Sem-VIth Biomechanics Biom - 19/12/09

VT-II-09-103

Con. 5644–09.

SP–8072

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions from the remaining **six** questions.
(3) **Figures** to the **right** indicate **full** marks.
(4) Assume **suitable** data wherever **necessary**.
(5) Draw neat labelled **diagrams** wherever **necessary**.

1. Describe the human gait cycle using suitable diagrams and explain the importance of various stages. **20**

2. (a) Explain using suitable block diagram working of a heart-lung machine. **10**
(b) Explain any two types of oxygenators using suitable diagrams. **10**

3. (a) Explain the principle of three point pressure in designing of a device. **10**
(b) Explain patient rehabilitation concept and how it helps the patients who are physically challenged. **10**

4. (a) Explain use of splints in upper limbs. **10**
(b) Explain the fabrication procedure of a PTB socket. **10**

5. Explain the principle of total contact socket with respect to a AK quadrilateral socket. **20**

6. (a) Classify the spinal orthosis and describe any one in detail with neat diagrams. **8**
(b) Explain the different kinds of levers existing in the human body and give one example for each type. **12**

7. Write short notes on any **four** :– **20**
(a) Hollow fiber dialyser
(b) Artificial heart valves
(c) SACH foot
(d) Milwakee Brace
(e) Block diagram of AKD
(f) Standard stress strain curve
(g) AE orthosis.

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