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## Outline of Marking Distribution

SN	Topics	Marks	Comments
1	Musculoskeletal physiotherapy	30	Including sports and biomechanics/ kinesiology
2	Neurological physiotherapy	20	
3	Cardiopulmonary physiotherapy	15	
4	Physiotherapy across life span and across genders	15	Geriatrics, pediatrics, women's health, men's health
5	Ethics, management and evidence based practice	10	
6	Community Based Rehabilitation and health promotion	10	
	<b>Total</b>	<b>100</b>	

Each topic may include questions from:

1. Clinical reasoning in that area of physiotherapy practice
2. Outcome measures for assessment
3. Biomedical sciences (anatomy, physiology, pharmacology, biochemistry, pathology)

### Question format:

Multiple choice questions – 100 marks – 1 mark each

- Clinical based MCQ – based on a clinical scenario from which 5 – 10 questions may be asked.
- Simple MCQ based on facts – 50

## Musculoskeletal Physiotherapy

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### Learning objectives:

In this section, the candidate should

1. *Explain the purpose of documentation and types of documentation*
2. *Use how to document according to International Classification of Functioning, Disability and Health (ICF) and SOAP notes.*
3. *Use sound clinical reasoning and evidence to provide the diagnosis of the patient's condition.*
4. *Should be able to identify precautions and contraindications (including yellow flags and red flags) for different assessment and treatment approaches in musculoskeletal physiotherapy practice.*
5. *Plan a short term goal and long term goal for patients with variety of clinical conditions.*
6. *Plan a treatment program for the patient*
7. *Explain the biomechanics/ kinesiology for various joints in human body and its implication in the pathogenesis and treatment.*
8. *Identify various outcome measures to use for different clinical conditions and body regions.*
9. *Explain pathogenesis, clinical features and evidence based treatment for variety of clinical conditions.*
10. *Explain the assessment, reasoning and contemporary management approaches or protocols of different types of fractures and post-operative conditions.*
11. *Explain posture, types of posture, and management of various types of postural faults.*
12. *Explain gait cycle and various pathological gait related to musculoskeletal system.*
13. *Explain contemporary neuroscience for the onset and maintenance of pain.*
14. *Explain contemporary approaches to the diagnosis and management of pain related conditions.*

### Course Contents

1. SOAP notes
2. Biomechanics of various joints including shoulder, elbow, superior and inferior radioulnar joint, wrist, hand, cervical spine, thoracic spine, lumbar spine and pelvis, hip joint, knee joint and ankle and foot complex.
3. Special tests and clinical prediction rules to assess common clinical conditions
4. Red flags associated with various clinical conditions including fractures, tumor, infections, ankylosing spondylitis, rheumatoid arthritis, cervical myelopathy, caudaequina syndrome etc.
5. Yellow flags and various tools to assess yellow flags
6. Assessment and management of conservative and surgical management of different types of fractures adopting adequate safety measures.
7. Assessment and management of various post-operative conditions such as arthroplasty, arthroscopy, arthrodesis, amputation etc.
8. Posture and issues related to posture.
9. Gait cycle and various pathological gait related to musculoskeletal system.

10. Thermo and electrophysiological agents: limitations of use, indications, contraindications.
11. Basic assessment and treatment approaches to manual therapy including Maitland's approach, McKenzie and Neurodynamics (neural mobilization).
12. Clinical features, diagnostic criteria, examination and treatment of various common conditions including:
  - a. Causes of shoulder pain including but not limited to instability, Impingement, Adhesive capsulitis, tendinopathies etc.
  - b. Pain around the elbow: Lateral epicondylalgia, medial epicondylitis
  - c. Pain around the wrist and hand including but not limited to carpal tunnel syndrome, De Quervain's tenosynovitis, trigger finger etc.
  - d. Various causes of neck pain including but not limited to Mechanical neck pain, Cervical radiculopathy, instability etc
  - e. Low back pain including but not limited to Mechanical low back pain, Lumbar radiculopathy, Spinal canal stenosis, instability.
  - f. Various causes of hip pain including but not limited to arthritis, impingement, gluteal tendinopathy, bursitis etc.
  - g. Various causes of knee pain including but not limited to knee osteoarthritis, patellofemoral pain, ligament injuries, meniscal injuries, bursitis, tendinopathy.
  - h. Leg, ankle and foot problems including but not limited to shin splint, ankle sprain, impingement, tarsal tunnel syndrome, plantar heel pain etc.
  - i. Conditions related to neural tissue dysfunction, joints, ligaments, muscles, fascia,
13. Sports related problems and injuries: tendinopathy, repetitive strain injuries, muscle strain, ligament sprains, fasciopathies, bursitis, delayed onset of muscle soreness etc.

## Neurological Physiotherapy

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### Learning Objectives

In this section, the candidate should be able to:

1. Describe the anatomy, physiology and pathology of nervous system.
2. Describe the normal sequence of neurological assessment with proper knowledge on observation and examination findings.
3. Define the relevant terminologies in various neurological conditions.
4. Explain the clinical features with sound knowledge of physiological mechanism behind the features.
5. Describe the normal functions mediated by the affected neurological area and pathophysiology related to the disease.
6. Classify the disease condition if any.
7. Use sound clinical reasoning and evidence to provide the diagnosis of the patient's condition.
8. Should be able to identify precautions and contraindications for different assessment and treatment approaches in Neurological physiotherapy practice.
9. Describe specific goals and relevant outcomes following ICF format.
10. Should be able to properly describe the strategies to manage various neurological symptoms.
11. Understand the principles used for sensory and motor retraining, balance and coordination, postural control and functional mobility training.
12. Plan a short term goal and long term goal for patients with variety of neurological conditions.
13. Plan a suitable treatment program for the patient.
14. Explain the principles of motor control and motor learning for various body parts with its implication in the pathogenesis and treatment.
15. Identify various outcome measures to use for different clinical conditions and body regions.
16. Apply the sound knowledge of various approaches used to manage neurological conditions.
17. Basic knowledge on newer evidences for neurological rehabilitation like mirror therapy, virtual reality, robotics, mental/motor imagery, body weight support treadmill training, LSVT big and loud etc.)

### Contents

1. Subjective neurological Assessment with subjective details, chief complains and history taking.
2. Neurological Examination (GCS, Higher mental function, Speech assessment, Cranial nerve examination, Sensory and motor examination, Balance and coordination, Postural and gait analysis including pathological gaits and postural strategies).
3. Brain related problems: Stroke, Traumatic brain injury, Tumors, brainstem lesions (Weber and Benedict syndrome, Lateral and Medial medullary syndrome, Millard Gublar syndrome etc.), Cerebellar diseases/ disturbances
4. Spinal cord related problems – Traumatic, Infectious and tumorous.
5. Neurodegenerative conditions – Parkinsonism, Multiple sclerosis, Motor Neuron diseases

6. Muscles and peripheral nervous system related problems: Neuropathies (GBS, Diabetic neuropathy, HMSN), Myasthenia gravis, Peripheral nerve injuries, myopathies.
7. Neurogenic bladder, Bladder and bowel management.
8. Vestibular diseases and rehabilitation
9. Physiological aspects of various Motor control and Motor learning theories.
10. Neurological approaches (Roods, Brunnstorm, Bobath, Motor Relearning Program, Constraint Induced Movement Therapy with its clinical implications)
11. Neuroplasticity
12. Proprioceptive Neuromuscular facilitation (PNF)
13. Biofeedback, principles and implications to rehabilitation.
14. Wheelchair and transfer techniques
15. Outcome measures in neurological rehabilitation. (Berg balance scale, FIM, Barthel index, MMSE, SCIM, ASIA, TUG, Fugl Meyer, Motricity index and trunk control test)

## Cardiopulmonary Physiotherapy

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### Learning objectives

In this section, the candidate should be able to:

1. *Understand the structure and function of the cardiovascular and pulmonary system.*
2. *Examine and clinical reasoning for the assessment performed for cardiovascular and pulmonary system.*
3. *Use clinical reasoning skills and implement various physiotherapy techniques, according to cardio-pulmonary conditions.*
4. *Explain bronchial hygiene therapy, pulmonary and cardiac rehabilitation.*
5. *Explain the current guidelines and evidence-based practice in various cardio-pulmonary conditions*
6. *Understand and apply the rehabilitation strategies for surgical and medical conditions*
7. *Explain types, grades, complications, assessment and treatment of burns.*
8. *Understand the basics of Intensive Care Unit (ICU) setup and equipment.*

### Contents

1. Anatomy/ Physiology/Biomechanics of cardio-pulmonary system
2. Common cardiac; pulmonary; vascular conditions
3. Assessment of cardio-pulmonary system
  - a. Subjective assessment
  - b. Objective assessment
  - c. Treatment planning and goal setting – SMART
  - d. Steps to interpret ABG/ Blood biochemistry (Basic haematology)
  - e. Chest Radiographs-interpretations of normal X ray
  - f. ECG: Lead systems, Normal wave form, Methods to calculate Heart Rate
  - g. Pulmonary Function Test – interpretations
  - h. Exercise Capacity: six minute walk test, Shuttle run test, Chester step test
4. Physiotherapy in Pulmonary conditions
5. Techniques to improve lung Volume
  - a. Breathing Exercise
  - b. Therapeutic positioning
  - c. Ventilatory muscle training
  - d. PNF respiration
  - e. Incentive spirometry
6. Mobility - rationale for respiratory cases
7. Bronchial hygiene therapy
  - a. Postural Drainage
  - b. Chest physiotherapy Techniques
  - c. Coughing and huffing techniques
  - d. ACBT
  - e. Autogenic Drainage
  - f. External appliance or devices
  - g. Suctioning
8. Dyspnea relieving techniques
9. Pulmonary rehabilitation
10. Physiotherapy in cardiovascular conditions

- a. Risk factor modification (through lifestyle and nutrition)
- b. Physiotherapy in Peripheral vascular conditions
- 11. Cardiac rehabilitation: MI and CABG protocol
- 12. Physiotherapy in surgical management
  - a. Introduction to surgical procedures: types of anesthesia, types of surgical incisions, common post-operative complications
  - b. Introduction to physiotherapy in surgical conditions
  - c. Pre and post-operative physiotherapy assessment and management
  - d. Physiotherapy in general surgeries (abdominal surgeries)
  - e. Physiotherapy in cardiac surgeries
  - f. Physiotherapy in thoracic and pulmonary surgeries
- 13. Physiotherapy in medical conditions
  - a. Diabetes
  - b. Obesity / Metabolic syndrome
  - c. Cancer - lung / breast cancer
  - d. Organophosphorous Poisoning
  - e. Burns
- 14. Introduction to ICU and critical care
  - a. Introduction and Types of ICU
  - b. Equipment (Monitoring)
  - c. Ventilators - modes and types (invasive and non-invasive)
  - d. Airways - Endotracheal/Tracheostomy/ Face mask/Oropharyngeal/ Nasopharyngeal
  - e. Oxygen Delivery systems



## Physiotherapy across life span and across genders

### Learning objectives

In this section, the candidate should be able to:

1. *Elaborate about various congenital and pediatric conditions including but not limited to Cerebral palsy, Muscular Dystrophy, Spina Bifida, Autism, congenital talipes equinovarus, hip dysplasia.*
2. *Assess different pediatric conditions.*
3. *Explain different treatment approaches for management of pediatric conditions.*
4. *Explain Orthotic management for various pediatric conditions.*
5. *Explain developmental milestones.*
6. *Explain the primitive reflexes in children.*
7. *Difference between preterm and full terms neonates.*
8. *Describe about high risk neonates.*
9. *Explain the behavioral issues in children with disabilities.*
10. *Describe changes in musculoskeletal, Cardiovascular and Metabolic system due to ageing.*
11. *Assess fitness level of elderly (Cognitive, Strength, Flexibility, Balance, Endurance, Gait, and Functional).*
12. *Design and conduct a group exercise program for different age elderly with regular follow-ups.*
13. *Diagnose, Evaluate and treat balance issues in Elderly.*
14. *Elaborate risk factors, causes, signs, symptoms, differential diagnoses, rehabilitation and preventive strategies of various geriatric diseases.*
15. *To describe normal physiologic and physical (hormonal musculoskeletal, cardiovascular /respiratory) changes associated with pregnancy, labor, delivery, and the puerperium.*
16. *To make physiotherapeutic plan(s) for women who experience prenatal health problems.*
17. *To treat amenable using a comprehensive approach, based on best available evidence:*
18. *Describe safety considerations and prevention strategies;*
19. *Incorporate knowledge of the underlying pathology with strategies that are appropriate for fixed versus modifiable impairments;*
20. *Describe pelvic muscle function and how a physiotherapist may help men or women to manage clinical manifestations of dysfunction.*

### Contents

1. Developmental milestones
2. Primitive reflex in children:
  - a. Spinal reflexes
  - b. Brain stem reflexes
  - c. Cortical reflex
3. Physical and behavioral differences between pre-term and full-terms neonates
4. High risk neonates

5. Cerebral palsy (CP)
  - a. Classification
  - b. Common deformities of CP
  - c. Assessment of Cerebral palsy: history, examination, tone assessment,
  - d. Scale:GMFM
6. Other congenital pediatric conditions including; Muscular Dystrophy, spina bifida, torticollis, autism and behavioral issues, club foot, hip dysplasiaetc.
7. Pediatric physiotherapy Approaches:
  - a. Neuro-developmental therapy
  - b. Vojta
  - c. Rood's approach
  - d. Constraint induced movement therapy
8. Biology of ageing and changes in various systems
9. Geriatric fitness assessment including various outcome measures
10. Problem list formulation using ICF
11. Individual/group exercise program design
12. Balance and fall in the Elderly including strategies to prevent falls.
13. Assessment and management of common geriatric conditions including Dementia, Osteoporosis, Arthritis, COPD, Parkinsonism
14. Psychology and sociology related to gerontology, social problems and rehabilitation
15. Psychiatry in elderly
16. Physiotherapy in obstetric Care:
  - a. Physiological , Anatomical, and musculoskeletal changes during Pregnancy
  - b. Physiotherapy management of Musculoskeletal dysfunction during pregnancy
  - c. Pre natal complication
  - d. Labor and Physiotherapy intervention during labor and delivery.
  - e. Postpartum complications
  - f. Postpartum exercise
17. Physiotherapy in Gynecologic Care:
  - a. Clinical anatomy of pelvis and perineum
  - b. Assessment of the pelvic floor muscle in both male and female and categories of pelvic floor dysfunction and their management.
  - c. Urinary incontinence: Causes, Types, outcome measure, Treatment.
  - d. Fecal incontinence: Causes, Types, outcome measure, Treatment.
  - e. Pelvic organ prolapse: Causes, Types, outcome measure, Treatment.
  - f. Pelvic pain: Causes, Types, Treatment.

## Ethics, management and evidence based physiotherapy practice

### Learning objectives

In this section, the candidate should be able to:

1. *Elaborate the steps in EBP.*
2. *Frame an appropriate clinical question.*
3. *Name different databases for literature search and perform literature search in pubmed, PEDro and Cochrane.*
4. *Understand the application of PEDro scale.*
5. *Understand the use of reporting guidelines such as CONSORT, PRISMA and STROBE checklists.*
6. *Identify and elaborate the parts of an article namely: Title, Authors and, affiliations, Abstract and keywords, Introduction, Methods, Results, Discussion and Conclusion, Acknowledgement, References and Conflict of interests.*
7. *Elaborate level of evidence.*
8. *Elaborate the characteristics (purpose, strengths and weaknesses) of various study designs including systematic review, meta-analysis, randomized controlled trials, cohort study, case-control study, cross-sectional study, case-series and case study.*
9. *Explain why ethics is important in research and clinical practice.*
10. *Explain outcome measures with validity and reliability.*
11. *Identify common generic and specific outcome measures for various parts of the body for different health conditions.*
12. *Ensure safety of the client and methods to minimize the common safety hazards and patients risk*
13. *Explain the health care system of Nepal*
14. *Explain the modes of communication, factors affecting and its effect on patient care.*
15. *Understand and explain the professional responsibilities*
16. *Explain the importance of working in the team*
17. *Describe the four fundamental ethical principles.*
18. *Apply the professional code of ethics to ethical decision making.*
19. *Resolve the ethical dilemma based on the traditional ethical principles.*
20. *Explain the Ethical principles according to World Confederation for Physical Therapists (WCPT).*
21. *Explain the code of ethics of Nepal Health Professional Council (NHPC).*
22. *Describe the characteristics and qualities of a leader and an entrepreneur.*

### Content

1. EBPP – definition and steps
2. Parts of an article
3. Level of evidence
4. Ethical issues in research
  - a. History of ethical codes
  - b. Declaration of Helsinki
  - c. Consent form

- d. Conflict of interest
- e. Plagiarism
- 5. Searching for evidence
  - a. Principles of literature search in pubmed
  - b. Identify other databases e.g., PEDro, Cochrane.
- 6. Outcome measures
  - a. Psychometric properties including validity and reliability
  - b. Types of validity and reliability
  - c. Minimal detectable change and minimal clinical important difference
- 7. Common Parametric and non-parametric tests
- 8. Health care system of Nepal
- 9. Terminologies: Morals, Values, Conduct, Service, Respect, Code, Behavior, Professionalism, Ethics, Bioethics, etc
- 10. Fundamental principles: Autonomy, Beneficence, Justice, Non-maleficence
- 11. Professional ethics
- 12. Ethical principles declared by World Confederation of Physical Therapy (WCPT)
- 13. Code of conduct by NHPC.
- 14. Ethical viewpoint and decision making
- 15. Team work, Leadership and types, Entrepreneurship

## Community based rehabilitation and health promotion

### Learning objectives

In this section, the candidate should be able to:

1. Describe Health and disease, its dimensions, spectrum, determinants.
2. Explain epidemiology of diseases and conditions.
3. Define and differentiate between impairment, disability and handicap.
4. Identify causes and prevention strategy of disability.
5. Role of various levels in disability prevention and health promotion.
6. Elaborate attitude towards disability, status of disability in various countries.
7. Describe community based rehabilitation and differentiate between institution based and community based rehabilitation
8. List out steps of management cycle of community based rehabilitation.
9. Identify various vocational training programs and institution which runs it in Nepal.
10. Define and classify disability.
11. Describe policies for person with disability provided by "The government Nepal".
12. List out major rights formulated by UN convention on the rights of persons with disabilities.
13. Differentiate role of Physiotherapist in a community and institutional setting.
14. Explain different role of community, NGO/INGO's, Government, Physiotherapist in disability prevention and community based rehabilitation.
15. Explain role of Physiotherapist in disaster management.
16. Use local resources in developing aids in a community setting.
17. Advocate on disability rights and conduct CBR programs at various levels.
18. Assess real and felt needs.
19. Discuss on epidemiology of Non communicable diseases.
20. Design a workplace using the basic concepts of ergonomics.
21. Provide short break exercises.
22. Prescribe exercises according to ACSM guidelines.

### Contents

1. Community and types
2. Health concepts
  - Health and disease: definitions, concepts
  - Indicators of Health
  - Concepts of disease control and prevention
  - Modes of Intervention
  - The role of socio-economic and cultural environment in health and disease.
3. Epidemiology of disease and various conditions including Cardio vascular diseases, Stroke, Rheumatic heart disease, Cancer, Diabetes, Obesity
4. Disability
  - a. Impairment, disability and handicap
  - b. Types of disability according to the Nepal government
  - c. Role of community, government, INGO and NGO in disability prevention and health promotion
  - d. Disability in developed countries and in developing countries.
  - e. Disability surveys: demography (methodologies)

5. Current situation of disability in Nepal
  - a. Own and others attitudes, assumptions and underlying belief systems regarding impairment, disability and handicap
  - b. Local, national and international organisations working in the disability sector, community based rehabilitation organisations within Nepal
6. Introduction to community based rehabilitation
  - a. Definition, concept, principles, need, objectives & scope of community based rehabilitation
  - b. Institution based and community based rehabilitation
  - c. Members of community based rehabilitation team
7. Planning and management of community based rehabilitation program, Sustainability, community participation, mobilisation and awareness
8. CBR management cycle by WHO, ILO and UNESCO
9. Situation analysis, Planning and design, Implementation and monitoring, Evaluation
10. Role of physiotherapy in community based rehabilitation
  - a. Prescribing and devising low cost locally available assistive aids
  - b. Modifications of physical and architectural barriers for disabled
  - c. Strategies to improve activities of daily living
  - d. Rehabilitation programs for various neuro-musculoskeletal and cardiothoracic disabilities
11. Social work in community based rehabilitation
12. UN convention on the rights of persons with disabilities
  - Legislation on disability in Nepal
  - Agencies involved in rehabilitation of physical handicapped
13. Extension services and mobile units
14. Vocational training in rehabilitation: Need, Vocational evaluation, Vocational rehabilitation services in Nepal.
15. Industrial health and ergonomics
  - Occupational hazards in the industrial area
  - Evaluation of work place and work of sedentary table workers, software engineers, bankers, surgeons, nurses, vehicle drivers, work involving prolonged standing, such as watchman, traffic police
16. Role of physiotherapy for various professionals in working posture (Short break exercises)
17. Disaster management: natural and man-made disasters
18. Role of Physiotherapist in prevention, preparedness, response and recovery.
19. Exercise prescription according to ACSM
20. Prescribe exercises to various age group (Children and adolescence, old adults)
21. Prescribe exercises to common diseases (Diabetes, Hypertension, Obesity).

## Recommended reading

Referring to recent editions of text books is recommended. The list is not fully representative nor comprehensive.

### General books with health promotion:

1. **Boissonnault WG.** *Primary care for the physical therapist.* 2nd ed. St. Louis: Elsevier.
2. **O'Sullivan S, Schmitz T.** *Physical Rehabilitation.* 6th ed. Philadelphia: F. A. Davis; 2007.
3. **Kisner C, Colby L.** *Therapeutic Exercise: Foundations and Techniques.* 6th ed. Philadelphia: F. A. Davis; 2007.
4. **DeLisa JA, Gans BM, Walsh NE,** editors. *Physical medicine and rehabilitation: Principles and practice.* 5th ed. Philadelphia: Lippincott Williams & Wilkins; 2010.
5. **Dutton M.** *Introduction to Physical Therapy and Patient Skills.* 1st ed. McGraw-Hill; 2014.
6. **Thompsons A., Skinna A., Piercy J.** *Tidy's physiotherapy,* 4<sup>th</sup> edition
7. **American College of Sports Medicine.** *Exercise Management for Persons with Chronic Diseases and Disabilities.* 3rd ed. Windsor: Human Kinetics; 2009.
8. **American College of Sports Medicine.** *ACSM's guidelines for exercise testing and prescription.* 9th ed. Baltimore: Lippincott Williams & Wilkins; 2014.
9. **American College of Sports Medicine.** *ACSM's Resources for Clinical Exercise Physiology: Musculoskeletal, Neuromuscular, Neoplastic, Immunologic, and Hematologic Conditions.* 2<sup>nd</sup> Ed. Baltimore: Lippincott Williams & Wilkins; 2009.
10. **Cameron and Monroe,** *Physical Rehabilitation: Evidence based examination, evaluation and intervention.* 2007. 1<sup>st</sup> edition.

### Musculoskeletal books:

11. **Hertling D, Kessler R.** *Management of Common Musculoskeletal Disorders: Physical Therapy Principles & Methods.* 4th. Philadelphia: JB Lippincott; 2005.
12. **Kendall FP, McCreary EK, Provance PG, Rodgers MM, Romani WA.** *Muscles: Testing and function with posture and pain.* 5th ed. Philadelphia: Lippincott Williams & Wilkins; 2005.
13. **Magee DJ.** *Orthopedic Physical Assessment.* 6th ed. Philadelphia: W. B. Saunders; 2014.
14. **Brukner P, Khan K.** *Clinical sports medicine.* 4th ed. Sydney: McGraw-Hill; 2011.
15. **Cynthia C. Norkin,** *Joint structure and Function.* 5<sup>th</sup> edit.
16. **S Brent Brotzman and Robert C Manske.** *Clinical orthopedic rehabilitation.* 3<sup>rd</sup> edition.

### Neurology:

17. **Umphred, D. (Ed.).** (2006). *Neurological rehabilitation (5th ed.).* St. Louis: Mosby.
18. **Bickerstaff's** *Neurological Examination in Clinical Practice,* (7 ed.)

### Cardiopulmonary books:

19. **Frownfelter D, Dean E,** editors. *Cardiovascular and Pulmonary Physical Therapy: Evidence to Practice.* (5th ed.). St. Louis: Elsevier Mosby; 2012.
20. **Jennifer Pryor;** *Physiotherapy for Respiratory and cardiac condition,*
21. **Alexendra Hough.** *Physiotherapy in Respiratory and Cardiac Care: An Evidence-Based Approach.*

### Pediatrics:

22. **Campbell SK**, Palisano RJ, Orlin, MN. *Physical Therapy for Children*. 4th ed. Philadelphia: W. B. Saunders; 2012.
23. **Tecklin JS**. *Pediatric Physical Therapy*. 5th ed. Philadelphia: Lippincott Williams & Wilkins; 2014.

**Geriatrics:**

24. Guccione A, Wong R, Avers D, editors. *Geriatric Physical Therapy*. 3rd ed. St. Louis: Elsevier Mosby; 2012.

**Women's Health:**

25. **J. Mantel**, J Haslam, S. Barton *Physiotherapy in Obstetrics and Gynaecology* 2<sup>nd</sup> edition

**Evidence Based practice:**

26. **Hoffmann T**, Bennett S, Del Mar C. *Evidence-based Practice across the health professionals*. Churchill Livingstone. Elsevier Australia. 2010.

**Community based rehabilitation:**

27. *CBR Guidelines*. World Health Organization 2010.
28. *World report on disability*. World Health Organization 2011.
29. *Directory to distribute identity card to the person with disability*, 2065
30. *Definition and classification of disability*, 2006
31. *Nepal definition and classification of disability*, revised by Nepal Government in 2006.
32. *Nepal census 2011*
33. *Disability prevention and rehabilitation*. Report of World Health Organization expert committee. World Health Organization Geneva 1981
34. *The role of physical therapists in disaster management*. WCPT report March 2016.

**Others:**

35. **Tim Watson**. *Electrotherapy*. Evidence Based Practice. *Physiotherapy essentials*. 12<sup>th</sup> edition.