



JHARKHAND
Rai University
RANCHI

PRACTICE SET
End Semester Examination, Spring- 2026

Program: B.P.T
Semester: VIII
Subject: Prosthetics & Orthotics
Subject Code: 23A801

Course Outcome	Description
CO1	Differentiate different types of Prosthetics & Orthotics and its fittings.
CO2	Apply splint, tape, and bandage as per the demand of device
CO3	Analyze and manage different Prosthetics and Orthotics device of upper limb, lower limb and spine.

UNIT I

Section A (10 marks)

1. Classify different types of prosthetic devices and explain their basic functions. (CO1)
(Understand – LOT)
2. Discuss the rationale behind prescribing prosthetic devices in rehabilitation. (CO1)
(Understand – LOT)
3. Explain the basic techniques used in taping and their clinical applications. (CO2)
(Understand – LOT)
4. Define the basic biomechanical principles involved in orthotic design.
(CO1) (Remember – LOT)

Section B (20 marks)

5. Design a comprehensive splinting, taping, and bandaging protocol for a patient with musculoskeletal injury, with rationale. (CO2) (Create- HOT)
6. Develop a patient-specific orthotic or prosthetic plan considering anatomical, pathological and biomechanical factors. (CO1) (Create- HOT)

UNIT II

Section A (10 marks)

7. Discuss the steps involved in orthotic management of a patient. (CO3) (Understand – LOT)
8. Describe the methods of donning and doffing prosthetic and orthotic devices. (CO1) (Understand – LOT)
9. Discuss the importance of follow-up in prosthetic and orthotic management. (CO1) (Understand – LOT)
10. Explain the psychological aspects involved in prosthetic and orthotic application. (CO1) (Understand – LOT)
11. Describe the usage advice and precautions to be given to patients using prosthesis. (CO1) (Understand – LOT)

Section B (20 marks)

12. Design a detailed rehabilitation protocol including assessment, checkout, usage training and follow-up for a prosthetic/orthotic user. (CO3) (Create- HOT)
13. Analyze the role of comprehensive assessment in successful prosthetic and orthotic management with suitable examples. (CO3) (Analyze – HOT)

UNIT III

Section A (10 marks)

14. Define the indications and functions of elbow orthosis. (CO3) (Remember- LOT)
15. Explain the role of hand orthosis in functional rehabilitation. (CO3) (Understand – LOT)
16. Define upper limb orthosis and classify shoulder and arm orthoses. (CO3) (Remember- LOT)
17. Differentiate between static and dynamic splints with suitable examples. (CO3) (Remember- LOT)
18. Define the function and clinical use of knuckle bender splints (Bunnell and reverse knuckle bender). (CO3) (Remember- LOT)

19. Explain the design, indications, and uses of a cock-up splint. (CO3) (Understand – LOT)

Section B (20 marks)

20. Analyze the biomechanical principles involved in the design and application of upper limb orthoses. (CO3) (Analyze – HOT)
21. Assess the clinical decision-making involved in selecting appropriate orthoses for shoulder, elbow, wrist and hand conditions. (CO3) (Evaluate- HOT)

UNIT IV

Section A (10 marks)

22. Define lower limb orthosis and describe the materials used in its fabrication. (CO3) (Remember- LOT)
23. Explain the general principles of orthosis design and application. (CO3) (Understand – LOT)
24. Write short notes on Ankle Foot Orthosis (AFO) & Foot Orthosis (FO). (CO3) (Remember- LOT)
25. Define Hip Knee Ankle Foot Orthosis (HKAFO) and its clinical applications. (CO3) (Remember- LOT)
26. Apply the principles of orthosis to select an appropriate device for a patient with foot drop. (CO3) (Apply- LOT)

Section B (20 marks)

27. Evaluate the effectiveness of AFO, KAFO, and HKAFO in different pathological gait conditions. (CO3) (Evaluate- HOT)
28. Develop a protocol for assessment, prescription and follow-up of a patient requiring lower limb orthosis. (CO3) (Create- HOT)

UNIT V

Section A (10 marks)

29. Apply the principles of Head Cervical Thoracic Orthosis (CTO) in selecting and justifying its use for a patient with specific cervical spine pathology. (CO3) (Apply- LOT)
30. Explain the types and functions of lumbosacral orthosis and lumbosacral corset. (CO3) (Understand – LOT)
31. Apply the principles of mobility aid prescription in selecting appropriate walking aids or wheelchairs for a patient. (CO3) (Apply- LOT)

32. Explain the design and indications of SOMI brace & ASH Brace. (CO3) (Understand – LOT)
33. Define cervical orthosis and describe its types and indications. (CO3) (Remember- LOT)

Section B (20 marks)

34. Design a comprehensive orthotic management plan for a patient with spinal deformity, including brace selection and justification. (CO3) (Create- HOT)
35. Critically evaluate the role of mobility aids (walking aids and wheelchairs) in improving independence and quality of life. (CO3) (Evaluate- HOT)

UNIT VI

Section A (10 marks)

36. Define amputation and classify different types of prosthesis. (CO1) (Remember- LOT)
37. Discuss the materials used in prosthetic fabrication and their properties. (CO1) (Understand – LOT)
38. Explain different types of prosthetic hands and their uses. (CO3) (Understand – LOT)
39. Apply the principles of prosthetic prescription in designing footwear modifications for a patient. (CO1) (Apply- LOT)

Section B (20 marks)

40. Analyze the basic principles involved in the design and fitting of upper and lower limb prostheses. (CO3) (Analyze- HOT)

Summary Sheet:

UNIT Wise

UNIT	Q.No.	Marks
1	1,2,3,4,5,6	80
2	7,8,9,10,11,12,13	90
3	14,15,16,17,18,19,20,21	100
4	22,23,24,25,26,27,28	90
5	29,30,31,32,33,34,35	90
6	36,37,38,39,40	60
Total		510

CO Wise

CO	Q.No.	Marks
C01	1,2,4,6,8,9,10,11,36,37,39	110
CO2	3,5	30
CO3	7,12, 13, 14,15,16,17,18,19,20,21, 22,23,24,25,26,27,28, 29,30,31,32,33,34,35, 38,40	370
Total		510

BLT Wise

BLT	Q. No.	Marks
LOT	1,2,3,4,7,8,9,10,11,14,15,16,17,18,19, 22,23,24,25,26,29,30,31,32,33,36,37,38,39	290
HOT	5,6,12,13,20,21,27,28,34,35,40	220
Total		510

Prepared by: Dr. Raunaque Ara (PT)

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.