60	100	60
KP002	Human Anatomy Physiology and Kinesiology .	40	60	100	60
KP003	Kalarippayattu Practical (Basic and Intermediate level)	40	60	100	240
	Total for Semester I	120	180	300	360

SEMESTER II

Course Code	Course Content	Marks		Total Teaching hours	
		Internal	External	Total	
KP004	Kalarippayattu for Sports	40	60	100	60
KP005	Physiology of exercises and Kalari Marmas.	40	60	100	60
KP006	Kalarippayattu Practical (Advanced level)	40	60	100	240
	Total for Semester II	120	180	300	360

^{*} Entrance examination shall be multiple choice questions based on the knowledge of Structure and functions of the body, Health, Objective English of HSC/+2 syllabus, General Knowledge and Current affairs. Candidates should scoreatleast40% marks in the selection tests to place in the rank list.

10. ATTENDANCE

The minimum attendance for both theory and practical required for each paper shall be 85% of the total number of classes conducted for that semester. Those who secure the minimum attendance in a semester alone will be allowed to register for the University examination.

Attendance (For Internal Valuation)

Above 95 % - 5 marks

90 to 94 % - 4 marks

85 to 89 % - 3 marks

Below 85 % - 0 marks.

Condonation of shortage of attendance, for a maximum of 10 days of the working days during the whole period of the course may be granted as per the existing university rules. A student who is not eligible for such condonation shall repeat the Course along with the subsequent batch.

11. SCHEME OF EVALUATION

The evaluation of a course consists of two parts: Internal Evaluation (IE) and End Semester Examination (ESE). The total marks allotted for the theory papers and Practical shall be 100, with 40 % marks for Internal Evaluation and 60% marks for the End Semester Examination.

12. INTERNAL EVALUATION

Internal Evaluation for theory and practical shall be on the basis of the internal examinations, assignments, seminars and attendance. The valuation shall be conducted by the concerned teacher. The students shall also maintain a record book of Kalarippayattu ,which should be submitted at the time of the University examinations.

Internal Evaluation of Theory Papers

Details of Internal Assessment	Marks
Test Papers	15
Assignment	10
Seminar Presentation	10
Attendance for the semester	5
Total	40

Internal Evaluation of Practical Examination

Details of Kalarippayattu practical	Marks
Demonstration	20
Instructions, Skills, Communications, Time	10
management etc.	
Viva Voce	10
Total	40

13. END SEMESTER EXAMINATION

The End Semester Examination in theory and practical shall be conducted by the University after the completion of the required theory and practical classes at the end of the semesters. The duration of the End Semester Examination for each theory paper shall be for 3 hours. The Head of the Department of the Course shall submit the attendance certificate, marks of internal assessments of eligible candidates for attending the University examination.

End Semester Evaluation of Practicals shall be conducted by the University with two examiners -one internal and one external. There shall be no provision for revaluation. There shall be no supplementary examinations. For reappearance/improvement the students can appear along with next batch. There shall be no improvement chance for internal evaluation. Moderation shall be decided by the concerned Board of examiners.

End Semester Examination of Theory Papers: Question Paper Pattern

	Number	Questions	Marks	Total
Type of questions	Questions	to be		Marks
		answered		
Section A- Essay Questions	4	2	15	30
Section B -Short Essay Questions	4	2	10	20
Section C -Short Answer Questions	8	5	2	10
Total Marks	16	9		60

End Semester Practical Examination (External Valuation)

Details of Kalarippayattu Practical	Marks
Demonstration	20
Instructions, Skills, Communications, etc.	15
Viva Voce	10
Record	15
Total	60

14. **PROMOTION AND PASS**

Students who secure not less than 50% marks in aggregate and separately in internal and external assessments in each of the theory papers and in practical shall be declared to have passed the certificate course in Diploma in Kalarippayattu Examination.

15. CLASSIFICATION OF EXAMINATION RESULT

The classification of examination result shall be awarded at the end of the course on the basis of aggregate marks obtained by the students.

- i) Candidates securing 50% but below 60% Second class
- ii) Candidates securing 60% and above First class

16. GRIEVANCE REDRESSAL MECHANISIM

As per the Regulations framed by the University

17 **FACULTY**

The Course comes under the Faculty of Sports Science and Physical Education.

SEMESTER I

KP001- FOUNDATIONS PRINCIPLES AND METHODS OF KALARIPPAYATTU

UNIT-I

- 1.1 Origin and development of Kalarippayattu

 Legend, History of Kalarippayattu- Evolution of Kalari Martial Art from Sangam
 period onwards, Tamil literature, Influence of Chera Dynasty period.
- 1.2 Patronage of erstwhile Kerala Kings-Decadence during and after foreign rule in India-Ballads of Kerala .
- 1.3. Revival in Post-independent India- Stalwarts and Kalari institutions instrumental to the revival.

UNIT-II

- 2.1 Ethics of martial art traditions in India with special emphasis on Kalarippayattthu-How Kalari trained masters became part of medival period judiciary- Ankam, Poithu, Mamankam.
- 2.2 Different regional styles of Kalarippayattu existing or extinct in parts of Kerala-Their salient features.
- 2.3 Bearing of Kalari tradition on art, culture and rituals, simulation of erstwhile battles of Kerala- Theyyam ,Poorakkali, Kolkkalli ,Circus and the like
- 2.4 Old and famous Kalaris in Kerala and Tulu Nadu and their social and spiritual importance.

UNIT-III

- 3.1 Differences of Callisthenics in Kalarippayattu and in other martial art systems.
- 3.2 Kinds of body conditioning exercises (Meithary) of Kalarippayattu and the use of muscle groups and joints to their maximum potentials.

UNIT-IV

4.1 Different types of Kolthari exercises with three kinds of common wooden weapons to endow one with quick reflexes.

UNIT-V

- 5.1 Armed combat with wooden/ metallic weapons (Ankathari) and their salient features
- 5.2 Unarmed defence techniques (Verumkai) and their applications

References

1. Sreedharan Nair T Chirakkal (2016). The Complete Guide to Kerala's Martial Art, Westland Books, Chennai.

- 2. Prasad S R D (2012) Mei Payattu, Kerala Folk Lore Acdemy
- 3. Sreedharan Nair T Chirakkal(2012) Uzhichal, Bharat kalari.
- 4. Prasad S R D (2004) Otta, Rainbow Book Publishers.
- 5. Vijayakumar K(2000).Keralathinte Shakhtiyum Vijayavum, Samskarika Vakuppu Publications.
- 6. Venugopalan A K (2005) Vattenthiruppu Sambradayam, Current books.
- 7. Phillip B Zarvilli,(2009). When Body Becomes All Eyes, Oxford, India.
- 8. Prasad S R D (2016) Kalarippayattu Vignana Kosham (Encyclopedia), Kairali Books.

KP002- HUMAN ANATOMY PHYSIOLOGY AND KINESIOLOGY

UNIT-I

Meaning of Anatomy and Physiology -Cell: Structure & Functions - The Cell theory - Types, shapes and size of cells -Organelles and their functions - Process of Active and Passive Transport in cells, DNA, Genes and Chromosomes- Tissues-Types of Tissues - Structure and functions of tissues :Epithelial tissue-Connective tissue -Muscular tissue - Nervous tissue

UNIT-II: SKELETAL SYSTEM

Axial and Appendicular skeleton - Classification of bones - Skeletal development from embryo to maturity - Classification of joints- Spinal Column& its Common Structural Deformities

UNIT III: CARDIO RESPIRATORY SYSTEM

Structure and functions of the Heart- The organization of systematic and pulmonary circulation, Heart rate measurement , cardiac cycle, Cardiac output - Blood pressure (systolic/ Diastolic) - Calculation of Target Heart Rate zone -Respiration mechanism-Respiratory rate- $VO_{2\,Max.}$ - Minute Ventilation

UNIT IV: NERVOUS SYSTEM, ENDOCRINE SYSTEM AND DIGESTIVE SYSTEM

Nervous System Structure and functions of Neuron - Central nervous system (Brain and spinal cord) - Peripheral nervous system- Autonomic nervous System (Sympathetic and Para sympathetic nervous systems)

Endocrine System- Location, structure and function of endocrine glands

Digestive System- Structure of digestive system - Mechanism of ingestion, digestion, absorption, assimilation & excretion.

UNIT V: KINESIOLOGY

Kinesiology, Meaning and definition— Importance of Kinesiology — Fundamental concepts: Anatomical position, Body Cavities-, Axis, Planes and Directional terms —

Fundamental movements- Major muscles of the upper body and lower body and their functions - Muscle Movement Classification –Agonist, Antagonist, Target , Synergist , Stabilizer, Connective tissues of muscular system - Tendons, Ligaments, Cartilage, Fascia Bursa -Muscle Attachments : Origin , Insertion - Types of muscle contraction – Isotonic contraction- Concentric and Eccentric, Isometric (Static)- Posture and Movement analysis.

References

- 1. Saladin Anatomy & Physiology: The Unit Form and Function, Published by
- 2. McGraw –Hill New Yord, 3 Ed, 2004
- 3. Gerard J. Tortora "Principles of Anatomy & physiology, Published by John Wiley &Sons, Inc, New York, 9th Ed, 2000
- 4. William Peter. L. Gray's Anatomy. Edinburgh; Churchill living stone, 1980.
- 5. Pearce Ecelyn C. Anatomy and Physiology for Nurses, Oxford University press, Kolkatta, 1978.
- 6. Thimpson, Elern. W. and R.T. Floyd; Manual of structural Kinesiology, St, Louis Morby 1994.
- 7. Hamilton, Nancy, Kinesiology, Boston, McGraw Hill, 2002
- 8. Crouch James E. Essential Human Anatomy A Text Lea & Febriger, Philladalphia, 1980.
- 9. Hay, James G & Reid J.G. Anatomical and Mechanical Basis of Human Motion, Prentice hall, New Jeresy, 1985.
- 10. Jenson C.R. & Schultzer G.W. Applied Kinesiology and Biomechnics, Mc Grow hill book Co. New York, 1984,
- 11. Lock Hurt and others Anatomy of the human body, Feber & Feber Oxford University, 1975
- 12. Pearce Evelyn Anatomy and Physiology for Nurses, Oxford University, 1975.
- 13. Rasch & Bruke Kinesiology and applied Anatomy, Lea Febriger, Philladalphia, 1978.
- 14. Rasch, Philip J. Kinesiology and Applied Anatomy, Lea Febriger, Philladalphia, 1989.

KP003- KALARIPPAYATTU PRACTICAL

(Basic and Intermediate level)

UNIT-I

- 1.1 Dress code in Kalari
- 1.2 General warm up
- 1.3 Preliminary postures and phases Kalukal in Kalari parlance
- 1.4 First series of *Meipayattu*.

UNIT-II

- 2.1 1 to 5 series of *Kettukari* (long canes)
- 2.2 Second series of *Meipayattu*.

UNIT-III

- 3.1 1 to 4 series of *Cheruvadi*
- 3.2 6 to 10 series of *Kettukari*
- 3.3 Swinging of long canes(vadi veesal)

UNIT-IV

- 4.1 5 to 8 series of *Cheruvadi*
- 4.2 First and second series of *Otta*

UNIT-V

- 5.1 Verum kaikal- Avoidance(ozhivvukal), Defensive Blocks.
- 5.2 Unarmed combat (*verumkai*), Locks and Holds (*Pidutham*)

References

- 1. Sreedharan Nair T Chirakkal (2016). The Complete Guide to Kerala's Martial Art, Westland Books, Chennai.
- 2. Prasad S R D (2012) Mei Payattu, Kerala Folk Lore Acdemy
- 3. Sreedharan Nair T Chirakkal(2012) Uzhichal, Bharat kalari.
- 4. Prasad S R D (2004) Otta, Rainbow Book Publishers.
- 5. Vijayakumar K(2000).Keralathinte Shakhtiyum Vijayavum, Samskarika Vakuppu Publications.
- 6. Venugopalan A K (2005) Vattenthiruppu Sambradayam, Current books.
- 7. Phillip B Zarvilli, (2009). When Body Becomes All Eyes, Oxford, India.

SEMESTER II

KP004 - KALARIPPAYATTU FOR SPORTS

UNIT-I

Similarity and difference between Kalarippayattu and Physical exercises- Complimentary nature of Kalarippayattu in Sports – Kalarippayatu's many uses for an athlete. Role of Kalarippayattu in Sports promotion.

UNIT-II

System of physical exercises –Meaning of exercise and physical activity –various types of physical exercises-Structure of exercises- Isotonic and Isometric Exercises –Aerobic exercises – Anaerobic exercise- Resistance exercises-Therapeutic exercise –Corrective exercises –System of Kalari Exercise -Body exercises (Mei Payyattu), Exercises with wooden weapons(Koltharippayattu), Exercise with sharp weapons (Valppayattu etc), Bare-handed defence (verum kai exercises)

UNIT-III: CONCEPT OF FITNESS

Meaning and definition - Components of Fitness - Types of Fitness - Components of Health related Fitness- Cardio respiratory endurance, Muscular strength, Muscular endurance- Flexibility - Body composition - Use of Kalari training for general warm-up Kalari training for cardio-respiratory fitness, Use of Kalari training for improving core strength, flexibility and agility - Standard Tests for measurement of Components of health related fitness.

UNIT-IV: FIRST AID

Meaning, aims of first Aider, Responsibilities of First Aider, Cardiopulmonary Resuscitation (CPR), First aid for fracture, sprain, strains , electric shock , poisonous snake bites , burns , near-drowning and spinal cord injury – Methods of Kalari First Aid.

UNIT V: NUTRITION

Meaning and definitions, Types of nutrition- Nutrients- macro nutrients and micronutrients - Malnutrition, definition, causes of malnutrition ,Diseases due to deficiency of vitamins and minerals, prevention of malnutrition- Adulteration in food, Steps to remove adulteration in food – Kalari Nutrition- Kalari diet for maintaining normal body composition.

References:

- **1.** Batman P. and Van Capelle M.(1995) The Exercise Guide to Resistance Training.FITAU publications. Australia.
- **2.** Bucher, C. A. (n.d.) Foundation of physical education. St. Louis: The C.V. Mosby Co.
- **3.** Deshpande, S. H. (2014). Physical Education in Ancient India. Amravati: Degree college of Physical education.
- **4.** Dick, Frank W. (1980) sports Training Principles. London Lepus Books Stephen I. Bull (1999) Adherence issues in sports and exercise.
- **5.** Havley E. T. and Franks B . D. (1997) Health Fitness instructions handbook . Third edition. Human kinetics Champaign Illinois
- **6.** Mohan, V. M.(1969). Principles of physical education. Delhi: Metropolitan Book Dep.
- **7.** Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: Pvt. Ltd., New Delhi).
- **8.** Sreedharan Nair T Chirakkal (2016). The Complete Guide to Kerala's Martial Art, Westland Books, Chennai.
- 9. Prasad S R D (2012) Mei Payattu, Kerala Folk Lore Acdemy
- 10. 'First Aid the Vital Link' The Canadian Red Cross Society, Mosby Lifeline 1994
- 11. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive
- 12. Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

KP005- PHYSIOLOGY OF EXERCISES AND KALARI MARMAS

UNIT I – Skeletal Muscles and Exercise

Macro & Micro Structure of the Skeletal Muscle, Chemical Composition-Types of Muscle fibre. Muscle Tone, Chemistry of Muscular Contraction – Heat Production in the Muscle, Effect of exercises and training on the muscular system.

UNIT II – Cardiovascular System and Exercise

Heart Valves and Direction of the Blood Flow – Conduction System of the Heart – Blood Supply to the Heart – Cardiac Cycle – Stroke Volume – Cardiac Output – Heart Rate – Factors Affecting Heart Rate – Cardiac Hypertrophy – Effect of exercises and training on the Cardio vascular system.

UNIT III – Respiratory System and Exercise

Mechanics of Breathing – Respiratory Muscles, Minute Ventilation – Ventilation at Rest and During Exercise. Diffusion of Gases – Exchange of Gases in the Lungs –Exchange of Gases in the Tissues – Control of Ventilation – Ventilation and the Anaerobic Threshold. Oxygen Debt – Lung Volumes and Capacities – Effect of exercises and Training on the respiratory system.

UNIT IV - MARMAS

Concept of Marmas

Location of Marmas on the Physical body and their impact on health

UNIT V-KALARI MARMAS AND THEIR PHYSICAL AND PHYSIOLOGICAL EFFECTS

Classification of Kalari Marmas according to Agatsya - Padu Marmas and Thodu Marmas- Kalari Marmas according to Kulabhyasa (Kula Marmas)-Marmas of the arms, legs, abdomen, chest, sides and back, neck and head- Kalari Marmas- symptoms of injuries to Marmas and their First Aids.

References:

- **1.** Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.
- **2.** Beotra Alka, (2000) Drug Education Handbook on Drug Abuse in Sports: Sports Authority of India Delhi.
- **3.** Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
- **4.** David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
- **5.** Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
- **6.** Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.

- 7. Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.
- **8.** Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers.
- **9.** Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications.
- **10.** Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication.
- **11.** William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human performance. Philadelphia: Lippincott Williams and Wilkins Company.
- **12.** Sreedharan Nair T Chirakkal (2016). The Complete Guide to Kerala's Martial Art, Westland Books, Chennai.
- 13. Prasad S R D (2012) Mei Payattu, Kerala Folk Lore Acdemy
- 14. Sreedharan Nair T Chirakkal(2012) Uzhichal, Bharat kalari.
- 15. Prasad S R D (2004) Otta, Rainbow Book Publishers.
- **16.** Sushrutha, Sushrutha Samhitha with Nibandha Sangraha vyakhyana of Dalhanacharya. YadavjiTrikamjiAcharya, editor. 8th ed. Varanasi: ChoukhambaSurabharthi Publication; 2005. Pp-824,p369-376.
- **17.** Vagbhata, Astangahridaya with Sarvangasundara vyakhyana of Arunadatta and Ayurveda rasayana of Hemadri Hari Sadasiva Satri Paradakara Bhisagacarya, editor. 9th edition. Varanasi chaukambha orientalia 2005, Pp 956, p409-416.
- **18.** Vijayakumar K(2000).Keralathinte Shakhtiyum Vijayavum, Samskarika Vakuppu Publications.
- 19. Venugopalan A K (2005) Vattenthiruppu Sambradayam, Current books.
- 20. Phillip B Zarvilli, (2009). When Body Becomes All Eyes, Oxford, India.
- 21. Kunhukrishnan Nadar.M- Marma Sastra Peedika.
- 22. Kochukrishna Nadar -Marma Sastra Samaharam

KP006 - KALARIPPAYATTU PRACTICAL (Advanced level)

UNIT-I

- 1.1 Advanced series of *Meipayattu*.
- 1.2 3 to 6 series of *Meipayattu*.
- 1.3 7 to 14 series of *Meipayattu*

UNIT-II

- 2.1 Angathari with blunt sword, spear, Urumi and Dagger
- 2.2 Sword swinging and Sword fight
- 2.3 Spear and sword skills of fighting.
- 2.4 Urumi and Dagger Skills of fighting

UNIT-III

- 3.1 Kalari First Aid
- 3.2 First Aid for Bone Injuries
- 3.3 First Aid for Muscle injuries.

UNIT-IV

- 4.1 Kalari Uzhichhal
- 4.2 Kai Uzhichhal (hand massage) in lying position.
- 4.3 Kai Uzhichil(hand massage) in standing position.

UNIT-V

- 5.1 Kalari Marma massage
- 5.2 Kalari Pedal massage (Chavutty Thirummal)

References

- 1. Sreedharan Nair T Chirakkal (2016). The Complete Guide to Kerala's Martial Art, Westland Books, Chennai.
- 2. Prasad S R D (2012) Mei Payattu, Kerala Folk Lore Acdemy
- **3.** Sreedharan Nair T Chirakkal(2012) Uzhichal, Bharat kalari.
- 4. Prasad S R D (2004) Otta, Rainbow Book Publishers.
- **5.** Sushrutha, Sushrutha Samhitha with Nibandha Sangraha vyakhyana of Dalhanacharya. YadavjiTrikamjiAcharya, editor. 8th ed. Varanasi: ChoukhambaSurabharthi Publication; 2005. Pp-824,p369-376.
- **6.** Vagbhata, Astangahridaya with Sarvangasundara vyakhyana of Arunadatta and Ayurveda rasayana of Hemadri Hari Sadasiva Satri Paradakara Bhisagacarya, editor. 9th edition. Varanasi chaukambha orientalia 2005, Pp 956, p409-416.
- **7.** Vijayakumar K(2000).Keralathinte Shakhtiyum Vijayavum, Samskarika Vakuppu Publications.
- 8. Venugopalan A K (2005) Vattenthiruppu Sambradayam, Current books.
- 9. Phillip B Zarvilli, (2009). When Body Becomes All Eyes, Oxford, India.
- 10. Sreedharan Nait T Chirakkal. Marma Darpanam, P K Brothers Kozhikode.

Model Question Papers

Semester I

Name	Question Code
Reg.No	

KP001-FOUNDATIONS PRINCIPLES AND METHODS OF KALARIPPAYATTU

Time: Three hours Maximum marks: 60

Section A

Answer any two of the following. Each question carries 15 marks

- 1. Elucidate the origin and development of Kalarippayattu.
- 2. Discuss different regional styles of Kalarippayattu existing or extinct in parts of Kerala and their salient features.
- 3. Discuss the types exercises in Meithary of Kalarippayattu
- 4. Discuss different Kolthari exercises with common wooden weapons

Section B

Answer any *two* of the following. Each question carries *10* marks

- 5. Ethics in Kalari martial art traditions
- 6. Influence of Kalarippayattu on various art forms of Kerala.
- 7. Differences of Callisthenics in Kalarippayattu and in other martial art systems
- 8. Ankathari

Section C

- 9. Meaning and definitions of Kalari and Kalarippayattu
- 10. Kalarippayattu and Theyyam
- 11. Kolkkali and Kalarippayattu.
- 12. Old famous Kalaris in Kerala and Tulu Nadu
- 13. Famous former Kalari Gurukkals of Kerala
- 14. Ankam, Poithu, Mamankam and ritualistic simulation of old battles of Kerala.
- 15. Kalari Bare-handed exercises
- 16. Kalari training and circus.

Model Question Papers

Semester I

Name	Question Code
Reg.No	

KP002- HUMAN ANATOMY PHYSIOLOGY AND KINESIOLOGY

Time: Three hours Maximum marks: 60

Section A

Answer any *two* of the following. Each question carries 15 marks

- 1. Cell is the structural and functional unit of an organism. Explain with diagram.
- 2. Discuss different types of bones and synovial joints giving example for each.
- 3. Explain the process of Digestion and absorption of the products of digestion
- 4. What is Anatomical position? Explain Body Cavities, Axis, Planes, Directional terms Fundamental movements with diagrammes.

Section B

Answer any *two* of the following. Each question carries *10* marks

- 5. Why Pituitary is called the master gland of endocrine system.? Discuss
- 6. Discuss the important muscles in the upper body and their functions
- 7. Briefly discuss the function of the heart
- 8. Draw a neat diagramme of neuron and discuss its functions.

Section C

- 9. Muscle Movement Classification
- 10. Lungs volume
- 11. Inter vertebral disc
- 12. Types of muscle contraction
- 13. Types of tissues
- 14. Thyroid
- 15. Autonomic nervous System
- 16. Mechanics of respiration

Model Question Papers

Semester-II

Name	Question Code
Reg.No	

KP004-KALARIPPAYATTU FOR SPORTS

Time: Three hours

Maximum marks: 60

Section A

Answer any *two* of the following. Each question carries 15 marks

- 1. Explain the complementary nature of Kalarippayattu exercise and physical exercises on different body systems
- 2. Discuss the role of Kalarippayattu training in Sports promotion
- 3. What are the components of health related fitness? Discuss the standard health related physical fitness tests.
- 4. What is nutrition? Discuss the functions and sources of essential nutrients

Section B

Answer any *two* of the following. Each question carries *10* marks

- 5. Explain the importance of warming up and cooling down exercise
- 6. What are the steps involved in Cardiopulmonary Resuscitation (CPR)?
- 7. Explain different types of Aerobics and their impact on health
- 8. Discuss the methods involved in Kalrai First Aid for joint injuries

Section C

- 9. Warm up exercises in Kalari Training
- 10. Isotonic and Isometric Exercises.
- 11. Kalari nutrition
- 12. Use of Body mass index
- 13. Resistance Training
- 14. Corrective exercises
- 15. Core strength
- 16. First Aid for electric shock.

Model Question Papers

Semester II

Name	Question Code
Reg.No	

KP005- PHYSIOLOGY OF EXERCISES AND KALARI MARMAS

Time: Three hours Maximum marks: 60

Section A

Answer any *two* of the following. Each question carries 15 marks

- 1. Discuss the effect of exercises on musculoskeletal system
- 2. Explain various effects of exercises on the cardiovascular system
- 3. Discuss the Sandhi Marmas, their locations and methods of Kalari massage
- 4. Explain the gas exchange phenomenon during exercise routines

Section B

Answer any two of the following. Each question carries 10 marks

- 5. Compare cardiac muscles and striated muscles
- 6. Explain the chemistry and type of Muscular Contractions
- 7. Discuss the effect of exercises and on the respiratory system.
- 8. Chalk out techniques of Kalari Marma massage for strain and sprain

Section C

- 9. Muscle Tone
- 10. Cardiac Hypertrophy
- 11. Dhamani Marma
- 12. Lung Volumes and Capacities
- 13. Factors Affecting Heart Rate
- 14. Asthi Marma
- 15. Anaerobic and aerobic glycolyses
- 16. Padu Marmas