

系所組別： 物理治療學系

考試科目： 應用肌動學

考試日期： 0220，節次： 2

※ 考生請注意：本試題 可 不可 使用計算機

1. Please describe the types of human joints and give examples. Use these examples to compare the motions between osteokinematic and arthrokinematic. (25%)
2. Please draw a stress-strain curve for a viscoelastic material, and explain the meaning of this curve in details. (15%) Please further explain the phenomenon of creep and stress-relaxation that a viscoelastic material typically present. (10%)
3. The muscle force is contributed by several physiological and anatomical factors. Please discuss how those factors affect the force development in the skeletal muscles. (25%)
4. Hip abductors are important for our walking gait. Please answer following questions: (25%)
 - (1) Please list muscles that contributes to hip abduction.
 - (2) The total cross-sectional area of hip abductors is quite smaller compared to that of quadriceps. Why can the hip abductors generate sufficient force to support our body weight?
 - (3) What would you observe in a walking gait if you observe insufficient hip abductor strength on the right side?