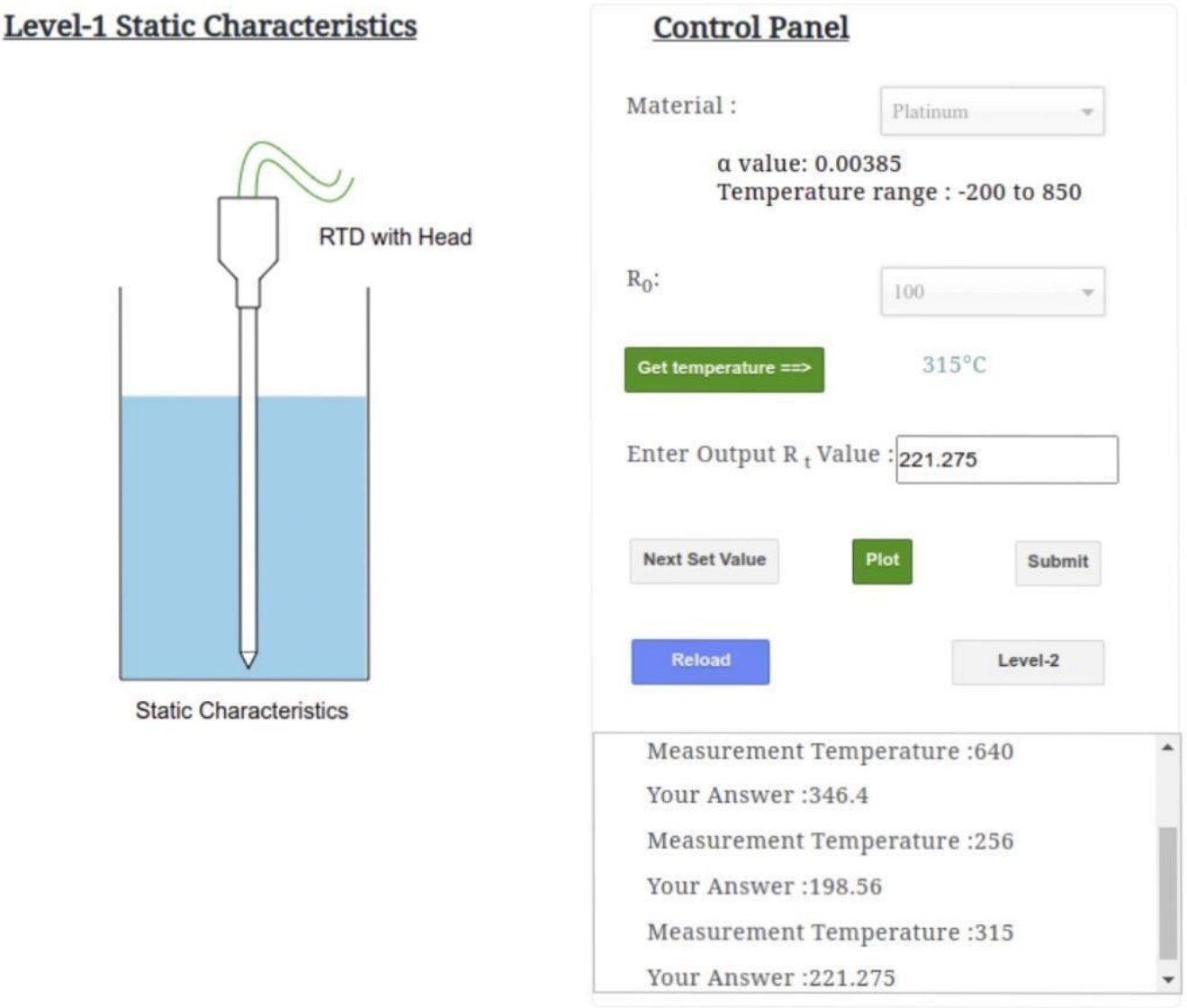
SENSORS AND AUTOMATION ASSIGNMENT NO 1

AIM : To understand the working principle of RTD.

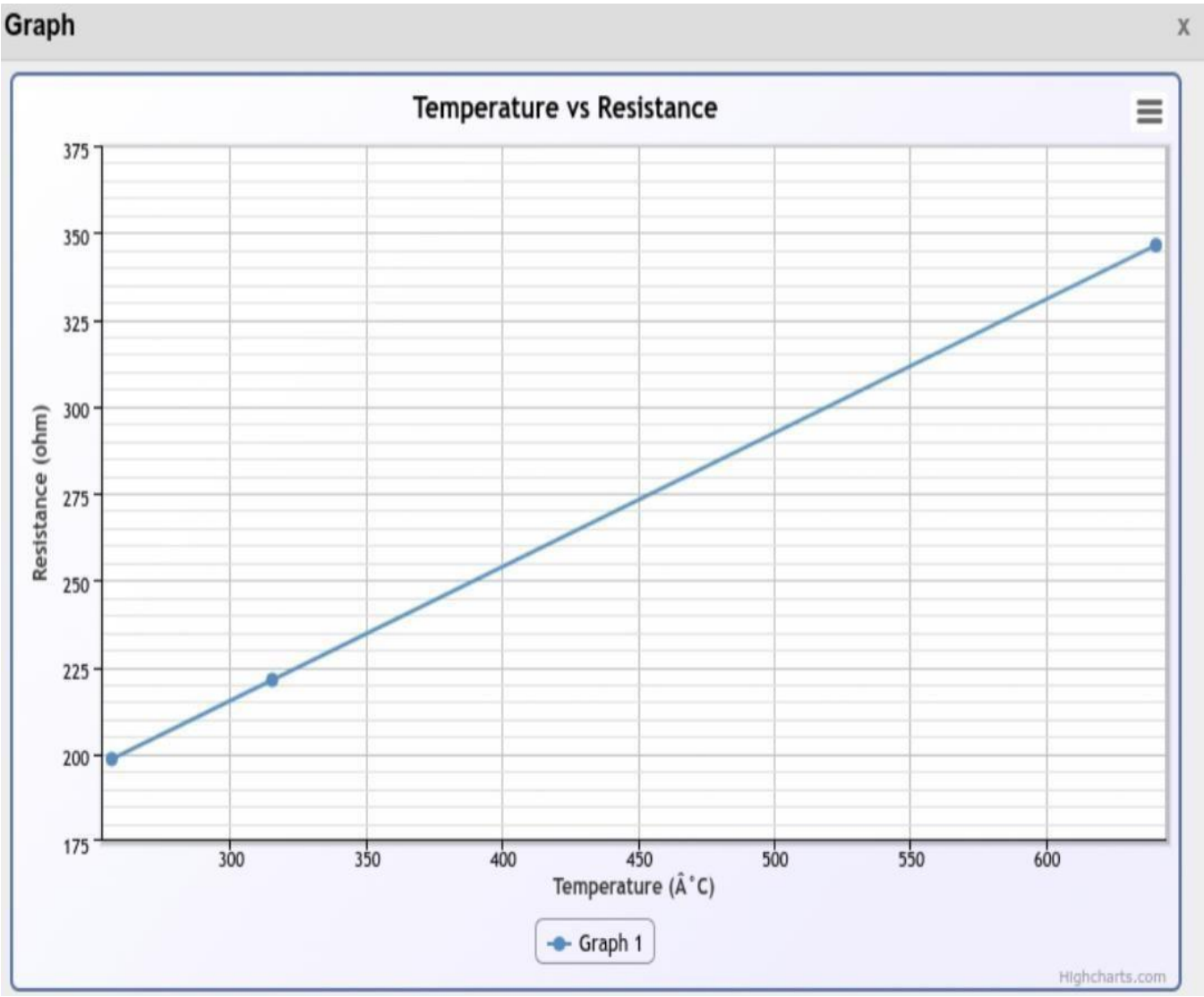
OBJECTIVES : 1. Study static and dynamic characteristics of RTD.

2. Study effect of various parameters on RTD performance.

SIMULATED DAIGRAM FOR STATIC CHARACTERISTICS:

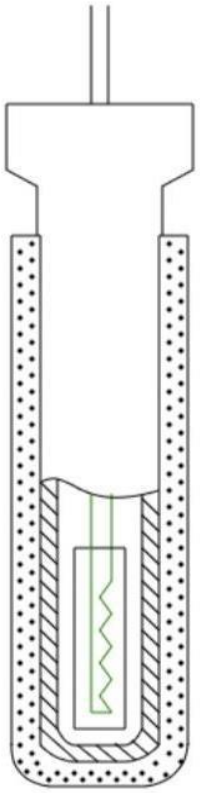


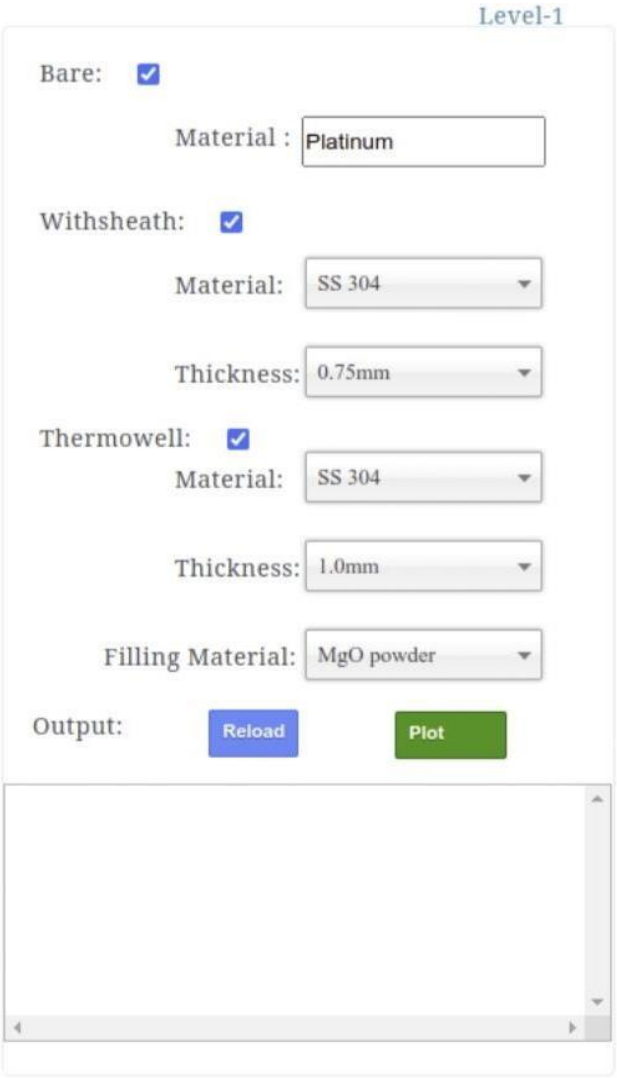
PLOTTED GRAPH:



SIMULATED DAIGRAM FOR DYNAMIC CHARACTERS:

Level-2 Dynamic Characteristics





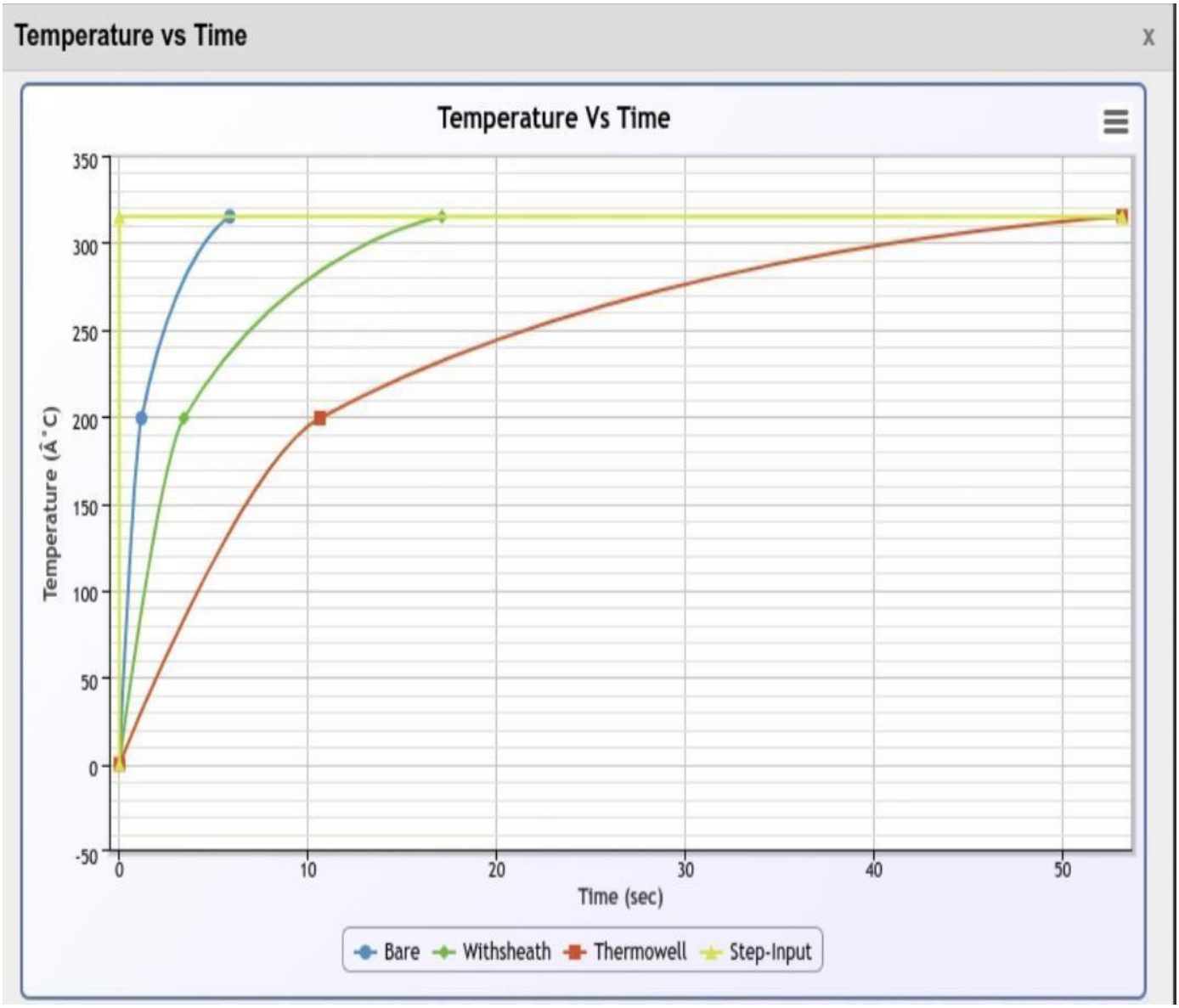
TIME CONSTRAINTS:

TC- 1.17 seconds

TC – 3.42 seconds

TC- 10.63 seconds

PLOTTED GRAPH:


Temperature vs Time
Temperature Vs Time
350
300
250
200
150
100
50
0
-50
Temperature (Â°C)
0
10
20
30
40
50
Time (sec)
Bare
Withsheath
Thermowell
Step-Input