

(19)

Q.P. Code : 802000

(3 Hours)

[ Total Marks : 80

- N.B. :** (1) Question no.1 is compulsory  
 (2) Attempt any **three** questions from remaining  
 (3) **Figures** to the right indicate **full** marks.

1. (a) Explain the stress-strain curve for bone 20  
 (b) Give classification of force systems  
 (c) Explain three point pressure principle, with one example  
 (d) Explain gait mats
  
2. (a) Explain the biomechanical characteristics of tendons and ligaments 10  
 (b) Explain different parameters of gait cycle. Explain the swing phase of gait cycle with neat diagrams. 10
  
3. (a) Explain with a suitable diagram HKAFO. 10  
 (b) Draw and explain various designs of hand and wrist splints used for different applications. 10
  
4. (a) Explain below knee prosthesis with a neat diagram. 10  
 (b) Explain patient Rehabilitation concept and how it helps the patient. 10
  
5. (a) What is a lever? Classify levers, give one common and one anatomical example. 10  
 (b) List major spinal orthoses. Explain cervical orthoses in detail. 10
  
6. Write short notes on: (Any four) 20
  - (a) Foot switches
  - (b) Functional classification of joints
  - (c) Biomechanics of skin
  - (d) Terminal devices
  - (e) Structure of Bone