

SYLLABUS

EXERCISE THERAPY I (Theory)

Marks: 100

S.No	Chapters	Topic
1.	Chapter A	Introduction to Exercise Therapy
2.	Chapter B	Applied biomechanics
3.	Chapter C	Starting Position and derived position
4.	Chapter D	Relaxation
5.	Chapter E	Posture
6.	Chapter F	Gait and human Locomotion
7.	Chapter G	Active & Passive Movements
8.	Chapter H	Group Exercise
9.	Chapter I	Mat activities & Functional re-education
10.	Chapter J	P.N.F
11.	Chapter K	Traction
12.	Chapter L	Manipulation
13.	Chapter M	Hydrotherapy
14.	Chapter N	History of massage
15.	Chapter O	Classification of massage
16.	Chapter P	Physiological Effects of massage on various body systems
17.	Chapter Q	Massage techniques ,Effects & Uses

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EXERCISE THERAPY II (Theory)

Marks: 100

S.No	Chapters	Topic
1.	Chapter A	Relaxed passive Movements
2.	Chapter B	Stretching
3.	Chapter C	Muscle Grading/Manual Muscle testing
4.	Chapter D	Muscle strengthening/Re-education of Muscle
5.	Chapter E	Resisted Exercise
6.	Chapter F	Goniometry
7.	Chapter G	Methods of Joint Mobilization
8.	Chapter H	Suspension therapy
9.	Chapter I	Balance & co-ordination exercise
10.	Chapter J	Chest Physiotherapy
11.	Chapter K	Breathing exercise
12.	Chapter L	Therapeutic Application of Massage
13.	Chapter M	Techniques used for Various parts of body- Massage
14.	Chapter N	Sports massage
15.	Chapter O	Walking aids/Crutch walking
16.	Chapter P	Describe the complications to patients due to prolonged bed rest/Demonstrate maintenance exercise for patients on prolonged bed rest

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EXERCISE THERAPY (Practicals)

Marks: 100

S.No	Chapters	Topic
1.	Chapter A	Relaxed passive Movements
2.	Chapter B	Stretching- soft tissues
3.	Chapter C	Manual muscle Testing
4.	Chapter D	Methods of Joint mobilization and Goniometry (Suspension Therapy)
5.	Chapter E	Balance and Co-ordination exercise
6.	Chapter F	Chest Physiotherapy
7.	Chapter G	Massage-Upperlimb,lowerLimb,back,Neck,Face
8.	Chapter H	Crutch Walking
9.	Chapter I	Prolonged bed rest Complication & Maintenance Exercise program
10.	Chapter J	Sports massage

Exercise Therapy

Total hours – 350 hours

Theory(150hrs)

Paper I	75hrs
Paper II	75hrs
Practical	200hrs
Total	350 hrs

References

EXERCISE THERAPY

S.No	Topic	Author
1.	Principles of exercise therapy	Dena gardener
2.	Practical exercises therapy	Margaret hollis
3.	Muscle testing and function	FlorencePetersonKendall, Williams and Wilkins
4.	Measurement of Joint motion,a guide to Goniometry	Cyndhia Norkins C
5.	Therapeutic Exercise-Foundations & techniques	Carolyn Kishner
6.	Human Movement Explained	Kim Jones& Karen barker
7.	Exercise therapy	Basmojin

Massage

S.No	Topic	Author
1.	Bears Massage	Beard
2.	Massage for Therapist	Margaret Hollis
3.	Therapeutic Massage	A.G.Sinha

SYLLABUS - Exercise Therapy

Muscle Strengthening / Re-education of Muscle

- Causes of Muscle weakness
- Prevention of Muscle weakness
- Early Re-education/initiation of Muscle Contraction in weak muscles
- Demonstrate the various re-education techniques & facilitating method on Different group of Muscles of Upper extremity, Lower extremity, Trunk
- Demonstrate the progressive exercise in Strengthening using Various methods according to Muscle power Grade 1 to Grade 5
- Muscle work (inner, outer, Middle range, Full range)

STRETCHING

- Definition
- Indication & contra indication
- Purpose of Stretching
- Explain to patient ,Why stretching is Essential?
- Physiological changes in Muscle to Stretch
- Neurological Changes in Muscle to Stretch
- Principle/technique of stretching
- Position of Patient to stretch particular Muscle
- Position of therapist
- Induce General relaxation

- Induce local relaxation
- Fixation of the Segment
- Support/Stabilization of the Segment
- Direction of Stretching Force
- Intensity & Duration
- Repetition
- Care/precaution while Stretching
- **Types of Stretching**
 - Passive Stretching
 - Active or Self Stretching
 - PNF
 - Ballistic Stretching
 - Dynamic Stretching
 - Isometric

LOWER EXTREMITY MUSCLE STRETCHING:

- **MUSCLES** : Iliacus & Psoas Major ,Adductor,Hamstring,tensor fascia lata,Quadriceps,Tendo Achilles(Gastrocnemius & Soleus) Piriformis,Tibialis Anterior, Peroneous Longus , Peroneous Brevis, Extensor hallucis Longus, Extensor Digitorum Longus, Exetensor digitorum Brevis.

TRUNK AND UPPER EXTREMITY STRETCHING

- Muscles : Lower back Extensors, Levator scapulae, Upper fibers of Trapezius, Middle Fibres of Trapezius, Rhomboids major & Minor, Pectoralis Major, Supra Spinatus, Subscapularis, Infra Spinatus, Teres minor, Latissimus dorsi, Elbow flexor- biceps, Elbow extensor- triceps, Wrist Extensors, Wrist Flexors, Common Extensors- ECRL, ECRB, ECU, ED, Wrist and Finger Flexors – FCR, FCU, FDS, FDP

GONIOMETRY

- Definition
- Normal Range of Motion of joints
- Types of Goniometer
 - ✓ Universal Goniometer
 - ✓ Gravity Dependent Goniometer/Fluid Goniometer
 - ✓ Pendulum Goniometer
 - ✓ Electro Goniometer
- Procedure/Steps in Joint Range Measurement
- Demonstrate measuring of Individual Joint range using Goniometer
- Patient Positioning
- Therapist Positioning
- Relaxation
- Support/Stabilization
- Fixation/Aims of goniometer over joints
- Direction of movement

- Knowledge about taking reading in goniometer
- Merits and Demerits
- Measure the following Joints
 - Shoulder joint
 - Elbow joint
 - Radio ulnar Joint
 - Wrist Joint
 - MCP joint
 - PIP Joint
 - DIP Joint
 - Hip Joint
 - Knee Joint
 - Ankle Joint
 - Sub Talar Joint

Chapter .L

MANUAL THERAPY

1. Bio Mechanical Principles of Manual Therapy
2. Concave- Convex Role
3. Close Pack & Loose Pack Positioning
4. Resting Positioning
5. Joint Status
6. Barrier Concept
7. Fryette Law
8. Articular Neurology
9. Pain
10. Clinical Reasoning Manual Therapy

JOINT MOBILIZATION TECHNIQUE

(Terminology, Principles, Indications, Contraindication,
Assessment, Effects & Uses)

1. MaitLand
2. Mulligan
3. Mckenzie
4. Cyrian
5. Kalten Born
6. Butler Neural Mobilization

SOFT TISSUE TECHNIQUES

(Terminology, Principles, Indications, Contra- Indications,
Assessment, Effects & Uses)

1. Myofascial Release Techniques
2. Muscle Energy Techniques
3. Trigger Point Release
4. High Velocity, Thrust Techniques
5. Positional Release Techniques
6. Cranio-Sacral Manipulations
