

2872-08.

CO-2912

(REVISED COURSE)

(3 Hours)

[Total Marks : 100

- (1) Question No. 1 is **Compulsory**.
- (2) Attempt any **four** questions out of remaining **six** questions.
- (3) **Figures** to the **right** indicate **full** marks.
- (4) Assume **suitable data** wherever **necessary**.
- (5) Draw **sketches/diagrams** wherever **necessary**.
- (6) Use **legible handwriting**. Use **blue/black ink**.
- 1) What are the functions of natural Kidneys ? Explain the basic principle of Artificial Kidney Dialysis machine. 6
- 2) Draw and explain using suitable block diagram, working of Artificial Kidney Dialyser. 14
- 3) Explain using suitable diagram HKAFO. 10
- 4) Explain using suitable diagram PTB. 10
- 5) Explain using suitable diagram Above Elbow Prosthesis. 10
- 6) Explain using suitable diagram Spinal Orthosis. 10
- 7) Explain in detail using suitable diagram various stages in Normal Human Locomotion. Also explain in the importance of each stage. 20
- 8) Explain using suitable block diagram working of Heart-Lung Bypass Machine. 10
- 9) Explain any two types of Oxygenators using suitable diagrams. 10
- 10) Explain with example principle of three point pressure in design of a device. 10
- 11) Explain Shoulder Prosthesis using suitable diagram. 10
- Write short notes on (Any **four**) :— 20
- (a) Artificial Heart Valves.
- (b) Biomechanics of Skin.
- (c) Patient Rehabilitation.
- (d) Transducers in P and O.
- (e) Biomechanics of Bone.