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# MASTER OF PHYSIOTHERAPY

2<sup>nd</sup> YEAR EXAMINATION, 2012-13

## BIOMECHANICS

Time : 3 Hours ]

[Max. Marks : 100

**Note:** This question paper is divided into two sections A and B.  
Attempt all questions as per instructions.

### SECTION-A (Long Answer)

Attempt any *three* parts. [20×3=60

- Describe how muscle and ligament interact to provide stability for vertebral column?
- Why is it preferable to use a cane on side opposite to a muscle weakness rather than on same side?
- Identify and explain five factors that play a role in the dynamic stability of GH joint in flexion or abduction.
- Explain what would happen in walking and running if a person's plantar flexor were paralyzed. What compensation expected?

### SECTION-B (Short Answer)

2. Short notes on any *four* parts. [10×4=40

- Name the plane and corresponding axis of motion for each of following: flexion extension, abduction/adduction and rotation.
- How does an overuse injury occur?
- Describe the "Carrying Angle" and explain why it is present?
- What is the composition and function of synovial fluid?
- What is the difference between arthrokinematics and osteokinematics? Give at least two examples of each.

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