

**MANIPAL UNIVERSITY****MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017****SUBJECT: PAPER - I: SECTION "A": GENERAL IN ALL TOPICS IN  
CARDIO PULMONARY SCIENCES****(SPECIALITY AREA: CARDIO PULMONARY SCIENCES)****(2013 Regulation)**

Thursday, June 15, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

**✍ Answer ALL questions.**

1. Explain the different treatment strategies to relieve dyspnea in a patient with COPD.  
(25 marks)
2. Discuss the various investigations for peripheral arterial disease. Explain their implications with regards to physiotherapy management.  
(25 marks)
3. Acute physiotherapy management in a patient with Guillian Barre Syndrome.  
(25 marks)
4. **Write short notes on:**
  - 4A. Prone body positioning
  - 4B. Exercise prescription for an osteoporotic patient
  - 4C. Complications of oxygen therapy
  - 4D. Algorithm for adult basic life support
  - 4E. Thoracic biomechanics during pregnancy

(5 marks × 5 = 25 marks)



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER - I: SECTION "A": GENERAL IN ALL TOPICS IN ORTHOPAEDIC CONDITIONS  
(SPECIALITY AREA: ORTHOPAEDICS)  
(2013 Regulation)

Thursday, June 15, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Discuss myofascial pain syndrome under the following headings:
  - 1A. Etiology including controversies
  - 1B. Symptomatology
  - 1C. Management
2. Outline principles of strength training in athletes.
3. Describe the role of induction exercises in neurotisation rehabilitation.
4. Discuss hand deformities in Hansen's disease- pathomechanics and causative factors.



**MANIPAL UNIVERSITY**

**MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017**  
**SUBJECT: PAPER – I: SECTION–A: GENERAL IN ALL TOPICS IN NEUROLOGICAL CONDITIONS**  
**(SPECIALITY AREA: NEUROSCIENCES)**  
**(2013 Regulation)**

Thursday, June 15, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

1. Explain the theories related to motor control with the clinical implications. (25 marks)
2. Explain the methods of eliciting brainstem reflexes in infants. Add a note on its integration age and clinical relevance in rehabilitation. (10+5+10 = 25 marks)
3. Explain **ANY TWO** modern electrodiagnostic tests in neurological rehabilitation under the following headings:
  - 3A. Indications of test
  - 3B. Parameters measured and its normal values
  - 3C. Interpretation of abnormal values and its rationale(5+10+10 = 25 marks)
4. **Short notes:**
  - 4A. Role of vestibular system on balance
  - 4B. HKAFO
  - 4C. Recovery stages in hemiplegia
  - 4D. Principles of proprioceptive neuromuscular facilitation
  - 4E. Assessment of fatigue(25 marks)



Reg. No.

## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017.

SUBJECT: PAPER – I: SECTION “A”: GENERAL IN ALL TOPICS IN COMMUNITY PHYSIOTHERAPY  
(SPECIALITY AREA: COMMUNITY PHYSIOTHERAPY)  
(2013 REGULATIONS)

Thursday, June 15, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. Define community based rehabilitation. Outline the basic principles of CBR. Explain in detail the concept of barrier free environment.
2. Explain the role of assistive technology in rehabilitation. Elaborate the various steps involved in reintegrating an above knee amputee back into the mainstream community with the help of assistive technology.
3. What are the various barriers to reintegration of disabled people to mainstream social life? Elaborate the various legislations passed in India to address these issues. What are the existing limiting factors in the implementation of these legislations?
4. Elaborate sheltered employment. Identify the various advantages and disadvantages of sheltered employment. Compare and contrast sheltered employment with community workshop employment.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – I: SECTION “A”: GENERAL IN ALL TOPICS IN PAEDIATRIC AND WOMEN HEALTH  
(SPECIALITY AREA: PAEDIATRIC AND WOMEN HEALTH)  
(2013 REGULATIONS)

Thursday, June 15, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ Answer ALL questions.

1. Discuss the physiological changes associated with postpartum period. (25 marks)
2. Describe in detail the intrauterine development of cardiopulmonary system. (25 marks)
3. Discuss the anatomy of the “core” muscles. (25 marks)
4. **Short notes:**
  - 4A. Pain management during dysmenorrhea.
  - 4B. Explain **ANY TWO** theories of motor control
  - 4C. Significance of Electro encephalogram (EEG) in pediatrics
  - 4D. Significance of tonic neck reflexes
  - 4E. Postural changes associated with menopause(5 marks × 5 = 25 marks)



**MANIPAL UNIVERSITY****MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017****SUBJECT: PAPER - I: SECTION “B”: RECENT ADVANCES IN ORTHOPAEDIC CONDITIONS  
(SPECIALITY AREA: ORTHOPAEDICS)  
(2013 Regulation)**

Saturday, June 17, 2017

Time: 10:00 – 11:30 Hrs.

Max. Marks: 50

✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Discuss the recent developments in neural tissue tension tests and therapies for conditions related to abnormal neurodynamics.
2. Discuss the role of lumbar stabilization in management of low back pain.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART-II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – I: SECTION “B”: RECENT ADVANCES IN CARDIO PULMONARY SCIENCES  
(SPECIALITY AREA: CARDIO PULMONARY SCIENCES)

(2013 Regulation)

Saturday, June 17, 2017

Time: 10:00 – 11:30 Hrs.

Max. Marks: 50

- ✍ **Answer ALL questions.**
- ✍ **All questions carry equal marks.**

1. Discuss the effects of exercise training on inflammatory markers.
2. Discuss the role of arm exercise training in patient with chronic obstructive pulmonary disease.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – I: SECTION “B”: RECENT ADVANCES IN PAEDIATRIC AND WOMEN HEALTH  
(SPECIALITY AREA: PAEDIATRICS AND WOMEN HEALTH)

Saturday, June 17, 2017

Time: 10:00 – 11:30 Hrs.

Max. Marks: 50

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. LASER therapy in lymph edema
2. Partial body weight supported treadmill training in pediatric population





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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – I: SECTION “B”: RECENT ADVANCES IN COMMUNITY PHYSIOTHERAPY  
(SPECIALITY AREA: COMMUNITY PHYSIOTHERAPY)

Saturday, June 17, 2017

Time: 10:00 – 11:30 Hrs.

Max. Marks: 50

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✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Discuss the community balance and mobility scale-a balance measure for individuals with traumatic brain injury.
2. Discuss Ergonomic Methods for Assessing Exposure to Risk Factors for Work-Related Musculoskeletal Disorders.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – I: SECTION “B”: RECENT ADVANCES IN NEUROLOGICAL CONDITIONS  
(SPECIALITY AREA: NEUROSCIENCES)  
(2013 Regulation)

Saturday, June 17, 2017

Time: 10:00 – 11:30 Hrs.

Max. Marks: 50

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. Virtual reality training in stroke rehabilitation.
2. Evidence for physiotherapy management in preterm infants.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

**SUBJECT: PAPER - II: ELECTIVE: WOMEN'S HEALTH**  
(SPECIALITY AREA: PAEDIATRIC PHYSIOTHERAPY)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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1. Discuss physiotherapy management for a thirty five year old second trimester pregnant lady with gestational diabetes. (25 marks)
2. Discuss physiotherapy assessment and management of a Post menopausal osteoporotic woman. (25 marks)
3. Discuss pre and postoperative physiotherapy management following abdominal hysterectomy in a young woman. (25 marks)
4. **Short notes:**
  - 4A. Polycystic ovarian disease and exercise
  - 4B. Effect of exercise on bone growth and stature in adolescents(13+12 = 25 marks)



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER - II: ELECTIVE – HAND REHABILITATION

(SPECIALITY AREA: ORTHOPAEDICS)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ Answer ALL questions.

1. The assessment of sympathetic function of hand after nerve injury.  
(25 marks)
2. Explain the clinical features, diagnostic tests of thoracic outlet syndrome. Write the physiotherapy management of anterior scalene syndrome affecting the right upper extremity.  
(10+15 = 25 marks)
3. Discuss the mechanics of scapular stabilizers. What are the various methods of assessing scapula dyskinesia? Write the physiotherapy management of the same.  
(25 marks)
4. **Short notes:**
  - 4A. Physiotherapy management following posterior dislocation of elbow
  - 4B. Assessment of grip strength
  - 4C. Game-keepers thumb
  - 4D. Dupuytren's contracture
  - 4E. Total claw hand

(5 marks × 5 = 25 marks)



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART - II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – II: ELECTIVE: ICU MANAGEMENT

(SPECIALITY AREA: CARDIO PULMONARY SCIENCES)

(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. Role of physiotherapy management in acute head injury
2. Discuss the role of physiotherapy in respiratory failure
3. Discuss the safety issues that should be considered while mobilizing critically ill patient
4. **Write short notes on:**
  - 4A. Cough mechanism
  - 4B. Artificial airways



**MANIPAL UNIVERSITY****MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017****SUBJECT: PAPER - II: ELECTIVE: PAEDIATRIC NEUROLOGY  
(SPECIALITY AREA: NEUROSCIENCES)  
(2013 REGULATION)**

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Discuss motor, sensory and cognitive problems in children with down's syndrome and physiotherapy management for the same.
2. Discuss physiotherapy management for a three and half year old child with spastic diplegia who is unable to sit. Add note on evaluation of hand function in spastic diplegia.
3. Discuss physiotherapy management for eight year old child with GCS score of five following head injury.
4. **Write short notes on:**
  - 4A. Classification of hypoxemic ischemic encephalopathy
  - 4B. Movement assessment of infants as an outcome measure
  - 4C. Outcome measures used in obstetric brachial plexus injury
  - 4D. Physiotherapy management in postencephalitic hydrocephalus
  - 4E. Rehabilitation in children with spina bifida



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

**SUBJECT: PAPER – II: ELECTIVE – HEALTH PROMOTION AND FITNESS**  
(SPECIALITY AREA: CARDIO PULMONARY SCIENCES)  
(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Acute and chronic adaptation of Cardio respiratory following aerobic training.
2. Write about functional fitness assessment in sedentary elderly population.
3. Discuss the structure of lipoprotein and their transport in the body. Discuss the effect of exercise on lipid profile.
4. Write the rationale of exercise prescription in obesity.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

**SUBJECT: PAPER - II: ELECTIVE: CARDIO PULMONARY REHABILITATION**

(SPECIALITY AREA: CARDIO PULMONARY SCIENCES)

(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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- ✍ **Answer ALL questions.**
- ✍ **All questions carry equal marks.**

1. Discuss physiotherapy management for lower extremity peripheral arterial disease.
2. Discuss the mechanisms and outcomes of Resistance training in the treatment of cardiac patients.
3. Discuss the role of respiratory and skeletal muscle strength in chronic obstructive pulmonary disease.
4. How would you encourage adherence of a prescribed method of airway clearance in:
  - 4A. C5-6 spinal cord injury.
  - 4B. A 9 year- old newly diagnosed with cystic fibrosis.





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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

**SUBJECT: PAPER - II: ELECTIVE: ADULT NEUROLOGY**

(SPECIALITY AREA: NEUROSCIENCES)

(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

1. Define intracranial pressure. Explain the factors affecting ICP and add a note on the role of physiotherapist in the management of a patient with increased ICP.

(2+15+8 = 25 marks)

2. What are the causes for cerebellar dysfunction? Add a note on assessment and physiotherapy management of patient with cerebellar dysfunction.

(5+10+10 = 25 marks)

3. Explain the factors affecting stability of spine. Add a note on physiotherapy treatment following two level laminectomy at lumbar level.

(10+15 = 25 marks)

4. **Short notes:**

4A. Complex regional pain syndrome

4B. Freezing episode

4C. Vestibular adaptation exercises

4D. Circumduction gait

4E. Associated reactions

(25 marks)



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER – II: ELECTIVE – SPORTS REHABILITATION  
(SPECIALITY AREA: ORTHOPAEDICS)  
(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ All questions carry equal marks.

1. Discuss regarding:

- 1A. Piriformis syndrome
- 1B. Glenohumeral internal rotation deficit (GIRD)
- 1C. Quadriceps contusion
- 1D. Nutrition for the younger athletes
- 1E. Common injuries in cycling

(5 marks × 5 = 25 marks)

- 2. Discuss pre participation physical evaluation for competitive athletes.
- 3. Predisposing factors, clinical features and conservative treatment of Achilles tendinopathy.
- 4. Define patello femoral pain syndrome (PFPS). Discuss in detail about factors that contribute to development of PFPS in athletes and its conservative treatment.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

SUBJECT: PAPER - II: ELECTIVE: MANUAL THERAPY

(SPECIALITY AREA: ORTHOPAEDICS)

(2013 REGULATION)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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✍ Answer ALL questions.

✍ All questions carry equal marks.

1. Discuss the principles and relevance of Cyriax school of manual therapy.
2. Discuss outcome evaluation in manual therapy.
3. Role of Mc Kenzie's approach to neck dysfunction.
4. Comment on the importance of clinical reasoning in patient care.



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## MANIPAL UNIVERSITY

MASTER OF PHYSIOTHERAPY (MPT) PART – II DEGREE EXAMINATION – JUNE 2017

**SUBJECT: PAPER - II: ELECTIVE: GERIATRICS REHABILITATION**  
(SPECIALITY AREA: COMMUNITY PHYSIOTHERAPY)

Monday, June 19, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Describe in detail the essential components for a home based care program for terminally ill elderly. What are the possible ethical issues involved?
2. Discuss the impact of common co-morbidities in geriatric population on the design of physiotherapeutic intervention programs. Give the outline of a comprehensive intervention program addressing these concerns.
3. What are the manifestations of malnutrition in aged population? Explain the effect they can have on the outcomes of physiotherapeutic interventions.
4. Elaborate the risks associated with poly-pharmacy in elderly. Discuss the coordination of exercise based intervention programs with drug regimen in chronically ill elderly.

