

22545

23124

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answer with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) State the need of the Rehabilitation team.
 - b) List any two motion analysis techniques.
 - c) Define orthosis.
 - d) List any two mobility aids.
 - e) Suggest the phases of a gait cycle.
 - f) Identify the function of prosthetic socket.
 - g) Suggest any two advanced applications of Rehabilitation Engineering.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) Give the significance of Hierarchically controlled prosthetic hand.
 - b) Draw the sketch showing different phases of gait cycle.
 - c) State the concept of functional electrical stimulation.
 - d) List any four parts of wheel chair and explain their functions.
- 3. Attempt any THREE of the following: 12**
- a) List the three parts of Goniometer and state the function of each part.
 - b) State the concept of motor rehabilitation.
 - c) Explain the goals of rehabilitation care.
 - d) Explain any two types of walking frame with neat diagram.
- 4. Attempt any THREE of the following: 12**
- a) Suggest an orthosis to protect and support the muscular and bony structures of spine. Describe in detail.
 - b) Give the classification of prosthesis according to material used.
 - c) Describe in detail the parallel bars with neat diagram.
 - d) Describe self alighting orthotic knee joint.
 - e) Explain an intelligent prosthetic knee.
- 5. Attempt any TWO of the following: 12**
- a) Suggest different approaches through which the delivery of rehabilitation care is done and give advantages of Institution Based Rehabilitation (IBR).
 - b) Suggest the meter to measure joint angle give the steps to measure joint angle using it.
 - c) Give the significance of myoelectric prosthesis and give its advantages.

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Marks

6. Attempt any TWO of the following:

12

- a) Write the significance of powered wheelchair and state its parts with functions.
 - b) Describe motion analysis using interrupted light photography.
 - c) Describe the general principle of orthosis. State the contra indications of orthosis.
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