

SENSORS AND AUTOMATION ASSIGNMENT NO 1

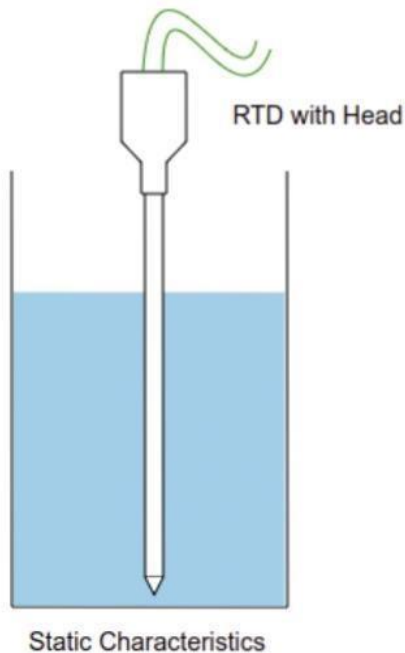
AIM : To understand the working principle of RTD.

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

2. Study effect of various parameters on RTD performance.

SIMULATED DAIGRAM FOR STATIC CHARACTERISTICS:

Level-1 Static Characteristics



Control Panel

Material :

α value: 0.00385
Temperature range : -200 to 850

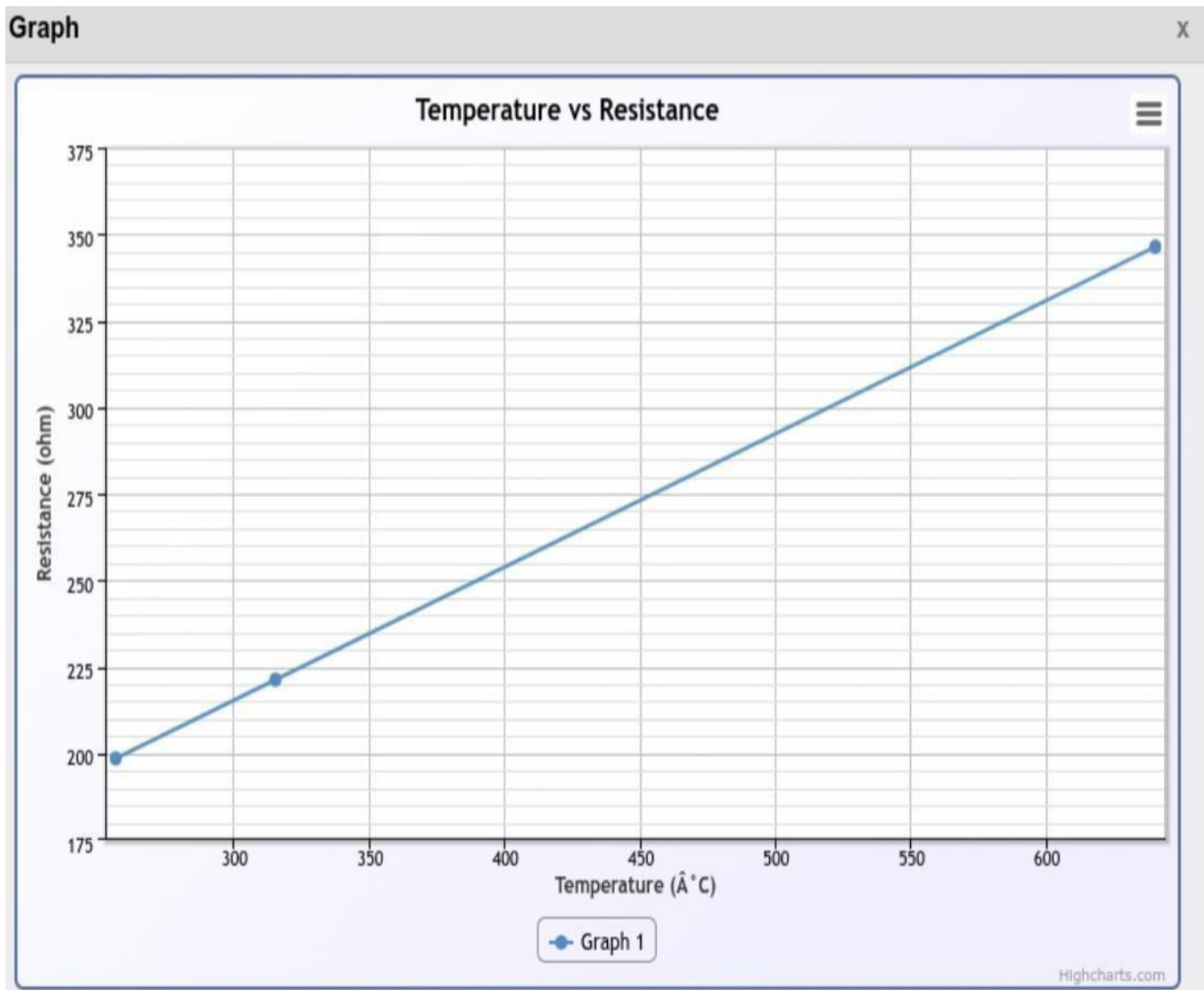
R_0 :

315°C

Enter Output R_t Value :

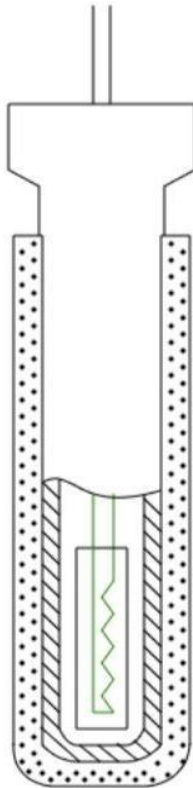
Measurement Temperature :640
Your Answer :346.4
Measurement Temperature :256
Your Answer :198.56
Measurement Temperature :315
Your Answer :221.275

PLOTTED GRAPH:



SIMULATED DAIGRAM FOR DYNAMIC CHARACTERS:

Level-2 Dynamic Characteristics



Level-1

Bare: ☒

Material :

Withsheath: ☒

Material:

Thickness:

Thermowell: ☒

Material:

Thickness:

Filling Material:

Output:

TIME CONSTRAINTS:

TC- 1.17 seconds

TC – 3.42 seconds

TC- 10.63 seconds

PLOTTED GRAPH:

