

Sample Questions:

A three phase induction motor is drawing 12 Ampere at 440 Volts. If the operating power factor of the motor is 0.85, then the power drawn by the motor is

- a) 7.8 kW
- b) 4.5 kW
- c) 5.3 kW
- d) 23.4 kW

The term missing in the following equation  $(kVA)^2 = (kW)^2 + ( ? )^2$  is

- a)  $\cos \phi$
- b)  $\sin \phi$
- c) kVAr
- d) kVArh

Electrical resistance is defined as

- a) Current/Voltage
- b) Voltage/Current
- c) Voltage x Current
- d) Ohm x Voltage

Energy management involves

- a) combination of technical and managerial skills
- b) managerial skills
- c) technical skills
- d) energy audit skills

Air velocity in ducts is measured by

- a) stroboscope
- b) pitot tube
- c) lux meter
- d) fyrite

Matching energy usage to requirement means providing

- a) Just theoretical energy needed
- b) just the design needs
- c) energy with minimum losses
- d) less than what is needed

A mass balance for energy conservation does consider the following substance

- a) steam
- b) water
- c) raw materials
- d) all of the above

Diagrammatic representation of input and output energy streams of an equipment or system is known as

- a) mollier diagram
- b) sankey diagram
- c) psychrometric chart
- d) balance diagram

Coal with 40% ash is fired in a boiler. The daily coal consumption is 80 tonnes. The ash going out of the boiler per day would be

- a) 32 tonnes
- b) 40 tonnes
- c) 48 tonnes
- d) 3.2 tonnes

An oil fired boiler operates at an excess air of 15%. If the stoichiometric air to fuel ratio is 14 kg of air per kg of oil and oil consumption is 100 kg per hour, then the mass of flue gas liberated in kg/ hour would be

- a) 1320
- b) 1400
- c) 1190
- d) 1610

An analysis which helps to bring into focus the positive and negative forces in an organization is

- a) energy action planning
- b) force field analysis
- c) energy policy
- d) energy analysis

1. Which of the following is not a Primary Energy Source?

- a) Oil
- b) Natural Gas
- c) Electricity
- d) Wood

2. Which of the following is a renewable energy source?

- a) Bitumen
- b) Solar Energy
- c) Coal
- d) Natural Gas

3.Which of the following States in India does not have proven coal reserve?

- a) Andhra Pradesh b) Madhya Pradesh c) Kerala d) West Bengal

4.At present the share of hydro power in the country's total generated units is around

- a) 20% b) 25% c) 30% d) 35%

5.Greenhouse effect refers to increase in

- a)Global temperature. b) Carbon monoxide c) atmospheric pressure d) Greenery

6.The nodal agency for coordinating the energy conservation activities under EC act in India is

- a) Bureau of Indian Standards b) Bureau of Energy Efficiency  
c) Bureau of Energy Education d) Bureau of Energy and Environment

7.X-Ray is a form of

- a. Chemical Energy  
b. Radiant Energy  
c. Thermal Energy  
d. Potential Energy

8.Ratio of maximum demand to connected load is termed as:

- a. Load factor  
b. Power factor  
c. Demand factor  
d. Form factor

9.When heat is added or subtracted, resulting in a change of temperature is called as

- a. Sensible heat  
b. Latent heat  
c. Specific heat  
d. Heat capacity

10.The objective of energy management is

- a) To minimize energy costs  
b) To minimize environmental effects  
c) a & b  
d) None of the above

11.For calculating plant energy performance which of the following data is not required

- a) Current year's production  
b) Reference year production  
c) Reference year energy use  
d) Capacity utilization

12.The simplest technique for scheduling of tasks and tracking the progress is

- a) Gantt chart b) CPM c) PERT d) CUSUM

13.Moderation of chilled water temperature for process is

- a) Matching energy usage to requirement  
b) Increasing system efficiency  
c) None of the above  
d) a & b

14.Which of the following is used to represent energy balance of a system?

- a) Sankey Diagram  
b) Flow Chart  
c) Single line Diagram  
d) Block Diagram

15.Among the following, which is most important for carrying out a material balance

- a)Temperature of Products  
b) Mass  
c ) Waste Quantity  
d) Pressure