

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LP 6278]

AUGUST 2019

Sub. Code: 6278

BPT DEGREE EXAMINATION
(Regulations for the candidates admitted from 2017-2018 onwards)
SECOND YEAR
PAPER III - EXERCISE THERAPY – I

Q.P. Code : 746278

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Gait. Add note on its various spatial and temporal variables.
2. Define Hydrotherapy. Explain in detail about Principles, Indications, contra-indications, Procedure, physiological and therapeutic effects of hydrotherapy.

II. Write notes on:

(10 x 5 = 50)

1. Axillary crutch.
2. Abnormal spinal curvatures.
3. Isometric muscle contraction.
4. Joint mobilization.
5. Determinants of gait.
6. Free exercise for knee joint.
7. Mat activities.
8. Abdominal exercises.
9. Hubbard Tank.
10. Types of Motion.

III. Short answers on:

(10 x 2 = 20)

1. Muscle work.
2. Repetition maximum.
3. Buoyancy.
4. Aims of exercise therapy.
5. Tendon-Gliding exercises.
6. Pelvic floor muscle exercises.
7. Waddling Gait.
8. Pelvic tilt.
9. Relaxation.
10. Parallel bar.

[LQ 6278]

FEBRUARY 2020

Sub. Code: 6278

BPT DEGREE EXAMINATION
(Regulations for the candidates admitted from 2017-2018 onwards)
SECOND YEAR
PAPER III - EXERCISE THERAPY – I

Q.P. Code : 746278

Time: Three hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Define Resisted Exercises. Write down its classification, technique, effects and advantages.
2. Describe about the principles, indications, contraindications and effects of joint mobilization. Add a note on Shoulder joint mobilization.

II. Write notes on: **(10 x 5 = 50)**

1. Types of walking aids.
2. Free exercise for shoulder joint.
3. Open and closed kinematic chain exercises.
4. Principles of Passive movements.
5. Describe the muscle work and uses of lying.
6. Lordosis.
7. Reeducation of elbow extensor from muscle power 0 to 5.
8. Manual muscle testing for Tibialis anterior.
9. Whirlpool bath.
10. What are the crutch muscles and how will you prepare the patient before providing crutches?

III. Short answers on: **(10 x 2 = 20)**

1. Stabilizer.
2. Hydrostatic pressure.
3. Crook sitting.
4. Oscillatory technique.
5. Plyometric training.
6. Uses of quadruped position.
7. Types of walkers.
8. Axis.
9. Flat back.
10. Passive insufficiency.

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[BPT 0921]

**SEPTEMBER 2021
(FEBRUARY 2021 EXAM SESSION)**

Sub. Code: 6278

**BPT DEGREE EXAMINATION
SECOND YEAR
(Regulations for the candidates admitted from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I
*Q.P. Code : 746278***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe in detail the postural mechanisms. What are the principles and techniques of postural re-education.
2. Describe in detail the techniques and principles of Hydrotherapy.

II. Write notes on:

(10 x 5 = 50)

1. Range of muscle work.
2. Axis and Planes.
3. Canes – Purpose and Types of cane.
4. Levers – Ist order IIInd order, IIIrd order, examples, application in PT.
5. Phases of gait.
6. Define Gravity.
7. Effect of prolonged immobilization.
8. General relaxation.
9. Faulty or Abnormal postures.
10. Parkinson gait.

III. Short answers on:

(10 x 2 = 20)

1. Definition of speed.
2. Range of motion (ROM) – Definition, Types.
3. Types of wheel chair.
4. Hold relax technique.
5. Thomas test.
6. Crook lying position.
7. Kyphosis..
8. Types of muscular contraction.
9. Progressive resisted exercise – Mac queen.
10. Define Pulley and its types.

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[BPT 0122]

**JANUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR- (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I
*Q.P. Code : 746278***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. What are the types of Crutches. Explain the crutch walking in non weight bearing and partial weight bearing.
2. Define free exercises. Write down its classification, technique, effect and uses of free exercises.

II. Write notes on:

(10 x 5 = 50)

1. Free exercise for shoulder flexor.
2. Exercises in hydrotherapy.
3. Assessment of Posture in lateral view.
4. Derived position of standing.
5. Types of muscle contraction.
6. Angle of pull with anatomical examples.
7. Mechanical resisted exercises.
8. Parkinson Gait.
9. Types and uses of walkers.
10. Jacobson's relaxation techniques.

III. Short answers on:

(10 x 2 = 20)

1. Centre of Gravity.
2. Range of Muscle work.
3. Scoliosis.
4. Half – Kneeling.
5. Shoe's on measurement.
6. Name the Starting positions.
7. Bridging.
8. Base of support.
9. Define work.
10. Law of Inertia.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0622]

**JUNE 2022
(FEBRUARY 2022 EXAM SESSION)**

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR- (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I
*Q.P. Code : 746278***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define and write about the purpose of starting and derived Positions. Explain in detail about any five derived positions of sitting.
2. Define Resisted Exercise. Explain in detail about the types, physiological and therapeutic effects of Resisted exercise.

II. Write notes on:

(10 x 5 = 50)

1. Write a note on range of muscle work.
2. Write a note on active assisted exercise.
3. Write an assessment on scoliosis.
4. How do grade triceps surae based on Medical Research Council?
5. Purpose, types and parts of Crutches.
6. Write a note on general relaxation exercises.
7. Write a note on exercises in Hydrotherapy.
8. Abdominal exercises.
9. Write about the Trendelenburg gait.
10. What are the causes for joint range limitation?

III. Short answers on:

(10 x 2 = 20)

1. Define synergist with example.
2. Pulley and its types.
3. Define force.
4. Forward head Posture.
5. Step standing.
6. Define cadence.
7. Define Free exercise
8. Purpose of canes.
9. Buoyancy.
10. Calcaneal gait.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 1022]

**OCTOBER 2022
(AUGUST 2022 EXAM SESSION)**

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR- (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I
*Q.P. Code : 746278***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Posture. Discuss in detail Posture Evaluation.
2. Define Resisted Exercise. Discuss in detail about the types of Resisted exercise and its uses.

II. Write notes on:

(10 x 5 = 50)

1. Positions derived from standing.
2. Resisted exercise for knee extensors.
3. Closed Kinematic and Open Kinematic chain exercises.
4. Write a note on mat activities.
5. Physiological effects of passive movements.
6. Free exercises to the shoulder joint.
7. Oscillatory Technique.
8. Phases of Gait Cycle.
9. Write a note on measurement methods for crutches.
10. Physiological effects of Peripheral Joint Mobilization.

III. Short answers on:

(10 x 2 = 20)

1. General contraindications for active exercises.
2. Range of Muscle work.
3. Hold Relax Technique.
4. Effects of therapeutic exercises.
5. Foot drop gait.
6. Muscle Grading.
7. Indications of joint mobilization.
8. Types of Wheel Chair.
9. Types of cane.
10. Hydrostatic Pressure.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0423]

**APRIL 2023
(FEBRUARY 2023 EXAM SESSION)**

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR - (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I**

Q.P. Code: 746278

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define starting position. Write in detail about starting and derived positions of sitting.
2. Define gait. Write in detail about gait cycle, parameters and determinants of gait and factors affecting gait.

II. Write notes on:

(10 x 5 = 50)

1. Types of muscle contraction.
2. Axis and planes.
3. Techniques of relaxation.
4. Physical properties of water.
5. Abnormal posture.
6. MMT for elbow extensors.
7. Non weight bearing – Gait training.
8. Ambulatory training in functional re education.
9. Resisted exercise for knee extensors.
10. Progressive resisted exercise.

III. Short answers on:

(10 x 2 = 20)

1. Types of movements.
2. Kinematic chain.
3. Mechanical advantage.
4. Lumbosacral angle.
5. Muscle stimulation.
6. Crutch line.
7. Treatment plane.
8. Concavo convex rule.
9. Half Kneeling.
10. Crutch measurements.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 1123]

**NOVEMBER 2023
(AUGUST 2023 EXAM SESSION)**

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR - (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I**

Q.P. Code: 746278

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define passive movements. What are the indications, contra indications and principles of passive movements? Elaborate on passive movements of shoulder joint.
2. Define functional re-education. Elaborate on pre ambulatory mat activities.

II. Write notes on:

(10 x 5 = 50)

1. Principles of Relaxation.
2. Derived positions of lying.
3. Hubbard tank.
4. Analysis of posture.
5. MMT for quadriceps.
6. Crutch measurement.
7. Resisted exercise for knee flexors.
8. Difference between open and close chain exercises.
9. Anatomical movements.
10. Gait cycle.

III. Short answers on:

(10 x 2 = 20)

1. Types 1 muscle fiber.
2. Active insufficiency.
3. Types of equilibrium.
4. Hydrostatic pressure.
5. Substitution.
6. Contrast bath.
7. Quadriceps gait.
8. Osteokinematics.
9. Iliopsoas stretching.
10. Stride length and cadence.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0824]

AUGUST 2024

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR - (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I**

Q.P. Code: 746278

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define levers. Write in detail about types of levers with examples in human body.
2. Define muscle re education. Write in detail about reeducation of quadriceps muscle from grade 0-5.

II. Write notes on:

(10 x 5 = 50)

1. Classification of muscles.
2. Gravity and line of gravity.
3. Physiological effects of hydrotherapy.
4. Postural reflex.
5. MMT for hamstrings.
6. Free exercises for shoulder joint.
7. Explain any two pathological gaits.
8. Crutch muscle strengthening exercises.
9. Maitland principles.
10. Active assisted exercises.

III. Short answers on:

(10 x 2 = 20)

1. Therapeutic exercise.
2. Movements of scapula.
3. Energy and its types.
4. Prone kneeling.
5. Buoyancy.
6. Pectoralis major stretching.
7. MRC grading.
8. Types of canes.
9. Bridging.
10. Multipennate muscle.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0225]

FEBRUARY 2025

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR - (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I**

Q.P. Code: 746278

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define Gait Cycle and discuss about the various phases of gait cycle.
2. Define hydrotherapy. Explain in detail about the principles, physiological and therapeutic effects of hydrotherapy.

II. Write notes on:

(10 x 5 = 50)

1. Axis and Planes.
2. Positions derived from lying.
3. Exercise for Scoliosis.
4. Muscle Energy Techniques.
5. Types and parts of Wheel chair.
6. Principles of Joint Mobilization.
7. Pelvic floor muscle strengthening exercises.
8. Define Posture. Write a note on Postural Control.
9. Write about the Parkinson's gait.
10. Crutch measurements.

III. Short answers on:

(10 x 2 = 20)

1. Passive insufficiency.
2. Hanging.
3. Autogenic training.
4. Isometric Contraction.
5. Flat neck.
6. Types of Walker.
7. Principles of manual muscle testing.
8. Uses of resisted exercises.
9. Reciprocal inhibition.
10. Angle of pull.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0825]

AUGUST 2025

Sub. Code: 6278

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR - (Regulation from 2017-2018 onwards)
PAPER III - EXERCISE THERAPY – I**

Q.P. Code: 746278

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe in detail the principles and techniques of hydrotherapy.
2. Define free exercises. Write down its classification, techniques, effect and uses of free exercises.

II. Write notes on:

(10 x 5 = 50)

1. Manual muscle testing for quadriceps.
2. Parkinson gait.
3. Wheel chair.
4. Active insufficiency.
5. Newtons laws of motion.
6. Range of muscle work.
7. Derived positions of standing.
8. Mat activities.
9. What are the causes for joint range limitation?
10. Techniques of local relaxation.

III. Short answers on:

(10 x 2 = 20)

1. Define gait cycle.
2. Effects of therapeutic exercise.
3. General contraindications for active exercise.
4. Base of support.
5. Define cadence.
6. Active resistance test.
7. Define posterior pelvic tilt.
8. Define stride standing.
9. Define Horizontal planes.
10. Momentum.
