

**BE Semester- 7<sup>TH</sup> SEM (Biomedical Department) Question Bank  
(REHABILITATION ENGINEERING)**

**All questions carry equal marks (10 marks)**

Q.1	Define the following: Impairment, rehabilitation, Disability, residual capacity, Prosthesis
Q.2	Explain the characterization of human systems and sub-systems and Characterization of assistive measures required.
Q.3	Explain in detail externally powered and controlled orthotics and prosthetics-FES system.
Q.4	Explain in detail the rehabilitation aids for mentally impaired.
Q.5	Explain the role of Improvement of orientation and Mobility.
Q.6	Explain the role of Interfaces in compensation for visual perception.
Q.7	Explain in detail Intelligent Hand Prosthesis (MARCUS).
Q.8	Explain the ergonomic design considerations for Walkers & Crutches.
Q.9	Explain the Ergonomic considerations in design of wheelchair & Tricycle
Q.10	Explain different types of wheel chair.
Q.11	Explain in detail: Polarized Ultrasonic Travel Aid.
Q.12	Explain in detail: Electro-cortical Prosthesis, Electro Roftalam.
Q.13	Explain in detail: Sonic Guide, Light Probes
Q.14	Explain in detail: Path Sounder, Ultrasonic Torch.
Q.15	Write a note on hybrid assistive system (HAS).
Q.16	Write a short note on following: Mowet sensor & Ultrasonic binaural sensing device.
Q.17	Explain Tadoma method & Tactile vocoders.
Q.18	Explain OCR & Automatic reading machine in detail.
Q.19	Explain the material used in wheelchair designing. Also give overview of frame design.
Q.20	Explain Measurement Objectives and Approaches in rehabilitation.
Q.21	Give structural aspects of walkers and crutches.
Q.22	What is augmentation? Explain Tactual vision substitution.
Q.23	Write a short note on Path sounder.
Q.24	Explain Subjective and Objective Measurement Methods in rehabilitation.

Q.25	Define the following: Myoelectric Hand, assistive technology, Amputation, Ergonomics
Q.26	Explain Engineering concepts in sensory rehabilitation.
Q.27	Write a short note on Nottingham Obstacle Sensor.
Q.28	Explain structure of Laser cane with their features and limitations.
Q.29	Explain augmentation and Substitution of Tactual system.
Q.30	Explain role of FES system in regaining functional movements in numerous paralyzed humans.
Q.31	Write a short note on Arm prostheses.
Q.32	Explain design and control of intelligent prosthetic knee.
Q.33	Explain Ergonomics of Wheelchair Propulsion.
Q.34	Give introductory information about Power Wheelchair Electrical Systems.
Q.35	Explain Auditory augmentation with assistive devices.
Q.36	Explain subjective & objective measurement methods in rehabilitation.
Q.37	Explain restoration of standing & walking.
Q.38	Explain myoelectric hand & arm prosthesis
Q.39	Explain Structure and Component Design of Wheelchair.
Q.40	Explain Engineering concepts in motor rehabilitation.