

Week 6:

1. The main function of a robotic exoskeleton is
 - a) Protection
 - b) Redundancy
 - c) Singularity avoidance
 - d) None of the above
2. One of the general classifications of robotic exoskeletons is “based on which body part is actuated”. True/False?
3. Cable-driven hand exoskeleton will be of lightweight and will have less number of actuators. True/False?
4. How many DOF, the optimally designed 3-fingered exoskeleton has:
 - a) Totally 3
 - b) Totally 4
 - c) Totally 10
 - d) Totally 12
5. A 4-bar mechanism-based finger exoskeleton is preferable than a serial link based finger exoskeleton because of
 - a) Lightweight
 - b) Compact design
 - c) Accurate tracking of phalanges
 - d) None of the above
6. In the force control experimental set up of the finger exoskeleton, where is the force sensor placed?
 - a) On the exoskeleton tip
 - b) On the object
 - c) On the human
 - d) None of the above
7. Why unsupervised learning mode is preferred over the supervised learning mode for robotic inverse kinematics based control of a redundant manipulator?
 - a) To resolve redundancy
 - b) To avoid singularity
 - c) To increase joint angle range
 - d) None of the above
8. What are the features used for the bio-signal based neural control of the exoskeleton?
 - a) Hjorth parameters
 - b) Fleming parameters
 - c) Kingsley parameters
 - d) None of the above
9. What are the bio-signals used in our study for the control of robotic exoskeleton?
 - a) EEG and EMG
 - b) EOG and ECG
 - c) Only EEG
 - d) None of the above
10. The expression for the relationship between the joint torque and end-effector force is given by $\tau = J^T F$