



PRACTICE SET

End Semester Examination, Dec 2025

Program: Bachelor of Physiotherapy (BPT)

Semester: III

Course: Advanced Exercise Therapy -I

Course Code: 23A303

COURSE OUTCOME

At the end of the course, candidate will able to

CO 1: Understand and explain about the operating procedure of various therapeutic equipment for different therapeutic benefits.

CO 2: Understand basic principles, indications, contraindication and precautions of various hands-on techniques of stretching, resisted exercise and PNF.

CO 3: Assess muscle strength and apply different resisted exercises program.

CO 4: Demonstrate stretching technique, PNF pattern and various yogic asanas.

Section A

(19x 5= 95 marks)

- 1) Explain stretch Reflex with diagram? (CO2) [UNIT 2] [UNDERSTAND, LOT]
- 2) Explain Yoga and its Classification? (CO4) [UNIT 1] [UNDERSTAND, LOT]
- 3) What is Gymnasium & its importance? (CO1) [UNIT 1] [REMEMBER, LOT]
- 4) Describe Tonic and Phasic muscle fiber? (CO1) [UNIT 1] [UNDERSTAND, LOT]
- 5) What is the strength of a muscle? (CO2) [UNIT 3] [REMEMBER, LOT]
- 6) What do you understand about the power of a muscle? (CO2) [UNIT 3] [REMEMBER, LOT]
- 7) Explain endurance? (CO2) [UNIT 3] [UNDERSTAND, LOT]
- 8) Explain dynamic exercise? (CO2) [UNIT 3] [UNDERSTAND, LOT]
- 9) What does fatigue mean of a muscle (CO2) [UNIT 3] [REMEMBER, LOT]

- 10) Explain SAID and overload principal (CO2) [UNIT 3] [UNDERSTAND, LOT]
- 11) Explain on Plyometric training (CO4) [UNIT 4] [UNDERSTAND, LOT]
- 12) What do you understand by Circuit training (CO4) [UNIT 4] [REMEMBER, LOT]
- 13) Explain PRE (CO2) [UNIT 4] [UNDERSTAND, LOT]
- 14) Describe DAPRE (CO3) [UNIT 4] [UNDERSTAND, LOT]
- 15) Explain DOMS (CO2) [UNIT 4] [UNDERSTAND, LOT]
- 16) Write down the Principle of PNF (CO4) [UNIT 5] [REMEMBER, LOT]
- 17) What are different Patterns of PNF (CO4) [UNIT 5] [UNDERSTAND, LOT]
- 18) Explain Rhythmic initiation and Reversal antagonist. (CO4) [UNIT 5] [UNDERSTAND, LOT]
- 19) Explain Contract- Relax & Hold-Relax? (CO4) [UNIT 5] [UNDERSTAND, LOT]

Section B

(16x 10= 160 marks)

- 20) Write down the Principle, Indication, Contra- Indications & limitations of MMT. (CO3) [UNIT 6] [REMEMBER, LOT]
- 21) Write down the MMT gradings? (CO3) [UNIT 6] [REMEMBER, LOT]
- 22) Explain Posture view and its components? (CO1) [UNIT 1] [UNDERSTAND, LOT]
- 23) Describe Various Types of Resistance exercise? What are the differences between agonist and antagonist? (CO2) [UNIT 3] [UNDERSTAND, LOT]
- 24) Describe Various Yoga asanas? (CO4) [UNIT 1] [UNDERSTAND, LOT]
- 25) Describe the stretching Procedure in Rectus femoris tightness? (CO4) [UNIT 2] [UNDERSTAND, LOT]
- 26) Write about determinants, effects of stretching. (CO2) [UNIT 2] [UNDERSTAND, LOT]
- 27) Describe neurophysiological properties of connective tissue. (CO2) [UNIT 2] [UNDERSTAND, LOT]
- 28) Write about stretching Procedure of hamstring muscles & mention indications and contraindications. (CO2) [UNIT 2] [UNDERSTAND, LOT]
- 29) Write down the principle of resisted exercise and its determinants. (CO2) [UNIT 3] [REMEMBER, LOT]
- 30) What are the variables of Dynamic Exercise? Write types of muscle fiber? (CO2) [UNIT 3] [REMEMBER, LOT]
- 31) Write in details about Delorme, Oxford techniques? (CO3) [UNIT 4] [REMEMBER, LOT]

- 32) Explain flexion and extension patterns of the upper limb? (CO4) [UNIT 5] [UNDERSTAND, LOT]
- 33) Write flexion & extension patterns of lower limb. (CO4) [UNIT 5] [UNDERSTAND, LOT]
- 34) Describe the principles of PNF in detail? What is the different mode of patterns of PNF technique? (CO4) [UNIT 4] [BTL-UNDERSTAND, LOT]
- 35) Analyze the MMT gradings according to the MRC scale of Soleus and Gastrocnemius muscle? (CO3) [UNIT 6] [Analyze, HOT]
- 36) Analyze the MMT gradings according to the MRC scale of Hip adductors in hemiplegic patients. (CO3) [UNIT 6] [Analyze, HOT]

Section C

(9 x 20= 180 marks)

- 37) Analyze the Hip Extensors muscle according to the MRC scale? (CO3) [UNIT 6] [Analyze, HOT]
- 38) Provide a detailed Explanation of Yoga along with Various Asanas if a patient is having low back pain? (CO4) [Unit 1] (Analyze, HOT).
- 39) Assemble all patterns of PNF of upper limb and lower limb in order to strengthen weaker muscles. (CO4) [Unit 5] (Analyze, HOT)
- 40) Analyse posture in details? (CO4) [UNIT 1] [Analyze, HOT]
- 41) Describe active and passive Hamstrings stretching procedure in detail? (CO4) [UNIT 2] [Evaluate, HOT]
- 42) Analyse the PNF techniques in detail for a patient having lower limb weakness? Explain diagonal pattern Procedures of Upper Limb in detail? (CO4) [Unit 5] (Analyze, HOT)
- 43) Analyse the role of different types of resistive exercises for strengthening muscles? Explain agonist and antagonist muscle contraction with an example? Write the differences between CKC and OKC with examples. (CO3) [UNIT 4] [Analyze, HOT]
- 44) Demonstrate MMT according to the MRC scale of Hip internal and external rotators in detail? (CO3) [UNIT 6] [Analyze, HOT]
- 45) Demonstrate shoulder MMT according to MRC Scale? (CO3) [UNIT 6] [Analyze, HOT]

Summary Sheet:

CO Wise

CO	Q.NO.	MARKS
CO1	3,4,22	20
CO2	1,5,6,7,8,9,10,13,15,23,26,27,28,29,30	105
CO3	14,20,21,31,35,36,37,43,44,45	135
CO4	2,11,12,16,17,18,19,24,25,32,33,34,38,39,40,41,42	185
TOTAL	45	445

UNIT WISE

UNIT	Q.NO.	MARKS
UNIT 1	2,3,4,22,24,38,40	75
UNIT 2	1,25,26,27,28,41	65
UNIT 3	5,6,7,8,9,10,23,29,30	60
UNIT 4 & 5	11,12,13,14,15,16,17,18,19,31,32,33,34,39,42,43,	65+80
UNIT 6	20,21,35,36,37,44,45	90
TOTAL	45	445

Bloom Taxonomy Wise

	Q.NO.	SCORE
LOT	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,	245
HOT	35,36,37,38,39,40,41,42,43,44,45	200
TOTAL	45	445

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Disclaimer: - This is a Practice Set. The Question in End term examination will differ from the Practice set. This Practice set is meant for practice only.