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- 1. What does Heating and cooling of the atmosphere generates?
- a) Thermo line circulation
- b) Radiation currents
- c) Convection currents
- d) Conduction currents

View Answer

Answer: c

Explanation: Wind energy can be economically used for the generation of electrical energy. Heating and cooling of the atmosphere generates convection currents. Heating is caused by the absorption of solar energy on the earth surface.

- 2. How much is the energy available in the winds over the earth surface is estimated to be?
- a) 2.9 X 120 MW
- b) 1.6 X 107 MW
- c) 1 MW
- d) 5MW

View Answer

Answer: b

Explanation: The energy available in the winds over the earth surface is estimated to be 1.6 X 107 MW which is almost the same as the present day energy consumption. Wind energy can be utilized to run wind mill which in turn, is used to drive the generators.

- 3. How much wind power does India hold?
- a) 20,000 MW
- b) 12,000 MW
- c) 140,000 MW
- d) 5000 MW

View Answer

Answer: a

Explanation: India has a potential of 20,000 MW of wind power. Wind power accounts nearly 9.87% of India's total installed power generation capacity. Generation of wind power in India mainly account from southern state of India.

- 4. What is the main source for the formation of wind?
- a) Uneven land
- b) Sun
- c) Vegetation
- d) Seasons

View Answer

Answer: b

Explanation: Wind is free and renewable form of energy, which throughout history has been used to grind grain, power ships, and pump water. Wind is created when the sun unevenly heat the earth surface.

- 5. Which country created wind mills?
- a) Egypt
- b) Mongolia
- c) Iran
- d) Japan

View Answer

Answer: c

Explanation: The earliest known wind mills were in Persia (Iran). These early wind mills looked like large paddle wheels. Centuries later, the people of Holland improved the basic design of wind mill. Holland is famous for its wind mills.

- 6. "During the day, the air above the land heats up more quickly than the air over water".
- a) True
- b) False

View Answer

Answer: a

Explanation: During the day, the air above the land heats up more quickly than the air over water. The warm air over the land expands and raises, and the heavier, cooler air rushes in to take its place, creating winds.

- 7. What happens when the land near the earth's equator is heated?
- a) All the oceans gets heated up
- b) Small wind currents are formed
- c) Rise in tides
- d) Large atmospheric winds are created

View Answer

Answer: d

Explanation: The large atmospheric winds that circle the earth are created because the land near the earth's equator is heated more by the sun than the land near the north and south poles. Wind energy is mainly used to generate electricity.

- 8. What type of energy is wind energy?
- a) Renewable energy
- b) Non-renewable energy
- c) Conventional energy
- d) Commercial energy

View Answer

Answer: a

Explanation: Wind is called a renewable energy source because the wind will blow as long as the shines. Wind power, as an alternative to burning fossil fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation, consumes no water, and uses little land.

- 9. What are used to turn wind energy into electrical energy?
- a) Turbine
- b) Generators

- c) Yaw motor
- d) Blades

View Answer

Answer: a

Explanation: Wind turbine blades capture wind energy, a form of mechanical energy, and put it to work turning a drive shaft, gearbox, and generator to produce electrical energy. Many factors affects wind turbine efficiency including turbine blade aerodynamics.

- 10. What is the diameter of wind turbine blades?
- a) 320 feet
- b) 220 feet
- c) 80 feet
- d) 500 feet

View Answer

Answer: b

Explanation: Large utility-scale wind turbines can now generate more than a MW of electrical power each and deliver electricity directly in to the electric grid, these turbines are placed at 200 feet height at the rotor hub and have blades which are 220 feet or more in diameter .