

No. of Printed Pages : 4
Roll No.

223253A

5th Sem. / Medical Electronics
Subject : Rehabilitation Engineering

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

- Q.1 What can be a benefit of preventive rehabilitation.
- a) Longer durations of hospital stays
 - b) Improved quality of life by maintaining good health
 - c) Over-reliance of medication for recovery
 - d) Increased dependence on caregivers.
- Q.2 Which joint in the human body allows for the widest range of movement.
- a) Hinge joint
 - b) Ball and socket joint
 - c) Pivot joint
 - d) Saddle joint
- Q.3 What characterizes a concurrent force system.
- a) Forces cause rotational motion
 - b) Forces act in opposite directions
 - c) Forces intersect at a common point
 - d) Forces are parallel to each other

- Q.4 Which of the following is a type of wheeled mobility device specifically designed to be more portable
- Standard wheelchair
 - Light weight wheelchair
 - Electric power wheelchair
 - Standing power wheel chair
- Q.5 What feature of powered wheel chairs allows users to transition from a seated to a standing position
- Lightweight wheelchairs
 - Sports wheelchairs
 - Standing power wheel chairs
 - Power assisted manual wheel chairs
- Q.6 Which of the following materials is known for providing a light weight yet strong frame for a wheel chair.
- Plastic
 - Aluminum
 - Carbon fiber
 - Steel

Section-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Expand FES.
- Q.8 What is sensory Augmentation.
- Q.9 Expand TTS.

- Q.10 What is parallel force system.
- Q.11 What is Orthotics.
- Q.12 What is Auditory Vision Substitution.

Section-C

Note: Short answer type Question. Attempt any eight questions out of Ten Questions. (8x4=32)

- Q.13 Write the characteristics of current force systems.
- Q.14 Explain the component of Preventive Rehabilitation.
- Q.15 Write the general properties of connective Tissues.
- Q.16 Explain the type of Auditory Vision Substitution.
- Q.17 Write the difference in Cochlear Implants and Hearing Aids.
- Q.18 Write the working of FES.
- Q.19 Explain the wheel chair Features and Categories.
- Q.20 Write the Benefits of Tactile Vision Substitution.
- Q.21 Give a brief overview of Motion.
- Q.22 Explain the design principles of Human Joints.

Section-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Explain joint and its types.
- Q.24 Explain OCR and its working.
- Q.25 Explain wheelchair structure and component Design in brief.