TEST

Answer True or False by clicking on the corresponding box. Each question answered in a wrong way will subtract 0.2 points.

1.- Neuroplasticity and learning can be driven by several factors. One important group of factors is related to the intensity of training while another group is related to the manner how a training and activity is carried out. Other factors include the psychological state or the amount of information provided during training.

☐ **True** ☐ **False**

2.- Motivation is very important for an effective therapy and can be increased by making the training enjoyable and goal-oriented.

☐ **True** ☐ **False**

3.- Non-actuator devices are devices with no motors that support or facilitate movement therapy. Examples would be body weight support systems which enable weakened patient to start with therapy already earlier.

☐ **True** ☐ **False**

4.- Brain stimulation is the usage of virtual environments to enhance therapy and increase patient's motivation and immersion.

☐ **True** ☐ **False**

5.- The robotic systems for rehabilitation can be divided accordingly their mechanical structure in three main groups: end-effector robots, exoskeleton robotic devices and parallel robots.

☐ **True** ☐ **False**

6.- **Definition of Exoskeleton robotic device.** A wearable robot or external structural mechanism with joints and links corresponding to those of the human body.

☐ **True** ☐ **False**

7.- One of the control strategies for rehabilitation robotic devices is "assist-as-needed". In this strategy, patients receive as much support or guidance as needed to complete a movement.

☐ **True** ☐ **False**

8.- **The main drawbacks of exoskeleton robotic device are:** 1) robot axes have to allign with anatomical axes, 2) the need of longer set-up times and 3) the limb posture not fully determined.

☐ **True** ☐ **False**

9.- The First therapeutic arm robot was MIT-Manus in 1991. MIT-MANUS proved an excellent tool for shoulder and elbow rehabilitation in stroke patients, showing in clinical trials a reduction of impairment in movements confined to the exercised joints.

☐ **True** ☐ **False**

10.- 2010 American Heart Association (AHA) guidelines for stroke care which recommended that: "Robot-assisted movement therapy can be used as an adjunct to conventional therapy in patients with deficits in arm function to improve motor skills"

☐ **True** ☐ **False**