WEEK 01 - Assessment

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

Due on 2018-08-15, 23:59 IST.

1) As the temperature increases, the efficiency of PV cell will
   - [ ] improve
   - [ ] decrease
   - [ ] increase
   - [ ] remain unchanged
   **No, the answer is incorrect.**

   Score: 0
   Accepted Answers: decrease

2) As the incident insolation on a PV cell increases,
   - [ ] both short circuit current and open circuit voltage increase linearly
   - [ ] open circuit voltage increases logarithmically
   - [ ] short circuit current increases logarithmically
   - [ ] both short circuit current and open circuit voltage increase logarithmically
   - [ ] open circuit voltage increases linearly
   **No, the answer is incorrect.**

   Score: 0
   Accepted Answers: open circuit voltage increases logarithmically

3) A PV panel has an open circuit voltage of 40V and a short circuit current of 8A at 25 deg C. 1 point
   The temperature has become 40 deg C. Each p-n junction develops an open circuit potential of 0.6V and it decreases by 2mV for every degree increase in temperature. The open circuit voltage is now approximately
   - [ ] 38 V
   - [ ] 39.95 V
   - [ ] 40.05 V
   - [ ] 42 V

   **No, the answer is incorrect.**

   Score: 0
   Accepted Answers: open circuit voltage increases logarithmically
4) As the temperature increases
- the peak power of PV cell decreases
- the peak power of PV cell increases
- the short circuit current value decreases
- the open circuit voltage value increases

5) As the temperature increases
- the open circuit voltage value increases
- the peak power of PV cell increases
- the short circuit current value decreases
- the short circuit current value increases

6) Consider a 12V battery with a 10 ohm series resistance. This battery-resistance combination is required to emulate a PV cell. The fill factor is
- 0.5
- 0.12
- 0.7
- 0.25

7) Consider a 24V battery with a 10 ohm series resistance. This battery-resistance combination is required to emulate a PV cell. The peak power that can be delivered is
- 120W
- 3.6W
- 14.4W
- 240 W

8) Photovoltaic cells are sensitive to
9) A PV panel having an area of 1.5m², gives the following readings under standard test conditions. The short circuit current is 8A, the open circuit voltage is 40V, the voltage at peak power is 36.5V and the current at peak power is 7A. The fill factor of the PV panel is found to be 0.72. The efficiency of the panel is

- 17%
- 25.5%
- 72%
- 16.2%

No, the answer is incorrect.
Score: 0
Accepted Answers: 17%

10) A PV panel is tested under standard test conditions. The short circuit current is 8A, the open circuit voltage is 40V, the voltage at peak power is 36.5V and the current at peak power is 7A. The fill factor of the PV panel is found to be 0.72. The incident input power on the panel is 1800W. The area of the panel is

- 1.5m²
- 0.17m²
- 0.225m²
- 1.8m²

No, the answer is incorrect.
Score: 0
Accepted Answers: 1.8m²