

PRACTICE SET
End Semester Examination, Spring- 2026

Program: BPT
Semester: IVth
Subject: Advance Exercise Therapy-II
Subject Code: 23A403

Course Outcome:

On the completion of the Course, the students will be able to:

Course Outcomes	Description
CO1	Understand principles, indications, types, contraindications, precautions and appropriate methods of application of aerobic exercises, hydrotherapy, breathing exercises, balance and coordination exercises etc.
CO2	Understand concepts of various mobilization/manipulation techniques and its method of application.
CO3	Demonstrate gait training, crutch walking, balance and coordination exercise.

UNIT I

Section A (10 marks)

1. Discuss mechanism of balance control by interaction of different systems. [CO3] [BTL Understand LOT]
2. What is coordination? Discuss the clinical test used for the diagnosis of coordination. [CO3] [BTL Remember LOT]
3. Describe indications, principles, techniques and progression of Frenkel's exercise. [CO3] [BTL Understand LOT]

Section B (20 marks)

4. How ankle and hip strategies help in maintaining balance control? [CO3] [BTL Analyze HOT]

UNIT II

Section A (10 marks)

5. Elaborate how exercise testing method helps in evaluation of aerobic capacity? [CO1] [BTL Analyze HOT]
6. What are the components and determinants of an aerobic exercise program? [CO1] [BTL Remember LOT]
7. Discuss FITT principles for aerobic exercise and its progression. [CO1] [BTL Remember LOT]
8. Describe the guidelines used for application of aerobic exercise programs in patients with chronic illness. [CO1] [BTL Understand LOT]
9. Discuss the principles of aerobic exercise along with its application. [CO1] [BTL Understand LOT]
10. Discuss different energy systems of the body and examples of exercise performed in each system. [CO1] [BTL Understand LOT]

Section B (20 marks)

11. Design an aerobic exercise training programme as per the FITT principles for a 35 years old athlete having resting heart rate 80 beats per minute. [CO1] [Create HOT]
12. Distinguish between the physiological response of the body's different system to aerobic exercise and aerobic training. [CO1] [BTL Analyze HOT]

UNIT III

Section A (10 marks)

13. Elaborate how equipment used in hydrotherapy helps to enhance the physical properties of water for therapeutic purposes? [CO1] [BTL Analyze HOT]
14. Describe the properties of water used for therapeutic purposes in hydrotherapy? [CO1] [BTL Understand LOT]
15. Write down the indications, contraindications, precautions and danger of the hydrotherapy. [BTL Remember LOT]
16. Discuss in brief about the stages of soft tissue healing. [CO1] [BTL Understand LOT]
17. Elaborate how the “PEACE and LOVE” protocol is beneficial for tissue healing? [CO1] [BTL Analyze HOT]

Section B (20 marks)

18. Elaborate the physio-therapeutic treatment protocol for different stages of soft tissue healing. [CO1] [BTL Analyze HOT]
19. Outline how different physiological effects of water help to gain different therapeutic effects in hydrotherapy? [CO1] [BTL Analyze HOT]

UNIT IV

Section A (10 marks)

20. Discuss about the goals of different breathing exercises. [CO1] [BTL Understand LOT]
21. Explain about the techniques of breathing exercises used for the management of dyspnoea. [CO1] [BTL Understand LOT]
22. Describe the goals and techniques of “Diaphragmatic breathing. [CO1] [BTL Understand LOT]

Section B (20 marks)

23. Elaborate the indications, hand placement for different segments and procedure of segmental breathing exercise. [CO1] [BTL Analyze HOT]

UNIT V

Section A (10 marks)

24. Elaborate how respiratory resistance training helps to strengthen the respiratory muscles? [CO1] [BTL Analyze HOT]
25. Discuss the indications, procedures and benefits of glossopharyngeal breathing exercise? [CO1] [BTL Understand LOT]
26. Discuss the goals and procedure of “Positive Expiratory Pressure” breathing. [CO1] [BTL Understand LOT]
27. Explain the benefits and techniques of chest mobilization with proper examples. [CO1] [BTL Understand LOT]

Section B (20 marks)

28. Elaborate how different positions in postural drainage technique helps to drain out different segments of the lungs? [CO1] [BTL Analyze HOT]
29. Distinguish between the chest clearance techniques which can be used for the following condition patients: Patient under the effect of anaesthesia, post-operative patient having surgical pain, COPD patient admitted in the ward. [CO1] [BTL Analyze HOT]

UNIT VI

Section A (10 marks)

30. Describe the prerequisites of gait training and training methods by which one can achieve those prerequisites. [CO3] [BTL Understand LOT]
31. Discuss in brief about gait training program in parallel bar. [CO3] [BTL Understand LOT]
32. Elaborate the crutch exercises used for crutch walking? [CO3] [BTL Analyze HOT]

33. Write in brief about different types of crutches and their measurements. [CO3] [BTL Remember LOT]
34. Discuss the progression of walking aids for a bedridden patient during recovery from bed to independent walking. [CO3] [BTL Understand LOT]
35. Discuss non-weight bearing, partial weight bearing and full weight bearing in crutch training. [CO3] [BTL Understand LOT]

Section B (20 marks)

36. Elaborate how crutch walking gait pattern can be progressed as per the patients condition with proper diagram? [CO3] [BTL Analyze HOT]

UNIT VII

Section A (10 marks)

37. What are the indications, contraindications and precautions of mobilization? [CO2] [BTL Remember LOT]
38. Discuss the grades of maitland mobilization and their purpose with suitable diagrams and examples. [CO2] [BTL Understand LOT]
39. Differentiate between postural syndrome, dysfunction syndrome and derrangement syndrome as per the Mckenzie concept. [CO2] [BTL Analyze HOT]
40. Discuss the Mckenzie exercises designed for the cervical and lumbar spine. [CO2] [BTL Understand LOT]
41. Differentiate between the chemical and mechanical pain as per the Mckenzie concept. [CO2] [BTL Analyze HOT]
42. Discuss the principles of Maitland and Mulligan concepts. [CO2] [BTL Understand LOT]

Section B (20 marks)

43. Distinguish how Mckenzie and Maitland concepts differ from each other in terms of principles, techniques and applications? [CO2] [BTL Analyze HOT]
44. Design the clinical evaluation protocol as per the Maitland concept.[CO2] [BTL Create HOT]

Summary Sheet

CO Wise

CO	Q. No	Marks
CO1	5-29	320
CO2	37-44	100
CO3	1-4, 30-36	130
Total		550

Unit Wise

Unit	Q. No	Marks
Unit 1	1-4	50
Unit 2	5-12	100
Unit 3	13-19	90
Unit 4	20-23	50
Unit 5	24-29	80
Unit 6	30-36	80
Unit 7	37-44	100
Total		550

Blooms Taxonomy Level (BTL) Wise

BTL	Q. No	Marks
LOT	1-3,6-10,14,15,16,20-22,25-27, 30,31,33-35, 37, 38,40,42	240
HOT	4,5,11-13,17-19,23,24,28,29, 32,36, 39,41,43,44	310
Total		550

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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.