

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)

● Lecture 27 - SoH and SoC estimation and Self Discharge - Part 1

● Lecture 28 - SoH and SoC estimation and Self Discharge - Part 2

● Lecture 29 - Battery Pack Development - Part 1

● Lecture 30 - Battery Pack Development - Part 2

● Lecture 31 - Computation of Effective cost of battery - Part 1

● Lecture 32 - Computation of Effective cost of battery - Part 2

● Lecture 33 - Charging Batteries

○ Quiz: Week 5: Assignment 1

○ Quiz: Week 5: Assignment 2

○ **Quiz: Week 5: Assignment 3**

○ Quiz: Week 5: Assignment 4

● Week 5 - Lecture notes

● Week 5 - Feedback form: Electric Vehicles and Renewable Energy

● Week 5: Solutions

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

Module 11: Renewable Energy

Live Session

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○ Quiz: Week 5: Assignment 1

○ Quiz: Week 5: Assignment 2

Week 5: Assignment 3

The due date for submitting this assignment has passed.

Due on 2021-09-01, 23:59 IST.

As per our records you have not submitted this assignment.

Use a 10kWh Battery with Capital Cost ₹1,00,000 with life of 3000 cycles, use of 1 cycle per day. Use 0.9 DoD and have 80% EoL, and take the rate of interest as 12%.

1) Use PMT in excel to compute usage cost per kWh of battery. The cost per kWh is

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 6.6,6.8

1 point

2) Use the PMT approximation discussed to compute usage cost per kWh of battery. The cost per kWh is (Correct up to 2 decimal places)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 6.5,6.9

1 point

3) Now assume the life-cycle of the battery is impacted by calendar life by 1% per year. Compute usage cost per kWh (Correct up to 1 decimal place)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 8.2,8.6

1 point