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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

M.Tech

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

(Subjective Type)

Subject Code: AMTME0222 Subject: Hybrid Vehicle Technology Max. Mks. : 30 Time : 50 Minutes

Roll No.

General Instructions:

All questions are compulsory.

Question No. 1 to 15 are subjective type question carrying 3 marks each. Attempt any 10 out of 15 questions.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Туре	Difficulty
1	What is coolent concentration?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
2	What is an EGR?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
3	What is battery rating?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
4	Define Slip in Induction Machine?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
5	How direction of 3 phase Induction Motor can be changed.		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
6	What is Slip In Induction Motor?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
/	Differentiate between constant current discharge approach and power density approach		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
8	Define the coefficient of fluctuation of energy.		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
u u	How does the fluctuation in Turning Moment diagram vary when the number of cylinder increases in multi-cylinder engine?	Page 1 of	Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Туре	Difficulty
10	Most Electric Machines used in HEV or EV drivetrains have speed limit of 12000 rpm. Give reasons.		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
11	Define Constant Power Speed Ratio		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
12	What are the two fundamental sizing constraints on an electric machine?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
13	What is overcharge protection in battery?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
14	What is thermal protection in battery?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
15	What is state of health in battery?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant