

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

[AHS 0222]

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

Sub. Code: 2476

**BACHELOR IN PROSTHETICS AND ORTHOTICS
THIRD YEAR (Regulation 2017-2018)
PAPER VI – ORTHOTIC SCIENCE - III
Q.P. Code : 802476**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain about finger driven flexor hinge splint fabrication procedure.
2. Write any three special assistive devices.
3. Write the influences of Functional Electrical Stimulator in upper extremity orthosis.

II. Write notes on:

(8 x 5 = 40)

1. Arches of Hand.
2. Anti-deformity position.
3. Orthotic management for arthritic hand.
4. Deformities in burn.
5. Different types of pinches.
6. Different types of upper extremity orthosis with examples.
7. Indication and positioning of Airplane orthosis.
8. Volar wrist flexion control orthosis.

III. Short answers on:

(10 x 3 = 30)

1. Tenodesis orthosis indication.
2. What is swan neck ring?
3. MCP mobilization orthosis function.
4. What is ulnar tunnel syndrome?
5. What is Schenck splint?
6. Finger orthosis indications.
7. What is functional position?
8. What is tennis elbow?
9. Advantages of functional orthosis.
10. What is smith fracture?

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[AHS 0423]

APRIL 2023

Sub. Code: 2476

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR (Regulation 2017-2018 onwards)

PAPER VI – ORTHOTIC SCIENCE - III

Q.P. Code: 802476

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe in detail the types of Hand Grasp and Prehension.
2. Describe briefly about Wrist Driven Flexor Hinge Splint.
3. Write down the different Orthotic Management of Claw Hand Deformity.

II. Write notes on:

(8 x 5 = 40)

1. General principles of Upper extremity splinting.
2. Indication, Functions and Bio-mechanics of Clavicular Orthosis.
3. What is Spring swivel thumb?
4. Flexion assist Metacarpophalangeal (MCP) dynamic splint.
5. How to make T – bar for a feeder?
6. Assistive device – button hook.
7. What is Wilmer Shoulder Orthosis?
8. Principle of Orthotic Management of Upper limb fracture.

III. Short answers on:

(10 x 3 = 30)

1. Dynamic wrist hand Orthosis for Median Nerve injury.
2. Swan neck deformity and its Orthotic management.
3. Hypothenar bar.
4. Opponens bar.
5. Tennis elbow splint.
6. Functional Electrical Stimulation in Upper limb Orthosis.
7. Prop.
8. Thumb post.
9. Passive prehension Orthosis.
10. Thumb Spica.

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[AHS 1123]

NOVEMBER 2023

Sub. Code: 2476

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR (Regulation 2017-2018 onwards)

PAPER VI – ORTHOTIC SCIENCE - III

Q.P. Code: 802476

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. What are Slings? Explain different types of Slings with their prescription criteria.
2. Write biomechanical principles of Hand Splinting.
3. Describe Objective, fabrication and positioning of balance forearm Orthosis.

II. Write notes on:

(8 x 5 = 40)

1. Measurement / Casting and Fabrication technique of Shoulder Orthosis.
2. Indication, functions and Bio-mechanics of Clavicular Orthosis.
3. What is Spring Swivel thumb?
4. Flexion assist MCP dynamic splint.
5. Swan-neck deformity and Orthotic management.
6. Common Elbow joint injuries and Orthotic management.
7. What is Wilmer Shoulder Orthosis?
8. Application of External power in upper limb Orthosis.

III. Short answers on:

(10 x 3 = 30)

1. What is C – bar?
2. What is Thomas suspension splint?
3. Temporary splinting.
4. What is Tenodesis splint?
5. Lever system in Wrist – Hand- Orthosis.
6. Uses of static Upper limb Orthosis.
7. Bio-mechanics of Orthosis.
8. What is Plate guard?
9. What is Tennis elbow?
10. What is Ulnar dysplasia?

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[AHS 0424]

APRIL 2024

Sub. Code: 2476

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR (Regulation 2017-2018 onwards)

PAPER VI – ORTHOTIC SCIENCE - III

Q.P. Code: 802476

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain about Tenodesis splint.
2. Objectives of Splinting and its principles.
3. Material used for Upper Extremity Orthosis and its advantages and disadvantages.

II. Write notes on:

(8 x 5 = 40)

1. Airplane splint and its function.
2. Gunslinger Orthosis.
3. Claw hand and its Orthotic function.
4. Orthotic management of burn injury of hand.
5. Types of Upper limb fracture brace.
6. Explain about external power Orthosis.
7. Long opponance and its function.
8. Shoulder joint abduction Orthosis.

III. Short answers on:

(10 x 3 = 30)

1. Wrist drop.
2. Claw hand.
3. Thenar and hypothenar muscle function in hand.
4. Static splint.
5. C bar.
6. Fore arm splint.
7. Tennis elbow.
8. Plate guard.
9. Swan neck deformity.
10. Mallet and hammer finger.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 2476

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR (Regulation 2017-2018 onwards)

PAPER VI – ORTHOTIC SCIENCE - III

Q.P. Code: 802476

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Types of Elbow Orthosis and its function.
2. Explain about finger driven splint and its function.
3. Explain about types of hand prehension position.

II. Write notes on:

(8 x 5 = 40)

1. Knuckle bender Orthosis and its function.
2. Thumb post, Thumb spica and Swivel thumb.
3. Wilmer Shoulder Orthosis.
4. Difference between Static and Dynamic Splint.
5. Lateral Epicondylitis and its Orthotic management.
6. What is CTS (Carpal Tunnel Syndrome) and its Orthotic function?
7. Mobile arm support.
8. Traction Splint of Humerus.

III. Short answers on:

(10 x 3 = 30)

1. Carpal Tunnel Syndrome.
2. Indications of Short opponens.
3. Shoulder sling function.
4. Smith fracture.
5. Cock up splint.
6. Golfer's elbow.
7. Functional position of hand.
8. Static progressive splint.
9. Principles of hand splinting.
10. Dynamic motion block splint.
