Tantia University

Sri Ganganagar

Ph.D. Course Work Syllabus

(Revised as Per UGC Regulation 2022)

Physiotherapy

Maximum Marks-120 **Minimum Marks-66**

PART-A

Part A- 60 Marks

Total Credits = 6 **Total Hours=6x45= 270 Hours**

Introduction to Research

Introduction of Research, Research methodology, Defining Research problem and formulation of hypothesis, research design, sampling design, measuring and scaling techniques, methods of data collection.

Pure and Applied Research, Exploring or Formulative Research, Descriptive Research, Diagnostic Research/Study, Evaluation Research/Studies, Action Research, Experimental Research, Historical Research, Surveys, Case Study, Field Studies

Research Ethics: Characteristics and format of research paper, article, thesis writing, review of Related Literature, Purpose of the review, Identification of the related literature. Organizing the related literature.

Statistics

Concept of statistics, relevance in research, parametric and non-parametric data; graphical representation of data: histogram, frequency polygon, ogive and pie chart; Measures of Central Tendency, Correlation, t-test chi square test

Computer Application

Basic and fundamental knowledge of Computer and its Applications. Introduction, Application Area, Operating System, Windows, Office, Internet**.**

PART-B

Part B- 60 Marks (Subject based)

Total Credits = 6 **Total Hours=6x45= 270 Hours**

1. Physiotherapy Management of cervical & thoracic spine disorders.
2. Physiotherapy Management of conditions affecting shoulder, elbow, hip, knee, ankle & foot.
3. Physiotherapy Management of spinal fractures, pelvic fractures & spinal cord injury.
4. Upper & Lower limb injuries & PT management

5. Clinical reasoning and differential clinical diagnosis based on different approaches such as

Maitland, Cyriax, Kalten borne, Mulligan, Mckenzie, Myofascial release.

6. Soft tissue approach - myofascial technique, neutral tissue mobilisation, muscle energy methods.
7. Burn and Physiotherapy management
8. Classification of hand injuries. Principles & methods of hand rehabilitation.
9. Neuro Anatomy & Neuro Physiology
10. Principles of Assessment & Motor control theories
11. Neural control of locomotion
12. Neurophysiological approaches
13. Spinal cord injuries- complications, consequences, SCI in children & adult rehabilitation including sports rehab.
14. Various treatment approaches for medical and surgical management
15. Principles of Geriatric Rehabilitation
16. Stroke, Parkinson's disease & its PT management.
17. Movement Disorder.
18. Sensory evaluation and treatment.
19. Motor control evaluation and treatment
20. Traumatic head injury
21. Peripheral nerve lesion
22. Lesions of central nervous system
23. Cardio-thoracic applied anatomy
24. Respiratory and cardio vascular physiology
25. Mechanics of ventilation
26. ECG, exercise ECG testing, Echo, PFT and ABG analysis etc.
27. Chest Physiotherapy techniques.
28. Cardio pulmonary Rehabilitation
29. Exercise physiology compared with abnormal exercise physiology
30. Common pulmonary diseases, including assessment and management
31. Detail study of various conditions (obstructive, restrictive, surgical conditions) patient intervention.
32. Respiratory muscle training
33. Fitness, definition, aspects and parameters for testing.
34. Scientific basis for exercise programs
35. Stress modifications by exercise

36. Traumatic brain injury
37. Down's syndrome
38. Cerebral Palsy
39. Spina bifida
40. Anterior Poliomyelitis &post-Polio syndrome
41. Muscular Dystrophy
42. Hydrocephalus
43. Infections of CNS – Bacterial & Viral infections
44. Infantile Hemiplegia.
45. Describe the various congenital and acquired orthopaedic problems in children and its medical, surgical & PT management.
46. Describe the various congenital and acquired cardiac diseases in children and its medical, surgical & PT management.
47. Describe the various respiratory problems and its medical, surgical & PT management.
48. Bobath approach
49. Motor relearning program
50. Voijta approach
51. Analysis of movement of sports injuries in upper limb
52. Concepts of motor control, clinical assessment and diagnosis of injury management.
53. Injuries of the patella
54. Hip & Knee Rehabilitation
55. Injuries to the running athlete
56. Specific physiotherapy for injuries including manual therapy and exercise for
57. rehabilitation.
58. Exercise in clinical practice
59. Exercise physiology and prevention of athletic injuries
60. Injury rehabilitation - goals, types of exercise and special forms of exercises
61. Special groups: Physiotherapy management for female, disabled, younger & olderathlet
62. Trigger point release.

63. Anatomy & Physiology of female reproductive system.
64. Gynecological infections.
65. Pelvic inflammatory diseases.
66. Infertility.
67. Contraception and family planning Physiology of urinary and faecal continence.
68. Gynecological surgeries
69. Types of Prolapse.
70. Menopause and osteoporosis.
71. Laproscopy and laser surgeries in Gynaecological condition.
72. Incontinence scales.
73. Gynaecologic problems in Female athletes
74. . Musculoskeletal changes during Pregnancy.
75. Common complication and discomforts during Pregnancy.
76. Stages and mechanism of labour.
77. Complication in labour.
78. Physiotherapy management of edema in Pregnancy.
79. Physiotherapy management of GDM, High risk Pregnancy
80. Management of common problem in Antenatal period.