PRN:		Course Code :	UEV403

Second Year **B. Tech** End Semester Examination Winter 2024

EV Principle And Architecture 000235

Day and Date: Wed 27 Nov 2024 Max Marks: **100**

Time : 02:00PM To 05:00PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1	**Attempt the following**				
	a)	Discuss the Historical development (root) of Automobiles	08	1	1
	b)	Describe the History of Hybrid Electric Vehicles	08	1	1
	c)	Illustrate the History of Fuel Cell Vehicles	09	2	1
		or			
	d)	Explain Economic and Environmental Impact of Electric Hybrid Vehicle.	09	2	1
Q.2	**Attempt the following**				
	a)	Derive the terms Vehicle Resistance, Rolling Resistance,	08	2	2
	b)	Explain the terms Aerodynamic Drag, Grading resistance	08	2	2
	c)	Explain Vehicle Power Plant and Transmission Characteristics	09	3	2
		or			
	d)	Describe Grade ability And Acceleration Performance.	09	3	2
Q.3	**Attempt the following**				
	a)	Explain Traction Motor Characteristics.	08	3	3
	b)	Write a note on Tractive Effort and Transmission Requirement.	08	3	3
	c)	Describe Tractive Effort in Normal Driving.	09	4	3
		or			
	d)	Illustrate the Energy consumption in EV.	09	4	3
Q.4	**Attempt the following**				
	a)	Explain the Architectures of Hybrid Electric Drive Trains.	08	1	4
	b)	Explain Series Hybrid Electric Drive Trains.	08	2	4
	c)	Explain Parallel Hybrid Electric Drive Trains.	09	3	4
		or			
	d)	Describe the power flow Parallel Hybrid Electric Drive Trains.	09	4	4

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