Program: BE Electrical Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VIII

Course Code: EEE804   Course Name: Smart Grid Technology (SGT)

Time: 1 hour   Max. Marks: 50

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

Q1.	CDM is defined in _____ Protocol.
Option A:	IEEE (IE8975)
Option B:	TCP/IP (IP 1070)
Option C:	Kyoto (IPCC 2007)
Option D:	AI (2017 CX)
Q2.	In Gujrat, _____is an ongoing smart grid project In India.
Option A:	Kutch
Option B:	Porbandar
Option C:	Daman
Option D:	Dholera SIR
Q3.	The CDM allows industrialized countries to buy _____ and to invest in emission reductions where it is cheapest globally.
Option A:	CER units
Option B:	PER units
Option C:	OER units
Option D:	PEV units
Q4.	CER is _____
Option A:	Certified Emission Reduction units
Option B:	Credit emission reduced units
Option C:	Carbon Emission Regeneration unit
Option D:	Certified emission regeneration Unit
Q5.	In PLC type smart meter, the measurement and data from the smart meter can be transmitted across _____from the meter to a collection point.
Option A:	the wireless communication channels
Option B:	the telephone lines
Option C:	the utility power lines
Option D:	Television broadcast Line
Q6.	Customers have access to historical and real time data on Energy costs and potentially Carbon Emission data using _____.

Option A:	Geographic Information System
Option B:	Islanding
Option C:	Outage management system
Option D:	Smart Meters
Q7.	Electrical appliances can be controlled automatically using_____.
Option A:	Geographic Information System
Option B:	Islanding
Option C:	Outage management system
Option D:	Smart Meters
Q8.	The _____enables customers can reduce the cost by shifting energy consumption to cheaper off-peak tariff periods.
Option A:	Smart meter
Option B:	Outage management system
Option C:	Geographic Information System
Option D:	present conventional meters
Q9.	FDCC is _____
Option A:	Frequency Detection and Correction Centre
Option B:	Fault Delay Control Centre
Option C:	Feeder Distribution Control Centre
Option D:	Fading Detection and Correction Centre
Q10.	Which statement is NOT true for GIS in context with Smart Grid?
Option A:	It can capture and analyses spatial and geographic data.
Option B:	It is a computer-based tools that allow the user to create interactive queries (user-created searches), store and edit spatial and non-spatial data,
Option C:	analyses spatial information output, and visually share the results of these operations by presenting them as maps.
Option D:	Provide information about consumption of energy via communication channel.
Q11.	The IED used in monitoring performs following functions
Option A:	Circuit-breaker condition monitoring, Trip circuit supervision, Internal self-supervision, Event recording
Option B:	measurements of current, Three Phase Voltages, Frequency, Active Power, Reactive power.
Option C:	Controls Reclosers, Circuit breakers, sensors, voltage regulators
Option D:	communicate via RS 232 interface with substations
Q12.	IED's are able to communicate directly to _____ system.
Option A:	SCADA
Option B:	GIS
Option C:	PMU
Option D:	FAS

Q13.	Bioenergy is the energy derived from
Option A:	organic matter such as corn, wheat, soybeans, wood
Option B:	coal
Option C:	Nuclear fuel
Option D:	potential energy of water
Q14.	Biopower is obtained from a process called
Option A:	certain chemical processes
Option B:	pyrolysis
Option C:	Gasification
Option D:	nuclear fusion
Q15.	Pumped Hydro energy storages
Option A:	does not require to pump water from downhill reservoir to uphill
Option B:	are high head hydro power plants
Option C:	stores energy in batteries
Option D:	water being pumped from a lower reservoir uphill then allowing it to flow downhill to through turbines
Q16.	In Compressed Air Energy Storage (CAES)
Option A:	air under atmospheric pressure expands through a combustion turbine to create electricity
Option B:	compressed air is released from storage, it expands through a combustion turbine to create electricity
Option C:	uncompressed air is released from storage, it expands through a combustion turbine to create electricity
Option D:	any air pressure does the function of producing electricity
Q17.	Transients are characterized by
Option A:	frequencies ranging from tens of hertz
Option B:	with no frequency deviations
Option C:	frequencies ranging only in MHz
Option D:	frequencies ranging from tens to hundreds of kilohertz or even megahertz
Q18.	Transients may be eliminated by
Option A:	installing lightning arrestor systems with separate grounds
Option B:	speed governors
Option C:	AVRs
Option D:	power system stabilizers
Q19.	Removal of bulk loads, switching on a large capacitor bank cause
Option A:	voltage sag
Option B:	voltage swell
Option C:	no change in voltage level
Option D:	no change in any network variables

Q20.	Voltage sags and swells lasting more than_____ minutes are classified as under- and over-voltage conditions, respectively
Option A:	2
Option B:	1
Option C:	3
Option D:	1.5
Q21.	Facets of the cyber security include:
Option A:	voltage control
Option B:	fault recovery
Option C:	Event logging, aggregation, and correlation
Option D:	load shedding
Q22.	Communication system in a SG must satisfy
Option A:	Quality of service of data
Option B:	low end reliability
Option C:	power factor control
Option D:	demand side management
Q23.	The Data Rate of WIMAX Communication Technology is
Option A:	Up to 75 MBPS
Option B:	Up to 25 MBPS
Option C:	Up to 10 Mbps
Option D:	Up to 50 MBPS
Q24.	The Data Rate of ZigBee Communication Technology is
Option A:	Up to 100 Kbps
Option B:	Up to 500 Kbps
Option C:	Up to 250 Kbps
Option D:	Up to 50 Kbps
Q25.	Recloser Controller and voltage regulators are _____.
Option A:	LEDs
Option B:	MCDs
Option C:	IEDs
Option D:	FASs

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

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