MODULE 2 – Introduction to Technology Of EV

2.3 Basics of EV Charging

Practice Problems 1

### Question 1 What type of connectors do Tesla cars use for DC charging?

1. Tesla cars use the Type 1 connector
2. Tesla cars use the CCS/Combo connector
3. Tesla cars use the Type 3 connector
4. Tesla cars use the same connector for AC and DC charging

Ans. D

### Question 2a For Questions 2a and b, consider a car with an empty 100 kWh battery with voltage of 480 Volts and with a current of 250 Amperes for 30 minutes.

**Calculate** the state of charge (SOC) in percentage after charging.

1. 45%
2. 55%
3. 60%
4. 70%

Ans. C

### Question 2b The efficiency of this car is 0.2 kWh/km. How far can this car drive after this charging session?

1. 200 km
2. 300 km
3. 400 km

Ans. B

Practice Problems 2

### Question 1a For Questions 1a-c, consider the following: An EV owner wants to charge his 30kWh Nissan Leaf. The battery is completely empty and he wants it to be full in 30 minutes.

What is the required power?

1. 40 kW
2. 50 kW
3. 60 kW

Ans. C

### Question 1b What is the charging power level in this case?

1. Level 1
2. Level 2
3. Level 3

Ans. C

### Question 1c At this charging power, what is the typical charging mode in this case?

1. Mode 1
2. Mode 2
3. Mode 3
4. Mode 4

Ans. D