Q=QUESTION	question_description
A=ANSWER	answer_description
These are sample MCQs to indicate pattern, may or may not appear in examination	
Q	Non-Conventional Source of Power Generation is
A	Coal
A	Petrol
A	Wind Energy
A	Natural Gas
Q	Which of the following is Natural Energy Source
A	Peat
A	Kerosene
A	Petrol
A	Charcoal
Q	Natural Energy Source is
A	Peat
A	Kerosene
A	Petrol
A	Diesel
Q	Which of the following is Artificial Energy Source
A	Petrol
A	Peat
A	Wood
A	Natural Gas
Q	Which of the following is Natural Energy Source
A	Diesel
A	Kerosene
A	Diesel
A	Wood

Q	Which of the following is Primary Energy Source
A	Energy stored in Water
A	Wind Energy
A	Tidal Energy
A	Petroleum Oils
Q	Which of the following is Secondary Energy Source
A	Coal
A	Petrol
A	Wind Energy
A	Natural Gas
Q	Which of the following is Renewable Energy Source
A	Coal
A	Wood
A	LPG
A	Natural Gas
Q	Non-Renewable Energy Source is
A	Solar Energy
A	Diesel
A	Wind Energy
A	Tidal Energy
Q	Which of the following is Non-renewable Energy Source
A	Kerosene
A	Geothermal Energy
A	Wind Energy
A	Tidal Energy
Q	Renewable Energy Source is
A	LPG
A	Diesel
A	Wind Energy

A	Natural Gas
Q	Which of the following is Secondary Energy Source
A	Coal
A	Petrol
A	Solar Energy
A	Natural Gas
Q	For Certain Hydropower Plant Site Discharge is 103 m^3/s and Head available is 208 m and Overall Efficiency of plant is 92%. Power available from plant is
A	193 MW
A	120 MW
A	130 MW
A	140 MW
Q	For Certain Hydropower Plant Site Discharge is 83 m^3/s and Head available is 209 m and Overall Efficiency of plant is 92%. Power available from plant is
A	148 MW
A	157 MW
A	168 MW
A	220 MW
Q	For Certain Hydropower Plant Site Discharge is 92 m^3/s and Head available is 210 m and Overall Efficiency of plant is 92%. Power available from plant is
A	220 MW
A	120 MW
A	174 MW

A	128 MW
Q	For Certain Hydropower Plant Site Discharge is 99 m^3/s and Head available is 208 m and Overall Efficiency of plant is 92%. Power available from plant is
A	120 MW
A	130 MW
A	140 MW
A	186 MW
Q	For Certain Hydropower Plant Site Discharges in Cubic Meter per second for 12 moths are 50, 50, 40, 40, 40, 90, 100, 100, 80, 70, 60, 70. Head available at site is 180 m and Overall Efficiency of plant is 90%. Power available from plant will be
A	150 MW
A	145 MW
A	105 MW
A	148 MW
Q	For Certain Hydropower Plant Site Discharges in Cubic Meter per second for 12 moths are 40, 40, 60, 60, 70, 120, 140, 160, 80, 70, 40, 20. Head available at site is 180 m and Overall Efficiency of plant is 90%. Power available from plant will be
A	135 MW
A	189 MW
A	192 MW
A	119 MW

Q	For Certain Hydropower Plant Site Discharges in Cubic Meter per second for 12 moths are 50, 50, 60, 80, 100, 100, 90, 90, 70, 60, 60, 60. Head available at site is 230 m and Overall Efficiency of plant is 89%. Power available from plant will be
A	120 MW
A	198 MW
A	146 MW
A	191 MW
Q	For Certain Hydropower Plant Site Discharges in Cubic Meter per second for 12 moths are 40, 30, 20, 15, 10, 80, 140, 120, 100, 60, 50, 40. Head available at site is 220 m and Overall Efficiency of plant is 94%. Power available from plant will be
A	156 MW
A	119 MW
A	135 MW
A	110 MW

Q	The monthly average run- off data of rivers A is 20, 20, 30, 40, 120, 120, 180, 190, 100, 80, 70, 50 and for river B is 50, 50, 40, 40, 40, 90, 100, 100, 80, 70, 60, 70 . Head Available for Site A is 80 m and Site B is 82 m. Ratio of Power Developed will be
A	1.10
A	1.56
A	1.29
A	1.38
Q	The monthly average run- off data of rivers A is 20 20, 30, 40, 120, 120, 180, 190, 100, 80, 70, 50 and for river B is 40, 40, 60, 60, 70, 120, 140, 160, 80, 70, 40, 20 . Head Available for Site A is 80 m and Site B is 82 m. Ratio of Power Developed will be
A	1.23
A	0.935
A	1.45
A	1.24
Q	The monthly average run- off data of rivers A is 40, 30, 20, 15, 10, 80, 140, 120, 100, 60, 50, 40 and for river B is 50, 50, 40, 40, 40, 90, 100, 100, 80, 70,60, 70. Head Available for Site A is 80 m and Site B is 82 m. Ratio of Power Developed will be
A	0.89
A	0.95

A	0.72
A	1.02
Q	The monthly average run- off data of rivers A is 40, 30, 20, 15, 10, 80, 140, 120, 100, 60, 50, 40 and for river B is 40, 40, 60, 60, 70, 120, 140, 160, 80, 70, 40, 20. Head Available for Site A is 80 m and Site B is 82 m. Ratio of Power Developed will be
A	1.2
A	0.78
A	1.3
A	1.28
Q	Which of the following things can not be read from Hydrograph
A	Rate of Flow at any Instant
A	Mean Runoff During Period
A	Spillway Capacity Required
A	Minimum Runoff During Period
Q	Select Incorrect statement for Mass Curve
A	It is representation of Water Quantity against time
A	Storage Capacity can be defined from Mass Curve
A	Spillway Capacity Required can not be defined from Mass Curve
A	Average Flow Capacity can be defined from Mass Curve
Q	Site Selection for Hydroelectric Power plant

A	does not Depend of availability of water
A	does not Depend upon Storage Capacity
A	depends on Ground water data
A	does not depend on geological condition
Q	Site Selection for Hydroelectric Power plant
A	does not Depend on availability of water
A	Depends upon Storage Capacity
A	does not depend on Ground water data
A	does not depend on Environmental Effect
Q	Site Selection for Hydroelectric Power plant
A	does not Depend of availability of water
A	depends on Sedimentation Effect
A	does not depend on Ground water data
A	does not Depend upon Storage Capacity
Q	For certain power plant Head Available is 89 m it is considered as
A	Low Head Plant
A	Medium Head Plant
A	High Head Plant
A	Microhydel Plant

Q	to cope up with Water Hammer Effect , which of the following component is used
A	Penstock
A	Surge Tank
A	Trash Rack
A	Spill Way
Q	Select Correct Statement for Hydroelectric Power plant
A	Hydroelectric plant is not reliable
A	Running cost of plant is high
A	Starting and Synchronising Period is short
A	Plant does not have standby losses
Q	In case of coal preparation following eqipments are used a- Sizers , b- driers, c- Crushers, d- Magnetic seperators. What is correct sequence in actual use
A	c a b d
A	a b c d
A	d b a c
A	d a c b
Q	Which material gives superior qualities even at high temperature
A	Nylon
A	cotton
A	Synthetic orlon
A	Teflon
Q	In case of mechanical ash handelling system
A	Ash is allowed to fall in stream of water possessing high velocity

A	Ash is allowed to fall in water below which belt conveyor is placed
A	Ash is allowed to fall in high velocity stream of air for conveying
A	Ash is allowed to fall in pipe carrying steam at sufficient high velocity
Q	In case of Hydraulic ash Handelling system
A	Ash is allowed to fall in stream of water possessing high velocity
A	Ash is allowed to fall in water below which belt conveyor is placed
A	Ash is allowed to fall in high velocity stream of air for conveying
A	Ash is allowed to fall in pipe carrying steam at sufficient high velocity
Q	For smaller dust particals in the range of 1 microns which type of method is suitable
A	Electrostatic precipitators
A	cyclone seperators
A	gravitational seperators
A	Pulse jet bag house dust collectors
Q	Steam power station requires space
A	lesser than diesel electric plant
A	greater than diesel electric power plant
A	lesser than gas fired plant
A	lesser than hydro power plant
Q	which type of coal has highest percentage of carbon

A	Peat
A	Lignite
A	Bituminous
A	Anthracite
Q	which type of coal has lowest percentage of volatile matter
A	Peat
A	Lignite
A	Bituminous
A	Anthracite
Q	Transportation by ropeways is limited to
A	100 Km
A	10 km
A	200 km
A	400 km
Q	Advantages of coal supply by means of Conveyors transportation is
A	used for much longer distances
A	continuous supply
A	Less quantity
A	unloading gear is required
Q	Which type of system can be used to convey coal in the vicinity of furnace
A	Belt Conveyor
A	Screw conveyor
A	trucks
A	through coal slurry by pipeline
Q	Silica content in Indian coal ash is
A	10 to 20 %
A	20 to 40 %

A	60 to 65 %
A	0.8
Q	Which type of as collection system has highest distance coverage
A	Mechanical
A	Hydraulic
A	Pneumatic
A	Steam Jet type
Q	efficiency of electrostatic precipitator is
A	Directly proportional to gas velocities
A	Not affected by gas velocities
A	Inversely proportional to gas velocities
A	becomes zero when change of velocity occurs
Q	Ash should be quenched because
A	it is so spongy
A	it forms clinkers by fusing together which is difficult to carry
A	it forms cement when mixed with water
A	it is poisonous
Q	Pressure bearing capacity of Fly ash, Stone powder, cement bricks is
A	100 to 200 bar
A	300 to 400 bar
A	70 to 110 bar
A	170 to 250 bar
Q	What is average life of thermal power plant
A	5 to 10 years

A	20 to 25 years
A	50 years
A	100 years
Q	In case of FBC system in order to reduce SO2 emission level which materials are added
A	sand
A	mulite
A	Limestone or Dolomite
A	Mulite
Q	which modification is made in circulatory FBC system
A	Uniform bed velocities
A	use of inert material
A	use of secondary compressed air along periphery of furnace
A	Sloping distributor plate
Q	Conventional Coal fired furnaces are unstable after the ash content
A	0.7
A	0.48
A	0.3
A	0.2
Q	What is advantage of open cycle gas turbine
A	low part load efficiency
A	loss of heat to atmosphere
A	sensitive to component efficiency
A	Less worm up time
Q	which is disadvantage of closed cycle gas turbine
A	Density of working medium can be maintained

A	any inferior fuel also be used
A	Considerable quantity of cooling is required
A	Filtration of working medium is avoided
Q	For perfect intercooling
A	T1≠T3 and efficiencies of both compressor is same
A	T1=T3 and efficiencies of both compressor is same
A	Efficiencies of both compressor can be different
A	compressor can be of different sizes
Q	Mechanical efficiency of gas turbine is
A	<50 %
A	<60 %
A	70 %
A	>90 %
Q	Temperature of Exhaust gas from simple gas turbine lies between
A	100 to 200 ˚C
A	800 to 900 ˚C
A	400 to 500 ˚C
A	1100 to 1200 ˚C
Q	In gas and coal cogeneration plant exhaust from gas turbine plant is absorbed by
A	Condenser
A	Compressor
A	Cooling tower
A	Heat recovery boiler

Q	What is Boiler repowering
A	replacement of new boiler
A	Exhaust gases acts as combustion air in steam power plant
A	replacement of boiler by heat recovery boiler
A	exhaust is used to heat gas after compression
Q	In case of open cycle gas turbine, condition of gas entering compressor is 27 ˚C at 1 bar pressure. If pressure after compressor is 5 bar, if efficiency of compressor is 80 % then calculate actual temperature of air after compression
A	145.9323 ˚C
A	304.6745 ˚C
A	245.9323 ˚C
A	987.6745 ˚C
Q	In case of open cycle gas turbine, condition of gas entering compressor is 27 ˚C at 1 bar pressure. If temperature after compressor is 230 ˚C, 6.1032 bar theoretically and considering efficiency of compressor 267.56 ˚C actually , calculate efficiency of compressor
A	0.6789
A	0.9478
A	0.7689
A	0.8438

Q	In case of open cycle gas turbine highest temperature in cycle is 1286 K at 5 bar, determine temperature of gases coming out from turbine considering outlet pressure is 1 bar and efficiency of turbine as 85 %. Take Y for air as gas as 1.4
A	856.7898 K
A	768.9864 K
A	906.7689 K
A	1028.78 K
Q	In case of gas turbine power plant if air flow through the compressor is 5000 Kg/Min and net work available for power generation is 126 KJ/Kg then what is capacity of plant
A	15620 KW
A	10500 KW
A	24353 KW
A	2546.8976 KW
Q	In case of gas turbine plant Net work done per kg of air flow is 265.87 KJ/Kg of air. Mass if fuel supplied is 0.025 kg/kg of air with calorific value as 40000 KJ/ Kg. then what is thermal efficiency of the plant
A	0.2658
A	0.3278
A	0.2278
A	0.2989

Q	For combined cycle power plant fuel supplied in combustion chamber I and II is 9.8 kg/s and 6.8 kg/s. calorific value of fuel is 45000 kJ/kg. work produced by gas turbine cycle is 106 MW & Steam turbine cycle is 177 MW. if compressor work is 151.6 MW total positive work produced by gas turbine will be
A	245MW
A	257.6 MW
A	201MW
A	198 MW
Q	Mass Number is defined as
A	The number of Protons in given atom
A	The number of Neutrons in given atom
A	The number of Protons + Electrons in given atom
A	Select Correct Statement for α - Radiation (Alpha Radiation)
Q	Mass Number of daughter element Increases by 4
A	Atomic Number of daughter element Increases by 2
A	There is no change in Mass Number
A	α - Radiation (Aplha Radiation) from Isotope produces new Isotope
A	Select Correct Statement for β - Radiation (Beta Radiation)

Q	Atomic Number of daughter element remains unaffected
A	Atomic Number of daughter element decreases by 1
A	Mass Number of daughter element increases by 1
A	Atomic Number of daughter element increases by 1
A	Select Correct statement for Half Life period
Q	Half Life Period is directly proportional to Decay Constant (λ)
A	Half Life Period is inversely proportional to Decay Constant (λ)
A	it is time required for nuclei to increase by half of its initial number
A	Half Life is not measure of Radioactive Nature of Substance
A	Half Life is not measure of Radioactive Nature of Substance
Q	Select Correct statement for Half Life period
A	Half Life Period is same for all radioactive element
A	Half Life Period is inversely proportional to Decay Constant (λ)
A	it is time required for nuclei to increase by half of its initial number
A	Half Life is not measure of Radioactive Nature of Substance
Q	Select Correct statement with respect to Binding Energy

A	Mass of Nuclei calculated experimentally is always Greater than mass of nuclei calculated theoretically
A	To break the nuclei amount of energy required to be supplied is less than Binding Energy
A	Mass Defect is not related to Binding Energy
A	Binding Energy Increases with increase in mass number becomes maximum at element having mass number 60 and then decreases
Q	Which of the following points are considered while designing Nuclear Fuel Rods
A	Non Uniform Heat Production
A	Non Uniform Heat Transfer
A	Low Structural Strength
A	Lower Corrosion rate
Q	Select correct statement regarding Good Moderator
A	Moderator should not absorb neutrons
A	It should have Low Melting Point
A	It should decompose easily
A	It should resist Conduction of Heat
Q	Select correct statement regarding Good Reflector
A	It reflects not back escaping neutron to the core
A	it should have low resistance to oxidation

A	It should have Low absorption Rate for Neutrons
A	Reflector Material does not require any cooling system
Q	Select incorrect statement regarding Good Reflector
A	It reflects back escaping neutron to the core
A	it should have high resistance to oxidation
A	It should have high absorption Rate for Neutrons
A	Reflector Material require any cooling system to overcome heat produced due to neutron collision
Q	Select Correct statement for Pressurised Water Reactor
A	Secondary Circuit needs shielding for radiation leakage
A	Water in primary circuit boils
A	Primary Circuit needs shielding for radiation leakage
A	Primary Circuit works at Pressure close to atmosphere
Q	Select Correct statement for Boiling Water Reactor
A	Steam is Generated in Steam Generator outside Reactor
A	Primary Circuit works at Pressure 100 to 130 bar
A	Thermal Efficiency is higher than PWR

A	Turbine and Piping need not be shielded for radiation leakage
Q	Select Correct statement for CANDU Reactor
A	Fuel Should not be enriched
A	Reactor Vessel must withstand Higher Pressure compared to PWR and BWR
A	Heavy Control rods are required
A	Normal Water is used as a Moderator
Q	Select incorrect statement for CANDU Reactor
A	Fuel Should not be enriched
A	Reactor Vessel must withstand Higher Pressure compared to PWR and BWR
A	No Control rods are required
A	Heavy Water is used as a Moderator
Q	Select Correct statement for Liquid Metal (Sodium) Cooled Reactor
A	It gives Lower Thermal Efficiency
A	Coolant Sodium need not be pressurised
A	Leakage of Sodium from reactor is not that dangerous
A	Secondary Circuit need not be shielded for radiation leakage
Q	Select Correct statement for Fast Breeder Reactor
A	Heavy Moderator is used

A	Reactor generates fissionable material from fertile material
A	It gives Lower thermal efficiency than conventional reactors
A	it gives lower power density
Q	Area under the load curve and load duration curve is
A	Equal
A	Different
A	Area of load curve is greater than Load duration curve
A	Area of load curve is Lesser than Load duration curve
Q	The peak load on the power station is 30 MW, capacity of power station is 40 MW and annual load factor is 0.5. Determine Average load
A	20 MW
A	15 MW
A	60 MW
A	35 MW
Q	In which method Depreciation cost decreases with increase in life
A	Straight line method
A	Sinking Fund Method
A	Diminishing Value method
A	Two part tariff method
Q	For economic load division which parameter of energy supplying units should be equal
A	Heat Rate
A	Incremental rate
A	Efficiency

A	Load factor
Q	In which Tariffs Method Charging is depend on only on amount of total energy consumed
A	Flat Demand rate Method
A	Straight line meter rate method
A	Block meter rate Method
A	Hopkinson’s Demand rate method
Q	Consumer use 400 Watts for 4 hours, 500 watts for next 10 hours, 300 watts for 5 hours and 200 watts for remaining 5 hours. This is consumption of consumer. Then determine daily consumption of consumer
A	8500 Whr
A	7400 Whr
A	10200 Whr
A	9100 Whr
Q	Power consumption is same for four consumer. Their maximum demands are a-: 450 Watts , b-: 300 Watts, c-: 600 Watts, d-: 400 watts. Then as per two part tariffs method which customer will have to pay higher bill
A	a
A	b
A	d
A	c

Q	Power consumption is same for four consumer. Their maximum demands are a-: 450 Watts , b-: 300 Watts, c-: 600 Watts, d-: 400 watts. Then as per Two part tariffs method which consumer has Lowest bill
A	a
A	b
A	d
A	c
Q	Power consumption is same for four consumer. Their maximum demands are a-: 450 Watts , b-: 300 Watts, c-: 600 Watts, d-: 400 watts. Then which customer has highest load factor for same time period considered
A	a
A	b
A	c
A	d
Q	Power consumption is same for four consumer. Their maximum demands are a-: 450 Watts , b-: 300 Watts, c-: 600 Watts, d-: 400 watts. Then which customer has lowest load factor for same time period considered
A	a
A	b
A	c
A	d

Q	A 50 MW power station has annual load factor is 0.7. if fuel cost is 2000 Rs/MWhr generation then determine total fuel cost
A	785.65 × 10^6 Rs
A	409.67× 10^6 Rs
A	613.2 × 10^6 Rs
A	978.64 × 10^6 Rs
Q	A Power station has annual load factor is 0.7. if average load on power station is 35 MW. Reserve capacity of power station is 10 MW. If capital cost involved is Rs 100000/MW installed capacity then what is total cost involved
A	1500000 Rs
A	5000000 Rs
A	3500000 Rs
A	6000000 Rs
Q	A power station has annual load factor is 0.8 . if Maximum demand on power station is 40 MW. If plant capacity factor is 0.64 then plant capacity is
A	40 MW
A	35 MW
A	60 MW
A	50 MW
Q	Which factor is depend upon actual number working hours
A	Load factor
A	Demand factor
A	Plant use factor

A	Plant capacity factor
Q	Considering two part tariffs method in order to get same electricity bill which things should same
A	Maximum demand only
A	Consumption only
A	Both maximum demand and consumption
A	connected load
Q	A power station has annual load factor is 0.85 . if Maximum demand on power station is 50 MW. If plant capacity factor is 0.75 then plant capacity is
A	66.66 MW
A	56.66 MW
A	76.66 MW
A	87.87 MW
Q	The maximum (peak) load on a thermal power plant of 80 MW capacity is 60 MW at an annual load factor of 60 %. The loads having maximum demands of 35 MW, 40 MW, 12 MW and, 15 MW are connected to the power station. Then what is average load on plant
A	36 MW
A	48 MW
A	40 MW
A	30 MW
Q	Which factor can have value greater than one
A	Demand Factor

A	Diversity factor
A	Load factor
A	Plant capacity factor
Q	A power plant has annual load factor is 0.8 and maximum demand is 40 MW. Plant Capacity factor is 0.5 then what is average load on the plant
A	24 MW
A	42 MW
A	32 MW
A	64 MW