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School of University Polytechnic

Diploma in Electrical Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem III - N1DJ301B - Introduction to Electrical VehiclesGeneral Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Explain the primary function of a power converter in an EV. K2 (2)
- 2) List the Name the components of an electric vehicle's powertrain. K1 (3)
- 3) Describe the main types of electric vehicles (EVs) commonly used. K2 (4)
- 4) Explain the concept of regenerative braking in electric vehicles. K2 (6)
- 5) Illustrate the concept of "peak power" in relation to motor performance in EVs. K3 (6)
- 6) Illustrate the role of a battery pack in an electric vehicle. K3 (9)
- 7) Analyze the significance of energy efficiency in electric vehicles. K4 (8)

- 8) Analyze the feasibility of integrating solar panels into an EV to supplement charging. K4 (12)

OR

Analyze the impact of motor control techniques on EV performance during extreme weather conditions. K4 (12)