

Biomechanics Prosthesis & Orthosis.

2/15

(17)

BE/VI/CBGS/BM/BP&O

QP Code.: 5948

(3 Hours)

[Total Marks : 100

- N.B. : (1) Question No.1 is compulsory.
(2) Attempt any three questions from Q.2 to Q.6
(3) Figures to right indicate full marks.
(4) Make suitable assumptions if required.

1. a) Write short note on goniometer. 5
b) Biomechanics of skin, explain. 5
c) SACH foot, draw neat diagram. 5
d) Explain typical stress-strain curve. 5
2. Explain the complete gait cycle with neat diagram. Draw the graphs for the various joint angles. 20
3. What is spinal orthosis. Discuss the criteria for providing spinal orthosis. List the various abnormal spinal curvatures. Describe any one spinal orthosis. 20
4. a) Explain the lamination procedure of a PTB socket. 10
b) Explain three point pressure principle with three examples. 10
5. a) Define lever and mechanical advantage. Explain levers giving two anatomical examples for each type. 12
b) Explain biomechanics of bone. 8
6. Write short notes on any Four 20
1) Jaipur foot
2) AFO
3) Biomechanics of tendons and ligaments
4) Wrist units
5) Foot switches
6) Synovial joints-classification