

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

[AHS 0122]

**JANUARY 2022 Sub. Code: 2482
(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)**

**BACHELOR IN PROSTHETICS AND ORTHOTICS
FOURTH YEAR
PAPER II – ORTHOTIC SCIENCE – IV
Q.P. Code: 802482**

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on: (3 x 10 = 30)

1. Milwaukee brace.
2. Biomechanics of Boston brace.
3. Orthotic management of kyphosis.

II. Write notes on: (8 x 5 = 40)

1. Knight Taylors brace.
2. Lumbosacral extension control orthosis.
3. Halo brace.
4. Cowhorn orthosis.
5. Biomechanics of corset.
6. SOMI brace.
7. Four poster orthosis.
8. Hard collar.

III. Short answers on: (10 x 3 = 30)

1. Importance of traction in spinal orthotics.
2. Soft collar.
3. Philadelphia collar.
4. Scoliosis.
5. Lordosis.
6. Parapodium.
7. Motions of spine.
8. Advantages and disadvantage of silicone prosthesis.
9. Corrective force for double curve in scoliosis.
10. Jewett brace.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 2482

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

BACHELOR IN PROSTHETICS AND ORTHOTICS

FOURTH YEAR (Regulation from 2017-2018)

PAPER II – ORTHOTIC SCIENCE - IV

Q.P. Code : 802482

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Cervical traction. Explain about HALO components and functions.
2. Explain about Milwaukee brace with corrective forces.
3. Explain biomechanical principle and function of spinal orthosis.

II. Write notes on:

(8 x 5 = 40)

1. Thoraco-Lumbo-Sacral Spinal Orthosis (TLSO) checkout procedure.
2. Chair back orthosis.
3. Cruciform Anterior Spinal Hyperextension brace.
4. Draw a neat sketch of typical thoracic vertebra and label its parts.
5. Boston brace trim line and its function.
6. How to measure Cobb's angle?
7. Two poster and four poster spinal orthosis.
8. Intervertebral disc parts and function.

III. Short answers on:

(10 x 3 = 30)

1. Whiplash injury and its orthotic management.
2. C shape and S shape curve of spine.
3. Soft collar and rigid collar.
4. Cheneau brace.
5. Adam's forward bend test.
6. Parapodium.
7. Philadelphia cervical collar.
8. Swivel walker.
9. Differentiate between Lumbo-Sacral corset and belt.
10. Pelvic Traction.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 2482

**BACHELOR IN PROSTHETICS AND ORTHOTICS
FOURTH YEAR (Regulation 2017-2018 onwards)
PAPER II – ORTHOTIC SCIENCE - IV
Q.P. Code: 802482**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain all types of lumbosacral orthosis.
2. Explain about different types of cervical orthosis.
3. Explain about orthotic management of T8 curvature scoliosis.

II. Write notes on:

(8 x 5 = 40)

1. Explain about Jewett brace.
2. Milwaukee brace - parts and its function.
3. Anatomical primary curve and secondary curve.
4. Function of pelvic girdle.
5. SOMI brace and its function.
6. Orthotic management of Pott's Spine.
7. Write about sagittal and coronal control TLSO.
8. Kyphotic corrective brace.

III. Short answers on:

(10 x 3 = 30)

1. Biomechanics of corset.
2. Differentiate between flexible and rigid spinal orthosis.
3. Types of immobilizer.
4. History of spinal orthosis.
5. The Charleston bending Brace.
6. Types of collar.
7. Prescription criteria of spinal orthosis.
8. Williams brace indication.
9. Chair back orthosis.
10. Philadelphia collar.

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

[AHS 0424]

APRIL 2024

Sub. Code: 2482

BACHELOR IN PROSTHETICS AND ORTHOTICS

FOURTH YEAR - (Regulation 2017-2018 onwards)

PAPER II – ORTHOTIC SCIENCE - IV

Q.P. Code: 802482

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Historical development of Spinal orthoses.
2. Orthotic management of Pott's spine.
3. Explain why the SOMI brace is very effective in resisting head flexion but provides relatively little resistance to extension.

II. Write notes on:

(8 x 5 = 40)

1. Pelvic traction and its uses.
2. Explain what is meant by end-point control and how it is achieved?
3. What is the effect of a lumbar spine orthosis on the activity of the back muscles?
4. Anatomical and Physiological Principles of construction and fitting of spinal Orthoses.
5. Stenosis of spinal canal.
6. HALO traction.
7. What is the main difference between a Yale and a Philadelphia collar orthosis?
8. Orthoses for Lumbar Lordosis.

III. Short answers on:

(10 x 3 = 30)

1. Under arm orthoses.
2. Cervical traction.
3. Measurement procedure of Conventional type Thoraco-Lumbar–Sacral Orthosis.
4. Raney flexion brace.
5. Various types of Spinal Immobilisers.
6. Cranial Orthoses.
7. Vital capacity.
8. Jones TLSO.
9. Boston Overlap Orthosis.
10. Knight-Taylor Brace.
