



MULTIPLE CHOICE QUESTIONS

UNIT-I

1. BEE stands for _____

- a) Bureau of Energy Effectiveness
- b) Board of Environmental Efficiency
- c) Bureau of Energy Efficiency
- d) Board of Energy Efficiency

Answer: c

2. _____ are used for describing the energy performance of manufactured products.

- a) Standards
- b) Labels
- c) Standards & Labels
- d) None of these

Answer: b

3. Energy Monitoring & Targeting helps in reducing annual energy costs in various industrial sectors by _____

- a) 1 % to 2 %
- b) 2 % to 10 %
- c) 4 % to 15 %
- d) 5 % to 20 %

Answer: d

4. SEC stands for _____

- a) Sustainable Energy Council
- b) Specific Energy Consumption
- c) Sustainable Energy Consumption
- d) Specific Energy Council

Answer: b

5. CUSUM technique is _____ technique

- a)Analytical
- b)Graphical
- c)Exponential
- d)None of these

Answer: b

6. In an industry, _____ has the best potential for cost savings.

- a)Energy
- b)Labour
- c)Materials
- d)All of these

Answer: a

7. The inspection, survey and analysis of energy flows for energy conservation in a building is called as _____

- a)Energy Management
- b)Energy Efficiency
- c)Energy Audit
- d)Energy Output

Answer: c

8. Detailed Energy Audit generally requires _____

- a)1 to 10 weeks
- b)1 to 3 days
- c)1 to 3 weeks
- d)1 to 10 days

Answer: a

9. If readily available data is used, the energy audit performed is _____

- a)PEA
- b)DEA
- c)TEA
- d)All of these

Answer: a

10. A company has 10 machines. During energy audit, only 3 machines are considered. It is _____ energy audit.

- a)Preliminary
- b)Detailed
- c)Targeted
- d)All of these

Answer: c

11. Conserving and optimizing energy use for getting more production output and saving money is called as _____

- a)Energy Conservation
- b)Energy Efficiency
- c)Energy Audit
- c)Energy Management

Answer: d

12. Energy can be conserved in HVAC systems by _____

- a)Using air-cooled condensers
- b)Maximizing fan speeds
- c)Using water-cooled condensers
- d)Maximizing heat losses

Answer: c

13. Use of a highly efficient machine is _____

- a)Using energy more efficiently
- b)Using energy less efficiently
- c)Reducing amount of energy used
- d)Increasing amount of energy used

Answer: a

14. Use of a highly efficient machine is _____

- a)Using energy more efficiently
- b)Using energy less efficiently
- c)Reducing amount of energy used
- d)Increasing amount of energy used

Answer:a

15. Plant Energy Performance (PEP) compares _____

- a)Energy performance of current and reference year
- b)Energy Audit of current and reference year
- c)Production of current and reference year
- d)Production of current and future years

Answer: a

16. Energy audit helps in :

- a. pollution control
- b. energy management
- c. energy conservation
- d. all of them

Answer: a

17. Which issue is not addressed by Integrated Energy Policy?

- a) consistency in pricing of energy
- b) scope for improving supply of energy from varied sources
- c) energy conservation Research and Development
- d)reducing price of energy

Answer: d

18. Which of the following is an energy security measure?

- a) fully exploiting domestic energy resources
- b) diversifying energy supply source
- c) substitution of imported fuels for domestic fuels to the extent possible
- d) all of the above

Answer: d

19. Which of the following is a standard for Energy Management System?

- a) ISO 14001 b) ISO 9001 c) ISO 18001 d) ISO 50001

Answer: d

20. The benchmarking parameter for a vapour compression refrigeration system is

- a) kW / kg of refrigerant used
- b) kcal / m³ of chilled water
- c) BTU / Ton of Refrigeration
- d) kW / Ton of Refrigeration

Answer: d

21. The return on investment (ROI), is expressed as

- a) annual cost / capital cost
- b) (first cost / first year benefits) x 100
- c) NPV / IRR
- d) (annual net cash flow x 100) / capital cost

Answer: d

22. The rate of energy transfer from a higher temperature to a lower temperature is measured in

- a) kCal
- b) Watt
- c) Watts per second
- d) none of the above

Answer: b

23. Cost of a new heat exchanger is Rs. 1.5 lakh. The simple payback period (SPP) in years considering annual savings of Rs 60,000 and annual maintenance cost of Rs 10,000 is

- a) 0.4
- b) 2.5
- c) 3
- d) 6

Answer: c

24. Energy sources which are inexhaustible are known as

- a) commercial energy
- b) primary energy
- c) renewable energy
- d) secondary energy

Answer: c

25. The internal rate of return is the discount rate for which the NPV is

- a) positive
- b) zero
- c) negative
- d) less than 1

Answer: b

26. Having energy policy

- a) satisfies regulations
- b) shows top management commitment
- c) indicates energy audit skills
- d) adds to the list of number other policies

Answer: b

27. The time between its earliest and latest start time, or between its earliest and latest finish time of an activity is

- a) delay time
- b) slack time
- c) critical path
- d) start time

Answer: b

28. A geothermal field may yield

- a) dry steam
- b) wet steam
- c) hot air
- d) all of these

Answer: b

29. Which of the following are characteristics of B.E.P?

- a) There is no loss and no profit to the firm.
- b) Total revenue is equal to total cost.
- c) Contribution is equal to fixed cost.
- d) All of the above.

Answer: d

30. Which of the following are limitations of break-even analysis?

- A) Static concept
- b) Capital employed is taken into account.
- c) Limitation of non-linear behavior of costs
- d) Limitation of presence of perfect competition

Answer: a

UNIT-II

1. An induction motor with 11 kW rating and efficiency of 90% in its name plate means

- a) it will draw 12.22 kW at full load
- b) it will always draw 11 kW at full load
- c) it will draw 9.9 kW at full load
- d) nothing can be said about how much power it will draw as motor power factor is not given

Answer: a

2. Which of the following statement is true regarding maximum demand controller?

- a) maximum demand controller enables a way of 'shaving' the peaks in the consumer load profile
- b) maximum demand controller enables a way of improving the system power factor
- c) enables a way for using more electrical energy at lower total cost of energy without investment in expansion of power supply
- d) maximum demand controller is installed by concerned utility at customer premises

Answer: a

3. Which of the following statements are true?

- i) reactive current is necessary to build up the flux for the magnetic field of inductive devices
 - ii) some portion of reactive current is converted into work
 - iii) the cosine of angle between kVA and kVA_r vector is called power factor
 - iv) the cosine of angle between kW and kVA vector is called power factor
- a) i & iv b) ii & iii c) i & iii d) iii & iv

Answer: a

4. The capacitor used in auto transformer circuit for sodium vapour lamps, is for

- A) protection against accidental power failure
- B) controlling illumination level of the lamp

- C) for regulating discharge voltage
- D) for improving the power factor of the circuit.

Answer: d

5. A auto transformer used with neon lamp should have

- A) high efficiency
- B) high step-up ratio
- C) high step-down ratio
- D) high leakage reactance.

Answer: d

6. he efficiencies of induction motors remain almost constant between _____ loading.

- a. 50% to 100%
- b. 60% to 100%
- c. 40% to 100%
- d. 30% to 100%

Answer: a

7. When a motor has a _____ rating than that required by the equipment, motor operates at part load.

- a. Higher
- b. Lower
- c. Constant
- d. Fluctuating

Answer: a

8. While input power measurements are fairly simple, measurement of output or losses need a laborious exercise with extensive _____ facilities.

- a. Measuring
- b. Testing
- c. Calculating
- d. Observing

Answer: b

9. The measurement of stray load losses is very _____ and not practical even on test beds.

- a. Easy
- b. Difficult
- c. Simple

d. Complex

Answer: b

10. Most motors are _____ such that the shaft is accessible to a tachometer or a strobe light.

a. Constructed

b. Planned

c. Designed

d. Calculated

Answer: a

11 Which of the following is true?

a. The line current load estimation method is used when output power can be measured and only amperage measurements are possible.

b. The line current load estimation method is used when output power cannot be measured and only amperage measurements are possible.

c. The line current load estimation method is used when input power can be measured and only amperage measurements are possible.

d. The line current load estimation method is used when input power cannot be measured and only amperage measurements are possible.

Answer: d

12. Which of the following is true?

a. The efficiencies of induction motors remain almost constant between 50% to 100% loading.

b. The efficiencies of induction motors remain almost irregular between 50% to 100% loading.

c. The efficiencies of induction motors remain almost irregular between 30% to 100% loading.

d. The efficiencies of induction motors remain almost constant between 70% to 100% loading.

Answer: a

13. An induction motor can be said analogous to _____

a) transformer

b) synchronous motor

c) universal motor

d) stepper motor

Answer: a

14. A 3-phase induction motor with its rotor blocked behaves similar to a _____

a) transformer under short circuit of secondary terminals

b) transformer under open circuit of secondary

c) synchronous motor under slip test

d) synchronous motor under open circuit

Answer: a

15. The no load current of the transformer is very less due to _____

- a) mutual flux having low reluctance iron core
- b) mutual flux having high reluctance iron core
- c) leakage flux having low reluctance iron core
- d) leakage flux having high reluctance iron core

Answer: a

16. Mechanically air gaps in induction motor are kept very low to avoid _____

- a) lower power factor
- b) lagging nature
- c) magnetizing current
- d) all of the mentioned

Answer: d

17. The great advantage of the double squirrel-cage induction motor over single cage rotor is that its _____

- a) efficiency is higher
- b) power factor is higher
- c) slip is larger
- d) starting current is lower

Answer: d

18. What is the primary function of a variable frequency drive (VFD)?

- a) To control the speed of an electric motor
- b) To convert AC power to DC power
- c) To measure voltage and current in an electrical system
- d) To protect electrical equipment from power surges

Answer: a

19. What type of load is a variable frequency drive typically used for?

- a) Resistive loads
- b) Inductive loads
- c) Capacitive loads
- d) All of the above

Answer: b

20. What is the purpose of a VFD's "overload protection"?

- a) To protect the electric motor from damage due to overloading
- b) To prevent the VFD from overheating
- c) To protect the electrical system from power surges
- d) To prevent the VFD from being overloaded by the electric motor

Answer: a

21. What type of VFD is typically used for applications with high starting torque requirements?

- a) Scalar VFD
- b) Vector VFD
- c) Pulse Width Modulation (PWM) VFD
- d) AC-DC VFD

Answer: b

22. What is the function of a VFD's "auto-tuning"?

- a) It automatically adjusts the VFD's parameters to optimize the performance of the electric motor
- b) It automatically adjusts the VFD's parameters to optimize the energy efficiency of the system
- c) It automatically adjusts the VFD's parameters to optimize the VFD's protection functions
- d) It automatically adjusts the VFD's parameters to optimize the VFD's monitoring functions

Answer: a

23. How the constant torque can be obtained from armature and field-controlled drives?

- (A) By reducing the field current
- (B) By increasing the field current
- (C) By reducing the armature current
- (D) By controlling the armature voltage

Answer: d

24. Lamination of the transformer core is made up of

- a. Aluminum
- b. Iron
- c. Steel
- d. Silicon steel

Answer: d

25. Transformer core are laminated in order to

- a) Reduce copper loss

- b) Minimize eddy current loss
- c) Reduce eddy current and hysteresis loss
- d) Reduce hysteresis loss

Answer: b

26. Oil is provided in an oil-filled transformer for

- a. Lubrication
- b. Cooling
- c. Insulation
- d. Both cooling and Insulation

Answer: d

27. A Buchholz relay can be installed on

- a) Oil cooled transformers
- b) Autotransformers
- c) Welding transformers
- d) Air-cooled transformers

Answer: a

28. Cruciform shape is used in the transformer core to

- a. Reduce core reluctance
- b. Reduce core loss
- c. Reduce copper winding
- d. All of the above

Answer: d

29. In the transformer, the function of a conservator is to

- a. Protect the transformer from damage when oil expands due to heating.
- b. It provides air for cooling the transformer.
- c. It provided cooling oil to transformer when transformer needed.
- d. None of the above

Answer: a

30. The efficiency of a transformer is maximum when

- a. Eddy current loss = iron loss
- b. Hysteresis loss = copper loss.
- c. Eddy current loss = hysteresis loss

d. Iron loss = Copper loss.

Answer: d

UNIT-III

1.. Which fan you would chose for moving large flows against relatively low pressures

- a) Radial fan
- b) backward inclined fan
- c) forward curved fan
- d) axial fan

Answer: d

2. If efficiency is the main consideration you would select

- a) Radial fan
- b) backward inclined fan
- c) forward curved fan
- d) axial fan

Answer:a

3. For heavy dust conditions, which type of fan is ideally suited

- a) Radial fan
- b) backward inclined fan
- c) forward curved fan
- d) axial fan

Answer:c

4. The system resistance refers to

- a) static pressure
- b) velocity pressure
- c) total pressure
- d) differential pressure

Answer:a

5. System resistance varies as a

- a) square of flow rate
- b) cube of flow rate
- c) directly proportional to square root of flow rate
- d) directly with flow rate

Answer:a

6. The intersection of system curve with fan operating curve is called

- a) design point
- b) operating point
- c) selection point
- d) shut off point

Answer:b

7 Varying the RPM of a fan by 10% varies the pressure by

- a) 19%
- b) 29%
- c) 10%
- d) does not vary

Answer:a

8. Varying the RPM of a fan by 10% varies the flow by

- a) 10%
- b) 20%
- c) 30%
- d) does not vary

Answer:a

9. Varying the RPM of a fan by 10% varies the power by

- a) 27%
- b) 37%
- c) 10%
- d) does not vary

Answer:a

10. The parameter used by ASME to define fan, blower and compressor is

- a) fan ratio

- b) Specific ratio
- c) blade ratio
- d) Twist factor

Answer: b

11) Which of the axial fan type is more efficient

- a) Propeller
- b) Tube axial
- c) Vane axial
- d) Radial

Answer: c

12. Choice of fan type for the given application depends on

- a) Flow
- b) Static Pressure
- c) both a & b
- d) Neither a nor b

Answer: c

13. Axial flow fan are equipped with

- a) fixed blade
- b) Cured blade
- c) Flat blade
- d) Variable pitch blade

Answer: d

14. Which of the following is created by blowers?

- a) Air flow
- b) Water flow
- c) Wastewater flow
- d) Vacuum flow

Answer: a

15. What is the purpose of the blower?

- a) Decrease air flow
- b) Increase air flow
- c) Create vacuum

d) Maintain air flow

Answer: b

16. Which technology's principle is used in screw blowers?

a) Air expander

b) Air compressor

c) Ventilators

d) Vacuum creators

Answer: b

17. Which blower among the following has the highest nominal efficiency?

a) Positive displacement

b) Single stage centrifugal

c) Multi stage centrifugal (inlet throttled)

d) Multi stage centrifugal (variable speed)

Answer: b

18. When is high pressure required, which type of blower is preferred?

a) Positive displacement blower

b) Centrifugal blower

c) Helical screw blower

d) Regenerative blower

Answer: a

19. What is the specific ratio for a blower?

a) <1.1

b) 1.11-1.2

c) >1.2

d) 1.11

Answer: b

20. Which blower is used when the system is prone to clogging?

a) Centrifugal blower

b) Positive displacement blower

c) Regenerative blower

d) Helical screw blower

Answer: b

21. Dimensionless pressure rise is not dependent on which of the following?

- a) Density of the fluid
- b) Speed of the blower
- c) Diameter of the blower
- d) Power of the blower

Answer: d

22. How is the static pressure drop in the water column related to the air flow rate?

- a) Linearly
- b) Inversely
- c) There is no relation between them
- d) A parabolic curve is obtained

Answer: a

23. Which of the following is a positive displacement pump?

- a) Centrifugal pump
- b) Diffuser pump
- c) Axial pump
- d) Reciprocating pump

Answer: d

24. Which of the following is a dynamic pump?

- a) Centrifugal pump
- b) Rotary pump
- c) Multiple rotor
- d) Reciprocating pump

Answer: a

25. Dynamic pumps are also known as _____

- a) Positive displacement pumps
- b) Non-positive displacement pumps
- c) Reciprocating pump
- d) Rotary pump

Answer: b

26. Hydraulic machine convert mechanical energy into hydraulic energy by means of centrifugal force acting on the fluid _____

- a) Centrifugal pump

- b) Rotary pump
- c) Multiple rotor
- d) Reciprocating pump

Answer: a

27. Which of the following is not an advantage of centrifugal pump?

- a) Low initial cost
- b) High efficiency
- c) Difficult installation
- d) Easy maintenance

Answer: c

28. Why an air vessel is used in a reciprocating pump?

- a) To obtain a continuous supply of water at uniform rate
- b) To reduce suction head
- c) To increase the delivery head
- d) To reduce cavitation

Answer: a

29. Negative slip occurs in reciprocating pumps, when delivery pipe is _____

- a) Long and suction pipe is short and pump is running at low speed
- b) Long and suction pipe is short and pump is running at high speed
- c) Short and suction pipe is long and pump is running at low speed
- d) Short and suction pipe is long and pump is running at high speed

Answer: a

30. . For a given centrifugal pump _____

- a) The discharge varies directly as the speed
- b) The head varies inversely as the speed
- c) The power varies as the square of the speed
- d) The discharge varies as the square of the speed

Answer: a

UNIT-IV

1. Assume CO₂ equivalent emissions by the use of a 60 W incandescent lamp are of the order of 60 g/hr. If it is replaced by a 5 W LED lamp then the equivalent CO₂ emissions will be

- a) nil
- b) 5 g/hr
- c) 12 g/hr
- d) 300 g/hr

Answer: b

2. If the relative humidity of air is 100%, then which of the following statements is correct

- a) only dew point & wet bulb temp. are same
- b) only dew point & dry bulb temp. are same
- c) only wet bulb & dry bulb temp. are same
- d) all dew point , wet bulb & dry bulb temp. are same

Answer: d

3. Which of the following will need the highest level of illumination ?

- A) Railway platforms
- B) Hospital wards
- C) Bed rooms
- D) Proof reading.

Answer: d

4. Which of the following will need lowest level of illumination ?

- A) Auditoriums
- B) Railway platform
- C) Fine engraving
- D) Displays.

Answer: b

5. Which of the following lamp gives nearly monochromatic light ?

- A) Sodium vapour lamp
- B) GLS lamp
- C) Tube light
- D) Mercury vapour lamp.

Answer: a

6. Radiant efficiency of the luminous source depends on

- A) shape of the source
- B) temperature of the source
- C) wavelength of light rays
- D) all of the above.

Answer: b

7. Carbon arc lamps are commonly used in

- A) photography
- B) cinema projectors
- C) street lighting
- D) domestic lighting.

Answer: b

8. The unit of solid angle is

- A) steradian
- B) candela
- C) radian
- D) solid angle.

Answer: a

9. The illumination level in houses is in the range

- A) 10 - 20 lumen/m²
- B) 30 - 50 lumen/m²
- C) 40 - 75 lumen/m²
- D) 100 - 140 lumen/m²

Answer: d

10. Luminous efficiency of a fluorescent tube is

- A) 5 - 10 lumen/watt

- B) 15 - 20 lumen/watt
- C) 30 - 40 lumen/watt
- D) 60 - 65 lumen/watt.

Answer: d

12. One lumen per square meter is the same as

- A) One lux
- B) One candela
- C) One foot candle
- D) One lumen meter

Answer: a

13. Standard wattage of 3 ft. Fluorescent tube is

- A) 10 W
- B) 40 W
- C) 65 W
- D) 100 W.

Answer: b

14. Candela is the unit of

- A) Luminous intensity
- B) Luminous flux
- C) Wavelength
- D) None of the above.

Answer: a

15. For the same wastage which lamp is cheapest ?

- A) Sodium vapour
- B) Mercury vapour lamp
- C) Fluorescent tube
- D) GLS lamps.

Answer: d

16. Optical instruments used for the comparison of candle powers of different sources are known as

- A) Photo meter
- B) Bunsen meter
- C) Radio meters

D) Candle meters

Answer: a

17. Which photometer is used for comparing the light of different colours ?

A) Lummer Brodhum photometer

B) Guilds Flicker photometer

C) Grease spot photometer

D) Bunsen photometer

Answer: b

18. Which photometer depends for its operation on Lambert's cosine law ?

A) Guild's Flicker Photometer

B) Lummer Brodhum Photometer

C) Trotter Illumination Photometer

D) Macbeth Illumino meter.

Answer: c

19. A mercury vapour lamp gives

A) pink light

B) yellow light

C) greenish blue light

D) white light.

Answer: c

20. Candela is the unit for

A) Light flux

B) Brightness

C) Luminous intensity

D) Luminous efficiency.

Answer: c

21. Under the influence of fluorescent lamps sometimes the wheels of rotating machinery appear to be stationary. This is due to the

A) low power factor

B) stroboscopic effect

C) luminescence effect

D) fluctuations.

Answer: b

22. Power factor is highest in case of

- A) Mercury arc lamp
- B) Sodium vapour lamps
- C) Tube lights
- D) GLS lamps.

Answer: d

23. The output of a tungsten filament lamp depends on

- A) size of lamp
- B) size of shell
- C) temperature of filament
- D) all of the above

Answer: c

24. A zero watt lamp consumes

- A) No power
- B) About 25 to 30 W power
- C) About 15 to W power
- D) About 5 to 7 W power.

Answer: d

25. In a mercury vapour lamp light red objects appear black due to

- A) absorption of red light by the lamp radiation
- B) absence of red light from lamp radiation
- C) colour mixing
- D) high wavelength of red objects.

Answer: b The life incandescent lamp is expected to be

- A) 100 hours
- B) 200 hours
- C) 1000 hours
- D) 10000 hours.

Answer: c

26. The source of illumination for a cinema projector is

- A) Carbon arc lamp
- B) Sodium lamp

C) Mercury vapour lamp

D) Incandescent lamp.

Answer: a

27. The purpose of providing a choke in tube light is

A) to eliminate corona effects

B) to avoid radio interference

C) to improve power factor

D) to limit current to appropriate value.

Answer: d

28. The decomposition of laterite results in the formation of _____ ballast.

a) Moorum

b) Coal ash

c) Broken stone

d) Sand ballast

Answer: a

29. Which element transfers its load directly to the Ballast?

a) Sleepers

b) Wheels

c) Locomotive

d) Formation

Answer: a

30. Which of the following is not a function of Ballast?

a) Providing a bed for sleepers

b) Holding sleepers in position

c) Providing effective drainage

d) Providing resistance to wheels

Answer: d

UNIT-V

1. Which of the following statements is not correct? Global warming will result in:

- a) melting of the ice cap
- b) increasing sea levels
- c) severe damage to ozone layer in stratosphere
- d) unpredictable climate patterns

Answer: c

20. The process of capturing CO₂ from point sources and storing them is called

- a) carbon sequestration
- b) carbon sink
- c) carbon Capture
- d) carbon absorption

Answer: a

3. Which of the following statements are true regarding wind turbine?

- i) wind power varies as cube of rotor size
- ii) wind power varies as cube of wind velocity
- iii) wind speed has more influence on wind power than turbine area
- iv) practical maximum amount of energy in the wind that can be collected by wind turbine rotor is about 79%

- a) i & ii b) ii & iii c) iii & iv d) ii & iv

Answer: b

4. What percentage of the sun's energy can silicon solar panels convert into electricity?

- a) 30%
- b) 15%
- c) 75%
- d) 50%

Answer: b

5. Under the Energy Conservation Act, the designated consumer is required to get the mandatory energy audit conducted by

- a) certified energy manager
- b) certified energy auditor
- c) accredited energy auditor
- d) in-house engineer

Answer: c

6. Why does too much carbon dioxide in the atmosphere cause climate change?

- a) It cools down our planet.
- b) It blocks out UV rays.
- c) It traps heat and warms up our planet.
- d) It lets sunlight escape.

Answer: c

7. Farmer's tractor adds to the carbon footprint of food because_____..

- a) It's green.
- b) It makes a lot of noise.
- c) It burns fossil fuel traveling back and forth over the fields.
- D) None

Answer:c

8. Which of these choices in transportation produces less greenhouse gas than the others?

- a)Walking
- b)Riding a bus
- c)Riding a car
- d)Taking a train

Answer: d

9. Earth's temperatures are stable because we are surrounded by _____ which allows the right amount of sunlight in to warm the Earth.

- a) a cloud layer
- b) an atmosphere
- c) gravity
- d) waste

Answer: b

10. This layer keeps us “not too hot in the summer” and “not too cold in the winter.”

Scientists call this the _____ effect.

- a greenhouse effect
- b seasonal effect
- c ocean effect
- d lake effect

Answer: a

11. Certain gases in the atmosphere: water vapor, carbon dioxide, methane and nitrous oxide, help maintain the Earth’s temperatures and climate. These are called: _____ .

- a ozone gases
- b solar gases
- c greenhouse gases
- d stomach gases

Answer: c

12. The solar energy that warms the Earth includes visible light, infrared and _____ coming from the sun.

- a) gamma rays
- b) ultraviolet radiation
- c) microwaves
- d) sunspots

Answer: b

13. The solar radiation that bounces off the Earth back toward the atmosphere is mostly _____ (with a longer wavelength).

- a) gamma radiation
- b) x-ray radiation
- c) nuclear radiation
- d) infrared radiation

Answer: d

14. The layer of the atmosphere closest to Earth is called the: _____ .

- a) troposphere
- b) stratosphere
- c) exosphere
- d) mesosphere

Answer: a

15. How are humans making greenhouse gases of our own?

- a) burning fossil fuels in our cars
- b) burning forests
- c) with large-scale agriculture
- d) all of these

Answer: d

16. Too many greenhouse gasses in the atmosphere may block heat from escaping into space and trap too much heat next to the Earth's surface causing: _____.

- a) another ice age
- b) global warming
- c) earthquakes
- d) volcanic eruptions

Answer: b

17. Something that might happen because of global warming is: _____.

- a. melting polar ice caps
- b) more reflected sunlight off the ice pack
- c) lower sea levels
- d) a sale on bathing suits

Answer: a

18. Things you can do to help decrease global warming include:

- a) Keep your air conditioner on high.
- b) Turn off your lights when you're not using them.
- c) Keep your freezer door open.
- d) Eat more ice cream

Answer: b

19. Energy Monitoring & Targeting helps in reducing annual energy costs in various industrial sectors by _____

- a) 1 % to 2 %
- b) 2 % to 10 %
- c) 4 % to 15 %
- d) 5 % to 20 %

Answer: d

20. Which one of the following cause global warming?

- a) Carbon dioxide
- b) Oxygen
- c) Nitrogen
- d) Hydrogen

Answer: a

21. How many percent of carbon dioxide increased in the atmosphere since pre-industrial times?

- a) About 10%
- b) About 20%
- c) About 30%
- d) About 40%

Answer: c

22. What is the full form of UNFCCC with respect to global warming convention?

- a) United Nations Framework Convention on Climate Change
- b) United Nations Federation Convention on Climate Change
- c) United Nations Framework Center on Climate Change
- d) United Nations Federation Center on Climate Change

Answer: a

23. Who measures the global warming rate?

- a) Astrologers
- b) Physicist
- c) Philosopher
- d) Climatologist

Answer: d

24. Which one of the following result takes place due to global warming?

- a) Maintaining steady temperature
- b) Changes in the rainfall
- c) Pleasant environment
- d) Causing less pollution

Answer: b

25. Which one of the following cause global warming?

- a) Radiative forcing

- b) Earth gravitation force
- c) Oxygen
- d) Centripetal force

Answer: a

26. Which one of the following is the anthropogenic radiative forcing of climate?

- a) Aerosols
- b) Cement
- c) Paper
- d) Glass

Answer: a

27. . Which one of the following land use causes global warming?

- a) Increase in the fertility of soil
- b) Surface reflectance
- c) Forestation
- d) Adopting organic farming

Answer: b

28. Which one of the following is the effect of global warming?

- a) Maintaining sea level
- b) Proper rainfall
- c) Desertification
- d) Afforestation

Answer: c

29.1 The Kyoto Protocol created the Clean Development Mechanism (CDM) to promote emissions reduction projects in developing countries.

2.The Global Environment Facility (GEF) uses a market-based approach to finance projects, while the Green Climate Fund (GCF) uses a grant-based approach.

Which of the statements given above is/are correct?:

- a) 1 only
- b) 2 only
- c) Both 1&2
- d) Neither 1 nor 2

Answer: c

30. What is the full form of NPPA?

- a) National Policy on Population Abatement

- b) National Policy on Pollution Abatement
- c) National Policy on Population Absorption
- d) National Policy on Population Aris

Answer: b