

## Colloquio A

### Domanda 1

Leggere ad alta voce e tradurre il seguente brano

**Troubleshooting:** if pressing the button does not reset the emergency module, go to **Status/Status Grid** panel and check for lighted LED in the **Safety Module States** box and **Motors** box. A safety switch may be open, for example related to cockpit or simulation room doors or an emergency device may be still pressed. Others low level cause of this error may be interruption of the Baseframe boundary laser sensors, the reaching of hardware limit switch of at least one motor, the reaching of a limit position for one or more subsystems or some problems in the wiring of at least one emergency device. If the **Emergency from secondary controller** LED is red, the error cause may be related to safety check in Diskframe end Hexalift workspace that use current systems position. Check if cable encoders and lasers are correctly mounted and free from interferences. Also check if alarms are reported in the Status/Status Graphic panel.

### Domanda 2

Con riferimento al software Matlab® della Mathworks® descrivere i passaggi e i comandi necessari per trovare la soluzione di un sistema di n equazioni in n incognite non lineare.

### Domanda 3

Con riferimento al software Excel di Microsoft, descrivere i passaggi necessari per graficare la funzione  $y=a*x^3$  con x variabile tra 0 e 10 e "a" parametro che può essere cambiato dall'utente.

## Colloquio B

### Domanda 1

Leggere ad alta voce e tradurre il seguente brano

Ropes assembly and tensioning phases can follow different steps depending on system state. For example, if ropes obstruct the photocells, it may not be possible to reset the alarms after the electrical panel has been switched on. If the ropes are disassembled (Ropes not installed, ropes connected to the rungs but not yet inserted in the grooves and place on the Baseframe or ropes mounted in the grooves but completely free of tension), mounting cable encoders may be difficult therefore is not possible to perform the system zero-search procedure until at least pre-tensioning is completed. The steps to correctly mount ropes and initialize the Diskframe, may involve one to six phases, all done from HMI except for phase 0 and 1.

### Domanda 2

Con riferimento al software Matlab® della Mathworks®, descrivere i passaggi e i comandi necessari per integrare un sistema di equazioni differenziali ordinarie (ODE)

### Domanda 3

Con riferimento al software Excel di Microsoft, descrivere i passaggi e i comandi necessari per graficare la funzione  $y=\cos(a*x)$  Con  $x$  compreso tra 0 e  $2\pi$  greco "a" parametro variabile il cui valore può essere cambiato dall'utente.