Week 7 - Assessment

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1) After assembling the 60V battery pack, it is now required to spot weld the bus bar and cell terminal together to avoid any miscontact during the use. Cell terminal and bus bar is of 0.00110 aluminum metal and has thickness of 1mm and 0.2mm respectively. The spot welding machine generate spots of 1.5mm diameter. 2 spot welds are made.

Calculate the force (in N), the weld can withstand.

\[ F_{\text{weld}} = 276M \text{Pu. Shear Stress} - 0.9 \times \text{Tensile Stress} \]

Shear stress, \( \tau = \frac{F_{\text{weld}}}{A} \)

Where, \( Y \) is no. of spot welds.

No, the answer is incorrect
Score: 0
Accepted Answers:
(Type: Range) 405, 490

2) An 8-bit ADC is used for reading the Voltage across a EV Battery. If the ADC reads a value of 209 to the microprocessor, find out what was the voltage in V (correct upto 2 decimal places), sensed by ADC across the Sensor.

No, the answer is incorrect
Score: 0
Accepted Answer:
(Type: Range) 3.98, 3.93

3) In the series circuit below, the head drop (in m) across the pipes R1, R2 AND R3 is respectively

No, the answer is incorrect
Score: 0
Accepted Answers:

4) In the parallel circuit below, the head drop (in m) across R1 and R2 respectively is

No, the answer is incorrect
Score: 0
Accepted Answer: 6.8