

Program: BE Electrical Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: EEDLO7032 and Course Name: Electric Vehicle Technology

Time: 1 hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	The cells consist of positive and negative electrodes connected by an _____.
Option A:	electrolyte
Option B:	cathode
Option C:	anode
Option D:	electrodes
Q2.	The electrolyte is a _____.
Option A:	liquid inorganic solution
Option B:	solid solution
Option C:	gas solution
Option D:	organic solution.
Q3.	In Series-Parallel Hybrid connection, during normal braking or deceleration the EM acts as a _____ to charge the battery.
Option A:	converter
Option B:	inverter
Option C:	motor
Option D:	generator
Q4.	The most commonly used technique for charging lead acid batteries is called _____.
Option A:	3 steps charging
Option B:	multiple steps charging
Option C:	1 steps charging
Option D:	2 steps charging
Q5.	Photovoltaic cells are devices that convert _____ into direct current electricity.
Option A:	battery
Option B:	sunlight
Option C:	gasoline
Option D:	electricity

Q6.	What is number of life cycles for lead acid batteries?
Option A:	Up to 800 to 80% capacity
Option B:	Up to 700 to 80% capacity
Option C:	Up to 900 to 70% capacity
Option D:	Up to 600 to 40% capacity
Q7.	What is Specific power for aluminium air batteries?
Option A:	9 W.kg ⁻¹
Option B:	10 W.kg ⁻¹
Option C:	11 W.kg ⁻¹
Option D:	12 W.kg ⁻¹
Q8.	Lead acid battery is the most well known as _____.
Option A:	rechargeable
Option B:	one time charge
Option C:	use and through
Option D:	replace
Q9.	Fuel cell performance is not limited by _____
Option A:	Primary Thermodynamics
Option B:	Secondary Thermodynamics
Option C:	Tertiary Thermodynamics
Option D:	Newton's law
Q10.	Fuel Cell provides _____ energy but _____ power.
Option A:	high, low
Option B:	modest, modest
Option C:	modest, low
Option D:	low, low
Q11.	Electric motors are ideal for vehicular applications because of
Option A:	the torque speed characteristics
Option B:	the V I characteristics
Option C:	the Pd characteristics
Option D:	the alpha delta characteristics
Q12.	In series hybrid vehicle _____ is coupled with the Internal combustion engine to produce electricity for pure electric propulsion
Option A:	diesel engine
Option B:	gas engine
Option C:	hydrogen engine
Option D:	generator
Q13.	During braking or deceleration, the electric motor acts as a generator which converts the _____ of the wheels into electricity and this is used to charge the battery

Option A:	Kinetic Energy
Option B:	Potential Energy
Option C:	Gravitational Energy
Option D:	Plutonium energy
Q14.	In wheel motor has the advantage that the _____ transmission path between the electric motor and the wheel can be minimized
Option A:	mechanical
Option B:	electrical
Option C:	hydraulic
Option D:	static
Q15.	HEV is a vehicle in which propulsion energy is available from.....source/sources.
Option A:	only one
Option B:	ICE
Option C:	two
Option D:	battery
Q16.HEV During start up or full throttle acceleration both the ICE and the EM share the required power to propel the vehicle. Typically, the relative distribution between the ICE and electric motor is 4:1
Option A:	Series Hybrid
Option B:	Series-Parallel Hybrid
Option C:	Complex Hybrid
Option D:	Parallel Hybrid
Q17.	If the wheel diameter, gear ratio and speed of the vehicle are all doubled, what will be its effect on the rpm of the electric motor? Choose the correct option.
Option A:	It will become twice
Option B:	It will become half
Option C:	No change
Option D:	It will become four times
Q18.	Answer in True/False. A) The aerodynamic force coefficient of railway train is higher compared to motorcycles. B)The rolling resistance coefficient of railway track is lower than asphalt road.
Option A:	A)-False B)-True
Option B:	A)-True B)-True
Option C:	A)-False B)-False
Option D:	A)-True B)-False
Q19.	Permanent magnet motors have _____
Option A:	Low residual flux
Option B:	Low coercivity
Option C:	High residual flux

Option D:	magnetic materials
Q20.	Main types of hybrid vehicle are
Option A:	series hybrid vehicle and mild hybrid vehicle.
Option B:	The parallel hybrid vehicle and the full hybrid vehicle.
Option C:	series hybrid vehicle and parallel hybrid vehicle.
Option D:	The full hybrid vehicle and the empty hybrid vehicle.
Q21.	A reluctance motor_____.
Option A:	is provided with slip rings
Option B:	requires starting gear
Option C:	has high cost
Option D:	is compact
Q22.	The size of electric motor depends on
Option A:	constant power region
Option B:	rated torque
Option C:	maximum torque required from the machine
Option D:	rated speed
Q23.	When the vehicle is solely powered by a conventional gasoline engine in Parallel HEV, the Hybridness is
Option A:	0
Option B:	0.25
Option C:	0.5
Option D:	0.75
Q24.	For full HEVs, the battery supplied power is usually greater and equal to than
Option A:	0.1
Option B:	0.75
Option C:	0.25
Option D:	0.5
Q25.	Fuzzy control in EVT technology does not contain_____.
Option A:	Predictive
Option B:	Power follower
Option C:	Adaptive
Option D:	Conventional

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	A
Q3.	D
Q4	B
Q5	B
Q6	A
Q7	B
Q8.	A
Q9.	B
Q10.	A
Q11.	A
Q12.	D
Q13.	A
Q14.	A
Q15.	C
Q16.	D

Q17.	A
Q18.	B
Q19.	C
Q20.	C
Q21.	D
Q22.	C
Q23.	A
Q24.	C
Q25.	B