



- N.B. : (1) Question No. 1 is compulsory.
(2) Attempt any four questions out of remaining six questions.
(3) Figures on the right indicate full marks.
(4) Draw diagrams / sketches wherever necessary.
(5) Use legible handwriting. Use blue/black ink only.
1. (a) Classify force system. [05]
(b) What is meant by double stance in gait cycle? [05]
(c) Discuss biomechanics of skin. [05]
(d) Explain with applications different transducers used in P&O [05]
 2. (a) Which are the different components of below elbow prosthesis. Explain with a neat diagram control system for this prosthesis. [10]
(b) What is lever? Differentiate with suitable anatomical examples between 2nd order and 3rd order lever system. [10]
 3. (a) Define Gait Cycle. With a neat diagram explain human Gait Cycle. [15]
(b) Explain with a neat diagram anisotropic property of a bone. [05]
 4. (a) Explain with necessary diagrams determinants of gait cycle. [10]
(b) Explain three point pressure system and its applications for design of different orthoses. [10]
 5. (a) What are the different deformities in ankle. Explain with a neat diagram different components of AFO. [10]
(b) Which are the different spinal orthosis? Explain any one. [10]
 6. (a) Explain with neat diagrams knee joints and knee locks. [10]
(b) Explain PTB total contact prosthesis using suitable diagram. [10]
 7. Write short notes on: [20]
 - (a) Stress - strain relationship of a bone
 - (b) SACH foot.
 - (c) Splints.
 - (d) Patient rehabilitation