

**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.

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