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Roll No

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) (Objective Type)

Subject Code: AMTME0222

Subject: Hybrid Vehicle Technology

Max. Mks. : 40

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 5 are objective type question carrying 2 marks each.

Question No- 6 to 20 are also objective type/Glossary based question carrying 2 marks each.

Q.No	Question Content	Question Image Cat	tegory	Sub Category	Marks	Options Randomi zation	Туре	Difficult y	Correct	Option1	Option2	Option3	Option4
1	What combustion engines can be used in combination with an electric motor?		empt all uestions	5 X 2=10	2		Single Choice	Brilliant	this doesn't matter	this doesn't matter	gasoline engines	diesel engines	common rail diesel engines
2	The dynamic braking can be used for		empt all uestions	5 X 2=10	2		Single Choice	Brilliant	All above motors	Series motors	Shunt motors	Compound motors	All above motors
3	The fuel cell is considered a battery in which is continuously replaced.		empt all uestions	5 X 2=10	2		Single Choice	Brilliant	both fuel and oxidizer	fuel only	oxidizer	both fuel and oxidizer	none of the mentioned
4	What is advantage of Controller Area Network in vehicle		empt all uestions	5 X 2=10	2		Single Choice	Brilliant	All of the above statements are correct	Reduction the number of electrical lines	Improve data exchange between sensors	Increase data amount between control unit.	All of the above statements are correct
5	Phase advancers are use to improve the power factor of		empt all uestions	5 X 2=10	2		Single Choice	Brilliant	Induction motors	Induction motors	Induction generators	Synchronous motors	Synchronous generators
6	Theoperates in blended mode	Glos	ossary I	Glossary I	2		Single Choice	Brilliant	PHEV	Series Parallel HEV	PHEV	Parallel HEV	
7	Therequire two power converters	Glos	ossary I	Glossary I	2		Single Choice	Brilliant	Parallel HEV	Series Parallel HEV	PHEV	Parallel HEV	
8	Therequires DCT (Dual Clutch Transmission).	Glos	ossary I	Glossary I	2		Single Choice	Brilliant	Series Parallel HEV	Series Parallel HEV	PHEV	Parallel HEV	
9	In Front electric rear hybrid complex HEV, no takes place during lights loads.	Glos	ssary II	Glossary II	2		Single Choice	Brilliant	battery charging	series HEV	battery charging	Ultra-flywheels	
10	In, battery can be charged at rest.	Glos	ssary II	Glossary II	2		Single Choice	Brilliant	series HEV	series HEV	battery charging	Ultra-flywheels	
11	The are high speed and low inertia flywheels	Glos	ssary II	Glossary II	2		Single Choice	Brilliant	Ultra-flywheels	series HEV	battery charging	Ultra-flywheels	
12	The systems require high motor rating.	Gloss	ssary III	Glossary III	2		Single Choice	Brilliant	Fixed gear	Fixed gear	Ultra-capacitors	Fuel cells	
13	Thehave high specific energy.	Gloss	ssary III	Glossary III	2		Single Choice	Brilliant	Fuel cells	Fixed gear	Ultra-capacitors	Fuel cells	
14	Thehave high specific power.	Gloss	ssary III	Glossary III	2		Single Choice	Brilliant	Ultra-capacitors	Fixed gear	Ultra-capacitors	Fuel cells	
15	Inthe energy source can store regenerated energy.	Gloss	ssary IV	Glossary IV	2		Single Choice	Brilliant	Battery EV	ICE heavy	Battery EV	Fuel cell EV	
16	In the energy source cannot store regenerated energy	Gloss	ssary IV	Glossary IV	2		Single Choice	Brilliant	Fuel cell EV	ICE heavy	Battery EV	Fuel cell EV	

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomi zation	Type	Difficult y	Correct	Option1	Option2	Option3	Option4
17	In series parallel HEV, only mechanical drivetrain is active during normal driving.		Glossary IV	Glossary IV	2		Single Choice		ICE heavy	ICE heavy	Battery EV	Fuel cell EV	
18	The of railway train is higher compared to motorcycles		Glossary V	Glossary V	2		Single Choice	Brilliant	aerodynamic force coefficient	rolling resistance	aerodynamic force coefficient	decreased	
19	Mud road has higher compared to tar road.		Glossary V	Glossary V	2		Single Choice		rolling resistance	rolling resistance	aerodynamic force coefficient	decreased	
20	Ground Clearance should be for low aerodynamic drag force		Glossary V	Glossary V	2		Single Choice		decreased	rolling resistance	aerodynamic force coefficient	decreased	