

[LF 0212]

AUGUST 2014

Sub.Code :2417

**B.Sc. PROSTHETICS & ORTHOTICS  
SECOND YEAR  
PAPER VII - ORTHOTICS SCIENCE - II**

*Q.P. Code: 802417*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Define “Cerebral palsy” and discuss the orthotic management of Spastic diplegic cerebral palsy child.
2. What is osteoarthritis (OA)? Discuss the role of knee orthosis in the treatment of OA.
3. Explain with examples different conditions of biomechanical control in orthotic joints.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Explain “Trilateral hip abduction orthosis”.
2. Explain design, indications for “Cowboy brace” draw a neat labeled diagram.
3. Explain Parapodium and its indications.
4. Explain in brief A-frame orthosis. What are the advantages of using standing frames by a paraplegic person?
5. Discuss the design, materials and indications for bilateral HKAFO.
6. Explain Floor Reaction Orthoses (FRO) design and its Biomechanical principles.
7. What are the clinical conditions in “Perthes disease”? Which orthotic designs are suitable for managing these conditions?
8. Describe Craig-Scott KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What is Spina bifida and its type?
2. What are the orthotic management principles in MMC?
3. Draw a diagram showing Coronal plane force system applied by KAFO, in the correction of Genu Varum.
4. Briefly explain a concept of Weight relieving orthosis.
5. Explain in brief Ischial bearing above knee orthosis.
6. Write a note on Leg length Discrepancy (LLD).
7. Explain “Tone reducing Ankle foot orthosis” (TRAFO).
8. What do you understand by twister orthosis?
9. Draw a neat labeled diagram of Toronto orthosis used in LCPD.
10. What is paraplegia enumerate various orthosis given for this?

\*\*\*\*\*

**BACHELOR IN PROSTHETICS AND ORTHOTICS****SECOND YEAR****PAPER VI – ORTHOTICS SCIENCE - II***Q.P. Code: 802417***Time: Three Hours****Maximum: 100 Marks****Answer all questions****I. Elaborate on: (3 x 10 = 30)**

1. Discuss the orthotic management in congenital dislocation of hip.
2. Describe on RGO. Write its indication, working principles and various types.
3. Describe in details on orthotic management in diplegic CP children.

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

1. Write a note on design, indication and mechanism of Knee orthosis with dial lock knee joint.
2. Write the design indications and biomechanics of offset axis orthotic knee joint.
3. Write the biomechanics of FRO in Cerebral palsy children.
4. Explain about trilateral hip abduction orthosis and its biomechanics.
5. Explain the biomechanics of knee orthosis in correcting genu varum and valgum deformity.
6. How will you differentiate a KAFO for PPRP patient and meningomyelocele (MMC) patient?
7. Write the orthotic management in CTEV.
8. Differentiate conventional KAFO and thermoplastic KAFO. Explain the biomechanics of thermoplastic KAFO.

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

1. Write a note on gait activated KAFO.
2. Write a note on weight relieving KAFO.
3. What is spinal cord injury and its types? Write the function of orthosis in spinal cord injury patient.
4. Write the role of knee orthosis in the osteoarthritis of knee joint.
5. What is limb length discrepancy, its types and how to measure it?
6. What is spina bifida and its type?
7. Explain Charcot restraint orthotic walker (CROW).
8. Explain about parapodium.
9. Write the advantages of standing frames in spinal cord injury patient.
10. Write a short note on
  - a. Placement of pelvic band in HKAFO.
  - b. Placement of hip joint in bilateral HKAFO.

[LJ 0816]

AUGUST 2016

Sub. Code :2417

**B.Sc. PROSTHETICS AND ORTHOTICS  
SECOND YEAR  
PAPER VII – ORTHOTICS SCIENCE – II**

*Q.P. Code: 802417*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain about spinal cord injury and its orthotic Management.
2. Explain about Ischial weight bearing devices with its principles.
3. Explain poliomyelitis and its orthotic management.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Toronto hip orthosis.
2. Tools required to fabricate KAFO.
3. Floor reaction orthosis with bio mechanical principle.
4. Lower limb weight relieving orthosis.
5. Knee orthosis for osteo arthritis condition.
6. What is CDH? Explain about its management.
7. Para podium and its indication.
8. Force system in KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What is Craig Scott KAFO?
2. Explain about Seattle orthosis.
3. Draw the force system in coronal plane in correcting genu valgum.
4. What is PTB orthosis and its indication?
5. How you accommodate leg length discrepancy?
6. Write about calm lock joint.
7. What is pattern bottom brace?
8. Osteoarthritis Knee Brace.
9. Write about different types of orthotic hip joint.
10. What is Swedish knee cage and its indication?

\*\*\*\*\*

[LK 0217]

FEBRUARY 2017

Sub. Code :2417

**B.Sc. PROSTHETICS AND ORTHOTICS  
SECOND YEAR  
PAPER VII – ORTHOTICS SCIENCE – II**

*Q.P. Code: 802417*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain about gait deviation and checkout procedure for KAFO.
2. What is CDH? Explain about its orthotic management.
3. Describe about muscular dystrophy and its orthotic management.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Osteoarthritis knee brace.
2. PTB orthosis.
3. Orthotic Management of Genu recurvatum.
4. Leg length discrepancy.
5. Toronto Brace.
6. Genu varum and its orthotic management.
7. Force system in KAFO.
8. Material used for KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What do you mean by cerebro vascular accident?
2. Name the type of Upper Motor Neuron disorders.
3. What orthosis used for hemophilia? Explain.
4. What you mean by weight relieving orthosis and its types?
5. What is fracture orthosis? Explain any one.
6. What is the biomechanical principle of FRO?
7. What is pavlik harness and its indication?
8. List the deformities seen in PPRP.
9. Write the advantage of plastic KAFO over Metal KAFO.
10. What do you mean by offset knee joint and its indication?

\*\*\*\*\*

**BACHELOR IN PROSTHETICS & ORTHOTICS  
SECOND YEAR  
PAPER VII – ORTHOTICS SCIENCE – II**

*Q.P. Code: 802417*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. What is osteoarthritis (OA)? Discuss the role of knee orthosis in the treatment of OA.
2. Define “Cerebral palsy” and discuss the orthotic management of Spastic diplegic cerebral palsy child.
3. Explain about different types of orthotic knee joints.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Explain “Trilateral hip abduction orthosis”.
2. Explain design, indications for “Cowboy brace” draw a neat labeled diagram.
3. Explain Parapodium and its indications.
4. Explain in brief A-frame orthosis. What are the advantages of using standing frames by a paraplegic person?
5. Discuss the design, materials and indications for bilateral HKAFO.
6. Explain Floor Reaction Orthosis and its Biomechanical principles.
7. Write the clinical conditions of “Perthes disease”, and its orthotic management.
8. Describe Craig-Scott KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What is Craig Scott KAFO?
2. Explain about Seattle orthosis.
3. Draw the force system in coronal plane in correcting genu valgum.
4. What is PTB orthosis? Its indication?
5. How you accommodate leg length discrepancy?
6. Write about calm lock joint.
7. What is pattern bottom brace?
8. Osteoarthritis Knee Brace.
9. Write about different types of orthotic hip joint.
10. What is Swedish knee cage? Its indication?

**BACHELOR IN PROSTHETICS & ORTHOTICS**  
**SECOND YEAR**  
**PAPER VII – ORTHOTICS SCIENCE – II**

*Q.P. Code: 802417*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain about different types of orthotic knee joints.
2. Explain Floor Reaction Orthoses (FRO) design and its Biomechanical principles.
3. Discuss the orthotic management in congenital dislocation of hip.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Differentiate conventional KAFO and thermoplastic KAFO. Explain the Biomechanics of thermoplastic KAFOs.
2. Explain the biomechanics of knee orthosis in correcting genu varum and valgum deformity.
3. Write the design indications and biomechanics of offset orthotic knee joint.
4. What is CDH? Explain about its management.
5. Lower limb weight relieving orthosis.
6. Toronto hip orthosis.
7. Write about two different types of orthotic hip joints.
8. Describe Craig-Scott KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What is Spina bifida? What are its types?
2. What are the orthotic management principles in MMC?
3. Draw a diagram showing Coronal plane force system applied by KAFO, in the correction of Genu Varum.
4. Briefly explain a concept of Weight relieving orthosis.
5. Explain in brief Ischial bearing above knee orthosis.
6. Write the advantages of standing frames in spinal cord injury patient.
7. Explain about parapodium.
8. What do you understand by twister orthosis?
9. Draw a neat labeled diagram of Toronto orthosis used in LCPD.
10. What is paraplegia? Enumerate various orthosis given for this.

**BACHELOR IN PROSTHETICS & ORTHOTICS  
SECOND YEAR  
PAPER VII – ORTHOTICS SCIENCE – II**

*Q.P. Code: 802417*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain with examples of different types of knee orthosis.
2. Define “Cerebral palsy” and discuss the orthotic management of Spastic diplegic cerebral palsy child.
3. Discuss the orthotic management in congenital dislocation of hip.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Write a note on design, indication and mechanism of Knee orthosis with dial lock knee joint.
2. Write the design indications and biomechanics of offset axis orthotic knee joint.
3. Write the biomechanics of FRO in Cerebral palsy children.
4. Explain about trilateral hip abduction orthosis and its biomechanics.
5. Explain the biomechanics of knee orthosis in correcting genu varum and valgum deformity.
6. How will you differentiate a KAFO for PPRP patient and meningomyelocele (MMC) patient?
7. Write the orthotic management of spina bifida.
8. Differentiate conventional KAFO and thermoplastic KAFO. Explain the Biomechanics of thermoplastic KAFO.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Write a note on gait activated KAFO.
2. Write a note on weight relieving KAFO.
3. What is spinal cord injury and its types? Write the function of orthosis in spinal cord injury patient.
4. Write the role of knee orthosis in the osteoarthritis of knee joint.
5. What is limb length discrepancy, its types and how to measure it?
6. What is pattern bottom brace?
7. Explain Charcot Restraint Orthotic Walker (CROW).
8. Explain about parapodium.
9. Write the advantages of standing frames in spinal cord injury patient.
10. Define Swedish knee cage and write its indications.

\*\*\*\*\*