

# Unit 1 - How does an NPTEL online course work?

<b>Course outline</b>
<b>How does an NPTEL online course work?</b>
<ul style="list-style-type: none"> <li><input checked="" type="radio"/> Welcome to NPTEL open online course</li> <li><input type="radio"/> Information about the course and accessing the content</li> <li><input type="radio"/> Announcement</li> <li><input type="radio"/> Discussion Forum: Do you have a doubt or question</li> <li><input type="radio"/> Know your scores in the Assignments</li> <li><input type="radio"/> What you should know about the final certification exam</li> <li><input type="radio"/> Certification criteria</li> <li><input type="radio"/> Best practices to maximize the learning from the online course</li> <li><input type="radio"/> Guidelines and Timelines</li> <li><input type="radio"/> MCQ and MSQ Assignment</li> <li><input type="radio"/> Numerical and Short Answer Assignment</li> <li><input type="radio"/> Subjective Assignment ( Essay Type)</li> <li><input type="radio"/> Subjective Assignment (Scan and Upload)</li> <li><input type="radio"/> Programming Assignment</li> <li><input checked="" type="radio"/> <b>Quiz : Assignment 0</b></li> <li><input type="radio"/> Assignment 0: Solution</li> </ul>
<b>Week 1 : Introduction and Solar radiation fundamentals</b>
<b>Week 2 : Basic physics of semiconductors</b>
<b>Week 3 : Carrier transport, generation and recombination in semiconductors</b>
<b>Week 4 : Semiconductor junctions</b>
<b>Week 5 : Essential characteristics of solar photovoltaic devices</b>
<b>Week 6 : First Generation Solar Cells</b>
<b>Week 7 : Second Generation Solar Cells</b>
<b>Week 8 : Third Generation Solar Cells</b>
<b>Text Transcripts</b>
<b>Download Videos</b>

## Assignment 0

The due date for submitting this assignment has passed. **Due on 2020-01-27, 23:59 IST.**  
 As per our records you have not submitted this assignment.

- 1) What does the word photovoltaic mean? 1 point
  - Sun-powered
  - Light-cells
  - Light-electricity
  - Solar-energy

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Light-electricity*
- 2) Who discovered the Solar Photovoltaic effect? 1 point
  - American physicist Enrico Fermi
  - Italian physicist Alessandro Volta
  - German physicist Heinrich Rudolf Hertz
  - French physicist Edmond Becquerel

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*French physicist Edmond Becquerel*
- 3) How much solar energy reaches the Earth's surface at any given moment? 1 point
  - 173 terawatts
  - 1.73 terawatts
  - 17,300 terawatts
  - 173,000 terawatts

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*173,000 terawatts*
- 4) Conductivity of an intrinsic semiconductor 1 point
  - Increases with increase in temperature
  - Increases with decrease in temperature
  - Increases with addition of impurities
  - Zero at absolute temperature

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Increases with increase in temperature*  
*Zero at absolute temperature*
- 5) What are the most common Solar Photovoltaic cells used today? 1 point
  - Organic Cells
  - Plastic Cells
  - Polymer Cells
  - Crystalline Silicon Cells

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Crystalline Silicon Cells*
- 6) When was silicon solar cell invented? 1 point
  - 1940's
  - 1950's
  - 1960's
  - 1970's

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*1950's*
- 7) Which is India's leading solar company? 1 point
  - Moser Baer Solar Ltd
  - Kotak Urja Pvt.Ltd
  - Websol Energy System Ltd
  - Tata Power Solar Systems Ltd

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Tata Power Solar Systems Ltd*
- 8) What is the name of largest solar power plant installed in India? 1 point
  - Bhadla Solar park
  - Kamuthi Solar power Project
  - Charanka Solar Park
  - Kurnool Ultra Mega Solar Park

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Kurnool Ultra Mega Solar Park*
- 9) Which of the following country is the largest market of Solar PV technology? 1 point
  - USA
  - India
  - China
  - Germany

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*China*
- 10) Which of the following are technologies are being used in concentrating solar power ? 1 point
  - Cathode ray tube
  - Linear fresnel
  - Parabolic trough
  - Power tower

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Linear fresnel*  
*Parabolic trough*  
*Power tower*
- 11) What does AM1.5G corresponds to? 1 point
  - 1 mW/cm<sup>2</sup>
  - 10 mW/cm<sup>2</sup>
  - 100 mW/cm<sup>2</sup>
  - 1 kW/m<sup>2</sup>

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*100 mW/cm<sup>2</sup>*  
*1 kW/m<sup>2</sup>*
- 12) Which AM is primarily used for standard solar spectrum for space applications ? 1 point
  - AM0
  - AM1.5
  - AM2
  - AM1

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*AM0*
- 13) What were researchers initially trying to achieve when they developed first practical solar cell? 1 point
  - Power source for no CO<sub>2</sub> emissions
  - Power source for households to replace electrical grids
  - Power source for telephone systems
  - Power source for remote locations

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*Power source for telephone systems*
- 14) How much power solar arrays installed on International space centers can produce? 1 point
  - 1KW
  - 10 KW
  - 100 KW
  - 1000 KW

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*100 KW*
- 15) What is essential for a rooftop Photovoltaics system to work? 1 point
  - A Rheostat
  - A battery
  - An inverter
  - Connection to electric grid

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*An inverter*