[LP 0819] AUGUST 2019 **Sub. Code: 2464**

BACHELOR IN PROSTHETICS AND ORTHOTICS
(New Syllabus 2017-2018)

SECOND YEAR

PAPER IV – BIOMECHANICS - II

Q.P. Code: 802464

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

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

1. What is gait? Explain about features of gait and gait parameters.
2. Explain about Trans femoral gait analysis and deviation.
3. Explain about biomechanical principle of KAFO and FRO.

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

1. Explain about biomechanics of IC socket and socket force analysis.
2. Explain about three, four and five point pressure system.
3. Explain about KAFO gait deviation due to pathological condition.
4. Explain about types of gait analysis.
5. Explain about through knee socket force analysis.
6. What an EMG? Role of EMG in pathological condition.
7. Types of orthotic knee joints.
8. Biomechanics of energy storing foot.

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

1. Biomechanical discrepancies of Scissoring gait.
2. Define relation between pressure and area.
3. Step length and stride length.
4. KAFO Alignment Procedure.
5. Waddling gait.
6. Rheumatoid arthritis knee biomechanics.
7. Electromyography.
8. Kinetics and kinematics.
9. Foot orthosis.
10. Degree of freedom.

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