

Course outline

How does an NPTEL online course work?

Module 1 - Overview of Electric Vehicles in India

Module 2 - Vehicle Dynamics

Module 2 and 3 - Vehicle Dynamics and EV Subsystems

Module 4 - Storage for EVs

Module 4 - Storage for EVs (contd)

Module 5 - Fundamentals of battery pack design

Module 5 and 6 - Battery Pack Design, Motors and Controllers

Module 6 - EV Motors and Controllers

Module 7&8 - Battery Charging and Swapping, Analytics

Module 9: Renewable Energy - Introduction

Module 10: Renewable Energy - Solar and Wind Energy

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Module 10: Renewable Energy - Solar and Wind Energy

- Solar Photovoltaic
- Solar Cell and its Characteristics
- Solar Cells to Modules
- Wind Energy
- The War of Currents
- The birth of Solar - DC

- Quiz: Week 11: Assignment 1
- **Quiz: Week 11: Assignment 2**
- Quiz: Week 11: Assignment 3
- Quiz: Week 11: Assignment 4
- Week 11: Feedback form: Electric Vehicles and Renewable Energy
- Week 11: Lecture notes
- Week 11: Solutions

Module 11: Renewable Energy

Live Session

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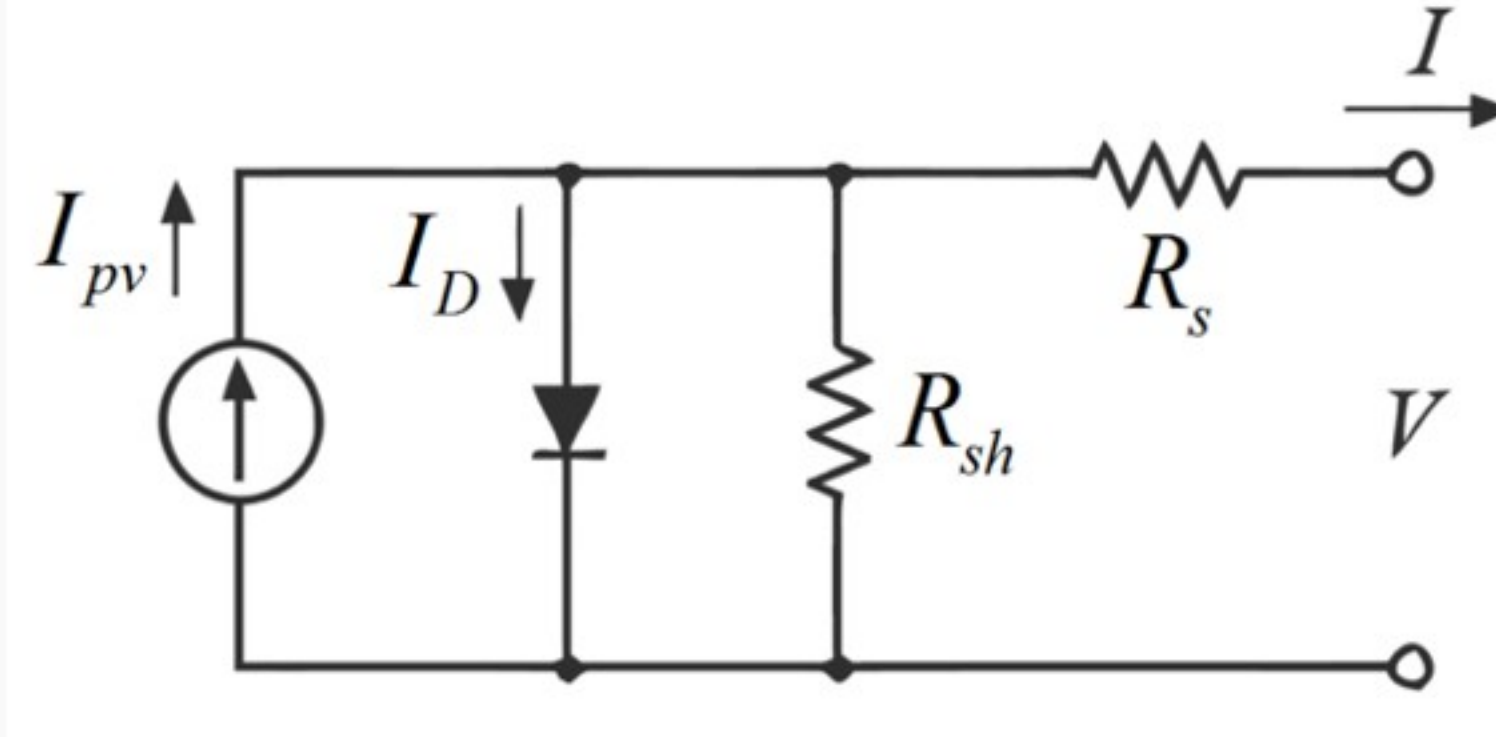
Week 11: Assignment 2

The due date for submitting this assignment has passed.

Due on 2021-10-13, 23:59 IST.

As per our records you have not submitted this assignment.

1) For the given model of PV cell, calculate the forward bias current I_D (in A) when forward bias voltage of 0.5V is applied (consider this voltage to be across diode or R_{sh}), the reverse saturation current is $2.23 \times 10^{-10}A$ and the thermal voltage is 25.2mV. Let the ideality factor be 1.



No, the answer is incorrect.

Score: 0

Accepted Answers:
(Type: Range) 0.08,0.12

1 point

2) As Solar power increases, short circuit current I_{sc} increases logarithmically whereas open circuit voltage V_{oc} increases Linearly.

1 point

- True
- False

No, the answer is incorrect.

1 point

2) As Solar power increases, short circuit current I_{sc} increases logarithmically whereas open circuit voltage V_{oc} increases Linearly.

1 point

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False

3) The maximum possible power that can be drawn from a solar cell is $I_{sc} \times V_{oc}$.

0 points

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False