

Q=QUESTION question_description

A=ANSWER answer_description

These are sample MCQs to indicate pattern, may or may not appear in examination

Q What is full form of GNP ?

A Gross National Product

A Gross Natural Product

A Gross National Policy

A Gross National Parameter

Q What is full form of MHD ?

A Magneto Hydro Dynamic

A Magneto Hydro Data

A Maximum Hydro Data

A Minimum Hydro Dynamic

Q Which parameter is having unit of Joule ?

A Motion

A Energy

A Rate of heat transfer

A Rate of flow

Q What is common energy source in Indian villages ?

A Coal

A Wood and animal dung

A Electricity

A Magma

Q Which is the non-renewable energy resource ?

A Fuel cells

A Wind power

A Wave power

A Coal

Q What is percentage of sulphur in a good coal ?

A Less than 1 %
A More than 1 %
A 0%
A Equal to 1 %
Q Which energy is trapped in earth's crust ?
A Tidal energy
A Wave energy
A Geothermal energy
A Ocean thermal energy
Q Which of the following is not type of fossil fuel ?
A Biogas
A Coal
A Petroleum
A Natural gas
Q Which of the following is the renewable energy source ?
A Geothermal
A Coal
A Petroleum
A Natural gas
Q Which among the following trees is not used for energy plantation ?
A Eucalyptus
A Casuarina
A Babool
A Bamboo
Q Which resources are exhaustible and can not replaced by nature ?
A Renewable resources
A Non- renewable resources
A Conventional resources

A Non-natural resources

Q Energy is released from fossil fuels, when they are ?

A Pumped

A Cooled

A Burned

A Pressurized

Q Which statement is correct for energy, economy and environment ?

A Only energy and environment are related

A Only energy and economy are related

A All the three are interrelated

A All the three are independent

Q What is the current per capita energy consumption of India ?

A Below 200 kWhr

A Between 200 to 500 kWhr

A Above 1000 kWhr

A Below 1000 kWhr

Q Which of the following country is ranked 3rd in energy consumption in the world ?

A China

A Canada

A India

A Italy

Q What is the solar radiation received from the sun after its direction has been changed by reflection and scattering by the atmosphere ?

A Beam radiation

A Diffused radiation

A Total radiation

A Ultra violet radiation

Q

What do you mean by total radiation ?

A Infrared radiation & beam radiation

A Infrared radiation & visible light

A

Infrared radiation & Ultraviolet radiation

A Beam radiation & diffused radiation

Q

What is the angle between the line extending from the centre of the sun to the centre of the earth & the projection of the line upon the earth's equatorial plane ?

A Altitude angle

A Azimuth angle

A Declination angle

A Latitude angle

Q

What is the angle through which the earth must turn to bring the meridian of a point directly inline with the sun rays ?

A Altitude angle

A Azimuth angle

A Hour angle

A Latitude angle

Q

What is the angle being measured between the beam of rays and normal to the plane ?

A Altitude angle

A Azimuth angle

A Incident angle

A Latitude angle

Q Which parameter is measured by
Pyranometer ?

A Beam radiation

A Intensity radiation

A Total radiation

A Day length

Q What is the acceptance angle of
Pyrheliometer ?

A 5 degree

A 15 degree

A 45 degree

A 90 degree

Q What is the use of silica gel cartridge in
Pyranometer ?

A To absorb the beam radiation

A To absorb diffused radiation

A To prevent dew forming inside on cold
nights

A To reduce temperature inside
Pyranometer

Q What is use of shading ring ?

A Measuring beam radiation with
pyranometer

A Measuring diffused radiation with
pyranometer

A Measuring beam radiation with
pyrheliometer

A Measuring diffused radiation with
pyrheliometer

Q Which of the following type of collector
gives highest concentration ratio ?

A Flat plate collector

A Parabolic trough collector
A Mirror strip collector
A Paraboloidal dish collector
Q What is the diameter of the sun ?
A 1.39×10^6
A 1.99×10^5
A 1.99×10^6
A 1.39×10^7
Q Which is the angle made in the horizontal plane between the horizontal line due south and the projection of the normal to the surface on the horizontal plane ?
A Hour angle
A Declination
A Surface azimuth angle
A Solar altitude angle
Q What is the diameter of the earth ?
A 1.27×10^6 km
A 1.27×10^4 km
A 1.27×10^3 km
A 1.27×10^2 km
Q What is the mean distance between sun & earth ?
A 1.5×10^8 km
A 1.5×10^7 km
A 1.5×10^6 km
A 1.5×10^5 km
Q What is the unit of solar constant ?
A Per square km
A Joule

A W/m²

A m²/W

Q What is range of Infrared radiation band wavelengths ?

A 0.39 to 0.78 μm

A Above 0.9 μm

A Below 0.78 μm

A Above 0.78 μm

Q Which of the following parameter is not required to calculate Local Solar Time ?

A Longitude of location

A Standard time longitude

A Equation of time correction

A Day length

Q What is total amount of solar energy received by earth and atmosphere ?

A 3.8×10^{24} J/year

A 9.2×10^{24} J/year

A 5.4×10^{24} J/year

A 2.1×10^{24} J/year

Q What is the transmissivity considering only absorption if 2 glass covers are used where k is 12 per meter & L is 3 mm ?

A 5.38×10^{-32}

A 0.39

A 0.93

A 0.99

Q Which of the following statement is true if parabolic trough collector is kept in N-S direction ?

A Absorber length is equal to reflector length

A Absorber length is greater than reflector length

A Absorber length is lesser than reflector length

A Absorber length is half of reflector length

Q What is minimum value of light intensity adequate for plant growth ?

A 35000 lux

A 45000 lux

A 25000 lux

A 65000 lux

Q What is the capacity range of most domestic solar water heating systems ?

A 100 - 150 litres per day

A 200 - 250 litres per day

A 50 - 100 litres per day

A 100 - 120 litres per day

Q What is there in earth's inner core as solid mass ?

A Iron & Nickel

A Copper & Iron

A Copper & Nickel

A Iron & Aluminium

Q What is efficiency of photovoltaic cell ?

A 15%

A 25%

A 35%

A 45%

Q What is full form of MIS ?
A Metal Insulator Semiconductor
A Metal Insulation System
A Material Insulation System
A Metal Isolation System
Q What is the rate of change of wind speed with height ?
A Wind shear
A Wind rose
A Wind solidity
A Wind Force
Q What is the inherent weakness of all wind machines?
A Their efficiencies
A Requires powerful winds to make fan rotate
A Their dependency on the wind speed
A Cannot be easily repaired
Q What is generated by heating and cooling of the atmosphere ?
A Radiation currents
A Thermo line circulation
A Conduction currents
A Convection currents
Q Which energy is used for harnessing wind energy with the help of windmill or turbine ?
A Mechanical
A Solar
A Electrical
A Heat
Q Why is Savonius rotor not suitable for installation ?

A Because of long drive shaft
A Because of its low capacity motor
A Because of its typical blade design
A Due to the light material
Q What should have for site selected for a wind farm/wind turbine ?
A Low annual wind speed
A High annual wind speed
A Tall obstruction around
A No wind at all
Q Who controls the action of yaw in small turbines ?
A Tail vane
A Blades
A Shaft
A Yaw motor
Q Which of the following is not a characteristics of Savonius Rotor ?
A Self starting
A Low speed
A Low efficiency
A High efficiency
Q How much power can be supplied by the small scale WEC systems ?
A 2 kW
A 5 kW
A 10 kW
A 20 kW
Q Which rotor is installed in a fixed orientation with the swept area perpendicular to the pre dominate wind direction ?
A Nacelle

A Yaw fixed machines
A Blades
A Anemometer
Q Why severe fluctuations in power are always undesirable in wind mill ?
A Because they pose power oscillations problems
A Damage of parts due to fluctuations
A The efficiency of the plant will be reduced
A Results in damage to the whole plant
Q Which of the following turbine or the rotor requires relatively low velocity winds for operation?
A Cup anemometer
A Savonius rotor
A Darrieus type rotor
A Magnus effect rotor
Q Which of the following is one of the characteristic of Darrieus Rotor ?
A Self starting
A Low speed
A High speed
A Low efficiency
Q Why recommendation of fixed ratio gears done for top mounted equipment ?
A Because they are easy install
A Requires less space
A Due to its low cost
A Because of their high efficiency
Q Why is wind turbine designed to stop operation at cut out velocity ?
A To protect wheel against damage

A To make a quick stop in emergencies
A To improve the efficiency
A In order to adjust the blades to wind direction
Q What is the range of solidity for various wind machines ?
A 2 to 9
A 1 to 10
A 0 to 1
A 1 to 40
Q When did the development of wind power in India began ?
A 1965
A 1954
A 1990
A 1985
Q Which of the following is not an application of small scale WEC systems ?
A Remote applications
A Use on farms
A Low power applications
A Distribution in central power grid
Q What is full form of LDR ?
A Length/Diameter Ratio
A Lift/Draught Ratio
A Lift/Drag Ratio
A Lift/Diameter Ratio
Q What is similar name for Betz Coefficient ?
A Blink's Limit
A Grashoff's Limit
A Gilbert's Limit

A Reynold's Limit
Q Which type of plant is portable ?
A Flexible Bag biogas plant
A Fixed dome biogas plant
A Floating drum biogas plant
A Khadi and village industries type biogas plant
Q What is the weight of biogas holder ?
A 8-10 kg/m²
A 10-15 kg/m²
A 8-18 kg/m²
A 25-30 kg/m²
Q Which type of biogas plant includes example as Khadi Village Industries ?
A Flexible Bag biogas plant
A Fixed dome biogas plant
A Floating drum biogas plant
A Semi-batch type
Q What does natural decay of biomass produces ?
A Ozone
A Methane
A Ethane
A Hydrogen
Q What should be the ratio of raw material to water ?
A 0.042361111
A 0.167361111
A 0.209722222
A 0.129166667
Q How many tonnes per acre per year can yield by energy plantation ?
A 10 to 20

A 20 to 30
A 30 to 50
A 15 to 30
Q What is meaninf of FBC ?
A Fluidised Bed Combustion
A Fluid Based Combustion
A Fluidised Bed Convection
A Fluid Based Combination
Q which of the following is not a Biogas plant site selection factor ?
A Distance
A Open space
A Water table
A Type of soil
Q Which decomposition process produces Carbon dioxide and methane?
A Aerobic decomposition
A Anaerobic decomposition
A Thermolysis
A Thermal decomposition
Q Which of the following plant has less gas production than that of continuous plant ?
A Batch plant
A Dome plant
A Drum plant
A Flexible gas biogas plant
Q What is the life time of Floating drum plant ?
A Short
A Large
A Life time

A Average
Q Which of the following involves biomass energy?
A Conventional energy
A Non renewable
A Commercial energy
A Sustainable energy
Q Which amount is the ideal carbon-nitrogen ratio for the raw material into a biogas plant ?
A 30.01
A 0.840277778
A 0.21875
A 0.047222222
Q What is the starting & stopping temperature of the fall in gas production in biodigestion ?
A 25°C, 20°C
A 20°C, 10°C
A 30°C, 35°C
A 10°C, 5°C
Q How many parts of solid in 100 parts of the slurry is considered as ideal ?
A 7 to 9
A 9 to 13
A 13 to 15
A 1 to 3
Q What is use of hot water from the ground ?
A Turn turbines
A Heat water
A Heat turbines
A Heat machinery

Q

What is name of a geothermal solution containing appreciable amounts of sodium chloride or other salts ?

A

Fluids

A

Brine

A

Solvent

A

Magma

Q

What is the by-product of the ocean thermal energy conversion ?

A

Hot water

A

Cold water

A

Chemicals

A

Gases

Q

What is wavelength by which deep water waves move in water ?

A

Half

A

One

A

Two

A

Zero

Q

What is meaning of a continuous movement of water in specific direction ?

A

Floats

A

Waves

A

Current

A

Tides

Q

Which is the type of energy where the energy is harnessed by the heat accumulated on the surface of water ?

A

Wind energy

A

Wave energy

A Ocean thermal energy conversion
A Solar energy
Q In which year the OTEC is developed ?
A 1880
A 1926
A 1890
A 1930
Q What is the vertical distance which lies between a crest and trough ?
A Wave energy
A Wave height
A Wave length
A Wave direction
Q What will be the type of most of the future geothermal power plants ?
A Dry stream geothermal plants
A Flash geothermal plants
A Binary geothermal plants
A Dry stream and flash plants
Q What is the meaning of a giant ocean wave due to earthquake, landslide or volcanic eruption ?
A Swell
A Tsunami
A Storm surge
A Whitecap
Q Which of the following has the lowest efficiency ?
A Solar energy
A OTEC
A wind energy
A wave energy

Q What is used by the ocean thermal energy conversion ?

A Energy difference

A Potential difference

A Temperature difference

A Kinetic difference

Q What is the form of geothermal energy from the earth ?

A Heat

A Light

A Photons

A Protons

Q What kind of water is produced by the open cycle system in OTEC ?

A Desalinated

A Impure

A Contaminated

A Chlorinated

Q Which of the following plant runs on binary cycle ?

A Vapour dominated plant

A Liquid dominated high temperature plant

A Liquid dominated low temperature plant

A Steam operated plant

Q Which is output form of energy for a fuel cell ?

A Mechanical energy

A Solar energy

A Electrical energy

A Potential energy

Q Which of the following is not an example of a fuel cell ?

A Hydrogen-oxygen cell

A Methyl-oxygen-alcohol cell

A Propane-oxygen cell

A Hexanone-oxygen cell

Q What is the most common element in the world ?

A Hydrogen

A Oxygen

A Helium

A Carbon

Q What do fuel cells emit ?

A Oxygen

A Nitrogen

A Nothing

A Water

Q What is meant by Bosch process ?

A Hydrogen from hydrocarbon

A Hydrogen from water

A Hydrogen from natural gas

A Hydrogen from gas

Q Which state has the most hydrogen fueling stations ?

A California

A Texas

A Florida

A Iowa

Q What is the voltage output of methane-oxygen fuel cell ?

A -1.16V

A -1.06V

A -1.26V

A -0.96V

Q What is the other name of partial oxidation ?

A Oxidation

A Oxygen reduction

A Oxygen reforming

A Oxygen Regaining

Q How do you boost the amount of electricity a fuel cell system produces ?

A Adding oxygen

A Adding hydrogen

A Adding cells

A Adding protons

Q Which of these fuel cells operates at low temperatures and pressures ?

A High temperature solid oxide fuel cell

A Alkaline fuel cell

A Phosphoric acid fuel cell

A Molten carbon fuel cell