

Program: BE ELECTRICAL Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: EEDLO5012

Course Name: Renewable Energy and Energy Storage

Time: 1hour

Max. Marks: 50

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

Q1.	Which is the ultimate source of energy?
Option A:	Sun
Option B:	Water
Option C:	Uranium
Option D:	Fossil fuels
Q2.	DER is denoted as
Option A:	district emission reduction
Option B:	Distributed energy resources
Option C:	Distributed emission resources
Option D:	Diesel energy reduction
Q3.	The following is not a future trend in power generation and distribution
Option A:	Electric and hybrid vehicles
Option B:	Advanced metering system
Option C:	Centralized generation power control
Option D:	LPG
Q4.	Which solar cell is having maximum efficiency?
Option A:	Monocrystalline
Option B:	Polycrystalline
Option C:	Amorphous
Option D:	Multi crystalline
Q5.	In a solar cell during the collection of e-h pairs, holes are collected by -----
Option A:	Finger electrodes
Option B:	Front Contact
Option C:	Si Wafer
Option D:	Back Contact
Q6.	Which is the part of the PV system that ensures max output power from the PV module?
Option A:	Blocking diode
Option B:	MPP Tracker
Option C:	Bypass diode

Option D:	Fuse
Q7.	Solar radiation which reaches the surface without scattering or absorbed is called _____
Option A:	Diffuse Radiation
Option B:	Ultraviolet radiation
Option C:	Infrared radiation
Option D:	Beam Radiation
Q8.	An inverter is required on a PV system if:
Option A:	DC power is needed
Option B:	AC power is needed
Option C:	Batteries are used
Option D:	If the load is large
Q9.	At maximum power point , dP/dV is equal to
Option A:	0
Option B:	maximum
Option C:	minimum
Option D:	1
Q10.	A reference cell voltage scaling method is used to track maximum power point for a solar panel. The open circuit voltage is 43.6 V then the voltage at maximum power point is approximately
Option A:	43.6
Option B:	13.5
Option C:	30.5
Option D:	21.8
Q11.	Suppose that a boost converter is connected as an interface between PV panels and a DC bus for MPPT and the operating point is at peak power point. Now if the insolation reduces, then
Option A:	Duty ratio of the converter is to be decreased
Option B:	Duty ratio of the converter is to be increased
Option C:	Load of the converter has to be increased
Option D:	Load of the converter has to be decreased
Q12.	The nation which produces maximum wind power worldwide -
Option A:	China
Option B:	Spain
Option C:	Germany
Option D:	India
Q13.	Two basic configurations of wind turbine are -
Option A:	Vertical axis wind turbine and horizontal axis wind turbine
Option B:	straight axis and tilted axis wind turbine

Option C:	reconfigurable wind turbines and flexible wind turbines
Option D:	automatic wind turbine and manual wind turbine
Q14.	In Doubly Fed induction generator (DFIG) system, the power output from rotor amounts to -
Option A:	30%
Option B:	50%
Option C:	70%
Option D:	100%
Q15.	Oxidation reaction means -
Option A:	gain of electron
Option B:	loss of electron
Option C:	loss of neutron
Option D:	gain of neutron
Q16.	Which technology uses temperature difference to power a turbine to produce electricity?
Option A:	Solar PV
Option B:	Wind turbine
Option C:	ocean thermal energy conversion (OTEC)
Option D:	tidal wave
Q17.	Which of the following is the most reliable source of energy -
Option A:	geothermal
Option B:	wind
Option C:	solar PV
Option D:	biomass plants require less space
Q18.	A disadvantage in the use of geothermal technology would include -
Option A:	not a reliable source of energy
Option B:	more requirement of maintenance
Option C:	low efficiency
Option D:	high investment cost
Q19.	The capacity of a battery is expressed in terms of
Option A:	Ampere hour rating
Option B:	Current rating
Option C:	Voltage rating
Option D:	cycling
Q20.	Ultra capacitors are also called as
Option A:	Primary cell
Option B:	Flywheel
Option C:	Super capacitors
Option D:	Compressed air energy storage

Q21.	Which of the following best defines a smart grid?
Option A:	It is a power grid which utilizes technology and control systems in order to operate more effectively.
Option B:	It is a power grid which relies solely on humans in order to operate.
Option C:	It is a power grid which contains a digital assistant which electrical engineers use to automate electrical processes.
Option D:	It is a power grid which is fully protected from and not susceptible to outside attacks such as malware and hacking.
Q22.	The cell in which chemical reaction is reversible is called as_____
Option A:	Dry cell
Option B:	Primary cell
Option C:	Mercury cell
Option D:	Secondary cell
Q23.	The function of separator in battery is
Option A:	It help to avoid internal short circuit
Option B:	it is used for efficient transfer of electrons
Option C:	it prevents outside influence
Option D:	It remove heat from electrodes
Q24.	_____ is defined as the ratio of total charge obtained during discharging to the total charge obtained during dischargingto the total charge pumped into the battery while charging.
Option A:	Battery capacity
Option B:	Battery efficiency
Option C:	Charging rate
Option D:	discharging rate
Q25.	In this method energy is generated from compressed air reservior.
Option A:	Compressed air energy storage
Option B:	Battery energy storage system
Option C:	Advanced capacitors
Option D:	Superconducting magnetic energy storage

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

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