

Page No: 121

### Very Short Answer Type Questions

**Q1. Name a non-renewable source of energy other than fossil fuels.**

**Answer:**

Nuclear fuels such as uranium is a non-renewable source of energy other than fossil fuels.

**Q2. Define calorific value of a fuel.**

**Answer:**

Calorific value of a fuel is defined as the amount of heat that is produced by burning completely 1 gram of fuel.

**Q3. “The calorific value of cooking gas is 50kJ/g”. What does it mean?**

**Answer:**

The calorific value of cooking gas is 50kJ/g means that if 1 gram of LPG is completely burnt then the amount of heat energy produced will be equal to 50kJ.

**Q4. Which of the following produces more heat per unit mass on burning?**

Coal or LPG

**Answer:**

Among coal and LPG, LPG will produce more heat per unit mass on burning because it has higher calorific value.

**Q5. Define ignition temperature of a fuel.**

**Answer:**

Ignition temperature of a fuel is defined as the minimum temperature that is required by the fuel in which it gets heated so that it can catch fire and start burning.

**Q6. “The ignition temperature of a fuel is 80 degree Celsius”. What does this mean?**

**Answer:**

The ignition temperature of a fuel is 80 degree Celsius means that the minimum temperature required by the fuel to catch fire before burning is 80 degree Celsius.

**Q7. Fill in the blanks with a suitable word:**

**The amount of heat produced by burning a unit mass of a fuel completely is known as its..... value.**

**Answer:**

Calorific value.

### Short Answer Type Questions

**Q8. What is a source of energy? What are the two main categories of the sources of energy?**

**Answer:**

A source of energy is defined as the source from which an adequate amount of energy can be obtained for a long period of time. Following are the two main categories of the sources of energy:

- a) Renewable source of energy
- b) Non-renewable source of energy

**Q9. State any four characteristics of a good source of energy.**

**Answer:**

A good source of energy will have following four characteristics:

- a) Storage and transportation is easy.
- b) The energy can be handled with ease and is safe.
- c) The energy is easily available.
- d) The amount of work done per unit mass is large.

**Q10. What is meant by a non-renewable source of energy? Give two examples of non-renewable sources of energy.**

**Answer:**

A non-renewable source of energy is defined as the source of energy which will exhaust very soon if used for a long period of time. These sources of energy are present in nature in limited amount. Examples of non-renewable sources of energy are coal and petroleum.

**Q11. What is meant by a renewable source of energy? Give two examples of renewable sources of energy.**

**Answer:**

A renewable source of energy is defined as the source of energy which is present in nature in large quantities and can be used for a very long period of time, they never exhaust. Examples of renewable source of energy are solar energy and wind energy.

**Q12. What is the difference between a renewable and a non-renewable source of energy? Explain with examples.**

**Answer:**

The difference between a renewable and a non-renewable source of energy is that renewable source of energy is available in abundant amount in nature whereas non-renewable source of energy is limited. The overuse of non-renewable source of energy will result in exhaustion of them.

Examples of renewable source of energy are solar and wind energy while examples of non-renewable source of energy are coal and petroleum.

**Q13. Why are fossil fuels classified as non-renewable source of energy?**

**Answer:**

Fossil fuels are classified as non-renewable source of energy because once it used it cannot be regained.

**Q14. Name two sources of energy that you think are renewable. Give reason for your choice.**

**Answer:**

Air and water are two sources of energy that are renewable because they are available in large quantities in nature and can be used repetitively.

**Q15. Name two sources of energy which you consider to be non-renewable. Give reason for your choice.**

**Answer:**

Petroleum and coal are the two sources of energy that are non-renewable. This is because once they are used completely, they cannot be regained.

**Q16. a) Classify the following into renewable and non-renewable sources of energy:**

**Coal, wind, tides, petroleum, wood, natural gas**

**b) What is the basis of above classification?**

**Answer:**

a) Renewable sources of energy: wind, tides, and wood

Non-renewable sources of energy: coal, petroleum, and natural gas.

b) The above classification of sources of energy is based on the inexhaustible and exhaustible characteristic of renewable and non-renewable sources of energy respectively.

**Q17. Coal is said to be formed from the wood of trees. Why then is coal considered to be a non-renewable source of energy whereas wood is a renewable source of energy?**

**Answer:**

Coal is considered to be a non-renewable source of energy while wood is considered to be a renewable source of energy because the accumulation of coal takes longer period than growing trees. Therefore, using coal at a very high rate will result in exhaustion of coal and therefore, it is considered to non-renewable source of energy.

### Long Answer Type Questions

**Q18. a) What is a fuel? Give five examples of fuels.**

**b) What are the characteristics of an ideal fuel or good fuel?**

**c) The calorific value and ignition temperature of fuel A are 55kJ/g and 80 degree Celsius respectively. These values for fuel B are 80kJ/g and 10 degree Celsius respectively. On burning, the fuel A produces CO<sub>2</sub> and H<sub>2</sub>O while the fuel B produces CO<sub>2</sub>, CO, and SO<sub>2</sub>. Give three points of relative advantages and disadvantages of these two fuels.**

**Answer:**

a) Fuel is defined as the substance that is burnt to produce heat energy. Wood, LPG, coal, kerosene, and diesel are the five examples of fuels.

b) Following are the characteristics of fuel:

i) The calorific value must be high.

ii) The ignition temperature of the fuel should be proper.

iii) The fuel should be readily available and inexpensive.

iv) When the fuel is burnt, there should not be release of harmful gases.

c) Fuel A:

i) The calorific value is low that is 55kJ/g which is a disadvantage

ii) The ignition temperature is 80 degree Celsius which moderate and is an advantage

iii) There are no harmful gases produced which is an advantage.

Fuel B:

- i) The calorific value is high that is 80kJ/g which is an advantage
- ii) The ignition temperature is 10 degree Celsius which is a disadvantage
- iii) Harmful gases are released and that is the disadvantage

### Multiple Choice Questions

**Q19. An example of a renewable source of energy is:**

- a) petrol
- b) natural gas
- c) biogas
- d) kerosene

**Answer:**

The correct answer is c) biogas

**Q20. A non-renewable source of energy is:**

- a) wood
- b) alcohol
- c) hydrogen gas
- d) natural gas

**Answer:**

The correct answer is d) natural gas



**Q21. Which of the following is not a renewable source of energy?**

- a) wind
- b) flowing water
- c) fossil fuels
- d) fuel wood

**Answer:**

The correct answer is c) fossil fuels

**Q22. A good fuel is one which possesses:**

- a) high calorific value and low ignition temperature
- b) high calorific value and high ignition temperature
- c) high calorific value and moderate ignition temperature
- d) low calorific value and moderate ignition temperature

**Answer:**

The correct answer is c) high calorific value and moderate ignition temperature

**Q23. The fuel having a calorific value of 55kJ/g is likely to be:**

- a) biogas
- b) methane gas

- c) hydrogen gas
- d) natural gas

**Answer:**

The correct answer is b) methane gas

**Q24. A newly planted sapling usually grows and mature into a tree in more than:**

- a) 50 years
- b) 25 years
- c) 45 years
- d) 15 years

**Answer:**

The correct answer is d) 15 years

**Q25. Which of the following fuels has the highest calorific value?**

- a) natural gas
- b) methane gas
- c) hydrogen gas
- d) biogas

**Answer:**

The correct answer is c) hydrogen gas



**Q26. The fuel having the lowest calorific value is:**

- a) coal
- b) wood
- c) charcoal
- d) kerosene

**Answer:**

The correct answer is b) wood

**Q27. There are four fuels which all contain only carbon and hydrogen. The fuel having highest calorific value will be one which has:**

- a) more of carbon but less of hydrogen
- b) less of carbon but more of hydrogen
- c) equal proportions of carbon and hydrogen
- d) less of carbon as well as less of hydrogen

**Answer:**

The correct answer is b) less of carbon but more of hydrogen

**Q28. One of the following is not a characteristics of a good fuel. This is:**

- a) high calorific value
- b) no emission of smoke
- c) smooth burning
- d) high ignition temperature

**Answer:**

The correct answer is d) high ignition temperature

**Q29. Which of the following is not a fossil fuel?**

- a) coal
- b) petroleum gas
- c) biogas
- d) natural gas

**Answer:**

The correct answer is c) biogas

**Page No: 130**

### **Very Short Answer Type Questions**

**Q1. Name the product of petroleum that is used to drive heavy vehicles.**

**Answer:**

Diesel is the product of petroleum that is used to drive heavy vehicles.

**Q2. Give one example of a good domestic fuel.**

**Answer:**

LPG is an example of a good domestic fuel.

**Q3. Name any one hydrocarbon fraction obtained during the fractional distillation of petroleum which is used as a domestic fuel.**

**Answer:**

Kerosene is a hydrocarbon fraction that is obtained during the fractional distillation of petroleum which is used as a domestic fuel.

**Q4. What are the various fuels which are used to generate electricity in a thermal power plant?**

**Answer:**

Following are the various fuels that are used in the generation of electricity in a thermal power plant:

Coal, gas, and oil.

**Q5. Name any four fractions obtained from petroleum which are used as fuels.**

**Answer:**

Following are the fraction that are obtained from petroleum that are used as fuels:

Petroleum gas, diesel, kerosene, and petrol.

**Q6. What is the composition of liquefied petroleum gas?**

**Answer:**

The composition of liquefied petroleum gas is butane with smaller amounts of propane and ethane.

**Q7. Which gaseous fuel is being used increasingly in transport vehicles like cars and buses these days?**

s

**Answer:**

Compressed Natural Gas is used in transport vehicles such as cars and buses.

**Q8. Write the full form of: a) LPG b) CNG**

**Answer:**

a) LPG: Liquefied Petroleum Gas

b) CNG: Compressed Natural Gas

**Q9. What is the main constituent of:**

**a) petroleum gas?**

**b) natural gas?**

**Answer:**

a) The main constituent of petroleum gas is butane

b) The main constituent of natural gas is methane

**Q10. Name the component which is found in natural gas as well as in biogas.**

**Answer:**

The component which is found in natural gas as well as in biogas is butane.

**Q11. State two important uses of natural gas.**

**Answer:**

Following are the two important uses of natural gas:

a) It is used as a fuel in thermal power plants

b) It is used as a fuel in transport vehicles

**Q12. State one important use of CNG these days.**

**Answer:**

One of the important uses of CNG these days is it is used as fuel in transport vehicles.

**Q13. Complete the following sentence:**

**Domestic gas cylinders like Indane contain mainly .....**

**Answer:**

Butane

### Short Answer Type Questions

**Q14. Explain why natural gas is considered to be a good fuel.**

**Answer:**

Natural gas is considered to be a good fuel because the calorific value of the gas is high and when it is burnt, it burns with smokeless flame resulting in no production of harmful gases.

**Q15. What is meant by conventional sources of energy? Write the names of two conventional sources of energy.**

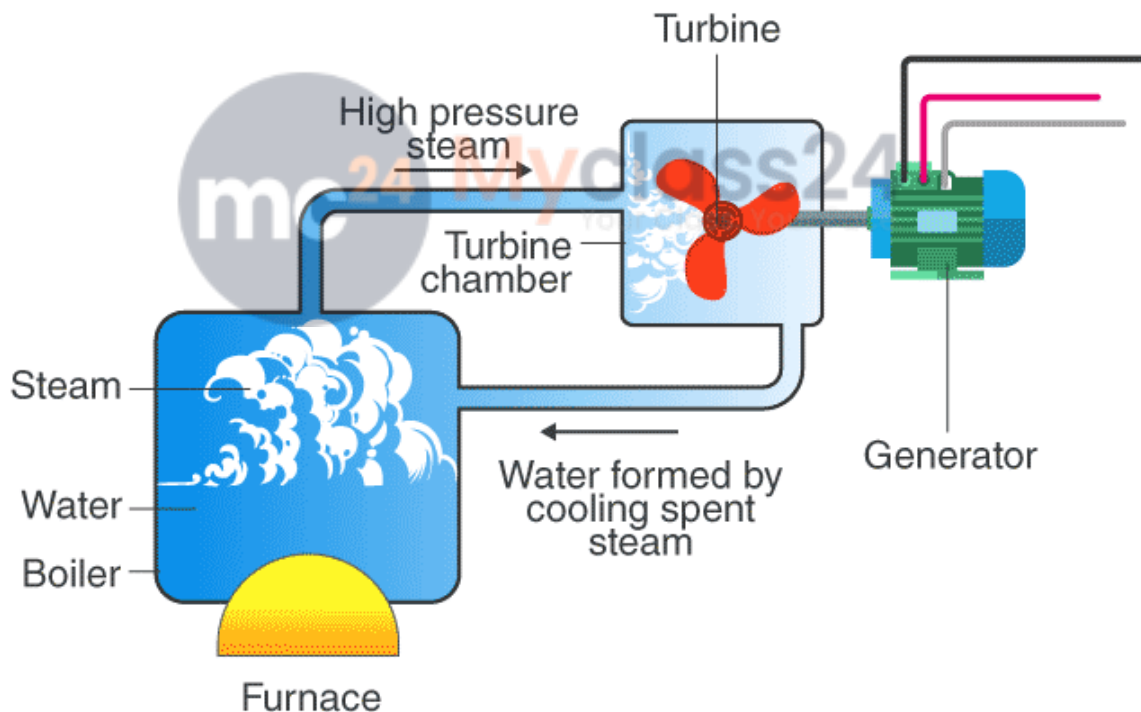
**Answer:**

Conventional sources of energy is the traditional sources of energy that is familiar to large number of people. Examples of conventional sources of energy are wood and coal.

**Q16. Explain the principle of working of a thermal power plant. Draw a labelled diagram to illustrate your answer.**

**Answer:**

In thermal power plants, heat is produced by burning coal which is used for boiling water to form steam. When the steam with high temperature and pressure is exposed to the turbines, it results in the rotation of turbine and its shaft. This continues rotation of turbine is responsible for the production of electricity.



**Q17. What are the disadvantages of burning fossil fuels?**

**Answer:**

Disadvantages of burning fossil fuels are:

- a) Burning of fossil fuels produces acidic gases.
- b) The amount of smoke released is more and the amount of ash production is also lot.
- c) Greenhouse gases are released during the burning of fossil fuels.

**Q18. Write a short note on the pollution caused by burning fossil fuels.**

**Answer:**

When fossil fuels are burned there is release of acidic gases such as sulphur-dioxide and nitrogen dioxides. These gases are responsible for the acid rains which damages trees, buildings, and plants, also reducing the fertility of soil. It is also dangerous for the aquatic life. Also, greenhouse gases such as carbon monoxide and carbon dioxide are released. These are the pollution that are caused by the burning of fossil fuels.

**Q19. What are the various steps which can be taken to control pollution caused by burning fossil fuels?**

**Answer:**

Steps that can be taken to control pollution caused by burning of fossil fuels are by increasing the efficiency of combustion process and by finding ways to reduce the release of harmful gases and ashes into nature.

**Q20. If you could use any source of energy for heating your food, which one would you use and why?**

**Answer:**

For heating food, LPG is used as a source of energy because it has a high calorific value and has smokeless flames.

**Q21. Why is LPG considered a good fuel?**

**Answer:**

LPG is considered to be a good fuel because of its calorific value and there is no production of harmful gases. Also, the calorific value of LPG is high.

**Q22. Why is LPG considered a better fuel than coal?**

**Answer:**

LPG is considered to be a better fuel than coal because when coal is burnt harmful gases are released which does not happen when LPG is burnt.

**Q23. Why is the leakage of LPG detected easily although it is odourless? State the steps to be taken in case its leakage is detected in the kitchen.**

**Answer:**

LPG is an odourless substance and it is still detected by its odour because of the presence of mercaptan that is added to the LPG.

In case of LPG leakage in the kitchen, following are the steps that must be taken:

- a) The doors and windows should be kept open at once so as to allow the gas to escape.
- b) Seeking help from a gas mechanic is advisable.

### Long Answer Type Questions

**Q24. a) What are fossil fuels? Give three examples of fossil fuels.**

**b) Describe how fossil fuels were formed.**

**c) Explain how the sun is considered to be the ultimate source of fossil fuels.**

**d) Which fossil fuels were formed by the buried remains of small plants and animals?**

**e) Which fossil fuel was formed by the buried remains of large land plants?**

**Answer:**

a) Fossil fuels are the natural fuels that are formed deep under the earth from the pre-historic remains of the organisms. Coal, petroleum, and natural gas are the examples of fossil fuels.

b) Fossil fuels are formed from the dead remains of the animals and plants that died millions of years back. These remains are buried deep inside the earth and are away from the reach of the oxygen. Also, the chemical effects bacteria along with continuous pressure and heat resulted in the formation of fossil fuels.

c) Sun is considered to be the ultimate source of fossil fuel because sunlight is responsible for the growth of plants and animals that are buried inside the earth. Therefore, it can be said that plants and animals are made from sun's energy and is converted into fossil fuels.

d) Petroleum and natural gas.

e) Coal

**Multiple Choice Questions**

**Q25. The main constituent of petroleum gas is:**

- a) methane
- b) ethane
- c) butane
- d) propane

**Answer:**

The correct answer is c) butane

**Q26. The natural gas consists of mainly of:**

- a) methane
- b) ethane
- c) propane
- d) butane

**Answer:**

The correct answer is a) methane

**Q27. Which of the following is not produced by the burning of fossil fuels?**

- a) nitrogen oxides
- b) sulphur oxides
- c) sodium oxides
- d) carbon oxides

**Answer:**

The correct answer is c) sodium oxides

**Q28. The product of petroleum used to drive heavy vehicles like trucks is:**

- a) petrol
- b) kerosene
- c) petrol
- d) CNG

**Answer:**

The correct answer is c) petrol

**Q29. The aviation fuel which is used in the engines of jet aeroplanes is:**

- a) diesel
- b) kerosene
- c) petrol
- d) CNG

**Answer:**

The correct answer is b) kerosene

**Q30. The ultimate source of energy stored in fossil fuels is:**

- a) moon
- b) earth
- c) sun
- d) sea

**Answer:**

The correct answer is c) sun



**Q31. Which of the following is not a fossil source of energy?**

- a) kerosene oil
- b) cow-dung cakes
- c) CNG
- d) coal

**Answer:**

The correct answer is b) cow-dung cake

**Q32. The fuel which is not used at thermal plants is:**

- a) coal
- b) uranium
- c) natural gas
- d) fuel oil

**Answer:**

The correct answer is b) uranium

**Q33. LPG consists mainly of:**

- a) butane
- b) ethane
- c) butanone
- d) methane

**Answer:**

The correct answer is a) butane

**Q34. Coke is more valuable when used:**

- a) as a fuel for industrial boilers
- b) as an oxidizing agent
- c) as a reducing agent
- d) as a fuel in domestic ovens

**Answer:**

The correct answer is c) as a reducing agent

**Q35. Coal cannot be converted into one of the following forms of energy. This is:**

- a) coal gas
- b) electricity
- c) oil
- d) charcoal

**Answer:**

The correct answer is d) charcoal

**Q36. One of the following does not contribute to acid rain. That is:**

- a) nitrogen monoxide
- b) sulphur dioxide
- c) carbon monoxide
- d) carbon dioxide

**Answer:**

The correct answer is c) carbon monoxide

**Page No: 140**

### **Multiple Choice Questions**

**Q29. A solar water heater cannot be used to get hot water on:**

- a) a sunny day
- b) a cloudy day
- c) a hot day
- d) a windy day

**Answer:**

The correct option is b) a cloudy day

**Q30. At a hydro power plant:**

- a) kinetic energy possessed by stored water is converted into electrical energy
- b) electricity is extracted from water
- c) water is converted into steam to turn turbines and produce electricity

**d) potential energy possessed by stored water is converted into electricity**

**Answer:**

The correct option is d) potential energy possessed by stored water is converted into electricity

**Q31. The part of box-type solar cooker which is responsible for producing greenhouse effect is:**

- a) plane mirror reflector
- b) black coating inside the box
- c) glass sheet cover
- d) utensils placed in the cooker box

**Answer:**

The correct option is c) glass sheet cover

**Q32. Solar cells are made of:**

- a) conductors
- b) insulators
- c) semiconductors
- d) superconductors

**Answer:**

The correct option is c) semiconductors

**Q33. The value of solar constant is:**

- a) 1.4kWh
- b) 1.4kW/m
- c) 1.4kW/m<sup>2</sup>
- d) 1.4kW/m<sup>3</sup>

**Answer:**

The correct option is c) 1.4kW/m<sup>2</sup>

**Q34. The radiations present in sunlight which make a solar cooker work are:**

- a) visible light rays
- b) ultraviolet rays
- c) cosmic rays
- d) infrared rays

**Answer:**

The correct option is d) infrared rays

**Q35. In order to make an efficient solar cooker, the cover of cooker box should be made of:**

- a) transparent plastic sheet
- b) shining aluminum sheet
- c) butter paper sheet
- d) transparent glass sheet

**Answer:**

The correct option is d) transparent glass sheet



**Q36. The minimum speed of wind necessary for the satisfactory working of a wind generator to produce electricity is about:**

- a) 15km/h
- b) 25km/h
- c) 35km/h
- d) 45km/h

**Answer:**

The correct option is a) 15km/h

**Q37. If the solar constant is  $1.4\text{kW/m}^2$  then the solar energy received by  $1\text{m}^2$  area in one hour is:**

- a) 5040J
- b) 504.4kJ
- c) 5040kJ
- d) 5.04kJ

**Answer:**

The correct option is c) 5040kJ

**Q38. A solar cooker may not cook food if:**

- a) the solar cooker is not placed in the shade
- b) the glass sheet cover of solar cooker is not closed
- c) a convex mirror reflector is not used
- d) the food containers of insulating material are not used

**Answer:**

The correct option is b) the glass sheet cover of solar cooker is not closed

**Page No: 148**

## Multiple Choice Questions

**Q29. Which of the following is not an example of a biomass energy source?**

- a) wood
- b) biogas
- c) atomic energy
- d) cow-dung

**Answer:**

The correct option is c) atomic energy

**Q30. most of the sources of energy that we use represent stored solar energy. Which of the following is not ultimately derived from the sun's energy?**

- a) wind energy
- b) geothermal energy
- c) fossil fuels
- d) ethane

**Answer:**

The correct option is b) geothermal energy

**Q31. The constituent of biogas which makes it an excellent fuel is:**

- a) butane
- b) methane
- c) propane
- d) ethane

**Answer:**

The correct option is b) methane

**Q32. The major component of biogas is:**

- a) hydrogen
- b) butane
- c) hydrogen sulphide
- d) methane

**Answer:**

The correct option is d) methane

**Q33. Which of the following is more environmentally friendly?**

- a) burning of diesel
- b) burning of coal
- c) burning of charcoal
- d) burning of wood

**Answer:**

The correct option is c) burning of charcoal

**Q34. Which of the following is not renewable energy technology?**

- a) solar cells
- b) windmills
- c) nuclear power
- d) tidal power

**Answer:**

The correct option is c) nuclear power

**Q35. The rise of sea-water during high tide is caused by the gravitational pull of the:**

- a) sun
- b) earth
- c) moon
- d) mars

**Answer:**

The correct option is c) moon

**Q36. One of the following is not required in the formation of biogas plant. This is:**

- a) cow-dung

- b) water
- c) oxygen
- d) anaerobic bacteria

**Answer:**

The correct option is c) oxygen

**Q37. The fuel which is not obtained from biomass is:**

- a) firewood
- b) cow-dung cakes
- c) coke
- d) charcoal

**Answer:**

The correct option is c) coke

**Q38. The non-renewable source of energy among the following is:**

- a) hydroelectricity
- b) sewage gas
- c) natural gas
- d) gobar gas

**Answer:**

The correct option is c) natural gas



**Q39. Geothermal energy is produced by the:**

- a) fission of radioactive materials
- b) burning of coal inside the coal mines
- c) combustion of natural gas deep inside the earth
- d) fusion of radioactive substance

**Answer:**

The correct option is a) fission of radioactive materials

**Q40. The harnessing of which of the following leads to the destruction of large eco-systems?**

- a) thermal power
- b) tidal power
- c) hydro power
- d) geothermal power

**Answer:**

The correct option is c) hydro power

**Q41. Which of the following is not a consequence of establishing hydroelectric power plants?**

- a) displacement of people
- b) production of methane
- c) occurrence of floods
- d) ecological disturbance

**Answer:**

The correct option is c) occurrence of floods

Page No: 156

### Multiple Choice Questions

**Q28. Which of the following is used as a moderator in the reactor of a nuclear power station?**

- a) liquid sodium
- b) boron
- c) graphite
- d) carbon dioxide

**Answer:**

The correct option is c) graphite

**Q29. The control rods used in the reactor of a nuclear power plant are made of:**

- a) steel
- b) graphite
- c) uranium
- d) boron

**Answer:**

The correct option is d) boron

**Q30. The 'coolants' which can be used in the reactor of a nuclear power station are:**

- a) liquid mercury and nitrogen dioxide
- b) liquid sodium and carbon dioxide
- c) liquid ammonia and carbon monoxide
- d) liquid boron and uranium oxide

**Answer:**

The correct option is b) liquid sodium and carbon dioxide

**Q31. In a nuclear power plant, coolant is a substance:**

- a) which cools the hot, spent steam to condense it back to water
- b) which transfers heat from reactor to water in heat exchanger
- c) which is boiled to make steam to turn the turbine
- d) which cools the generator coils to prevent their overheating

**Answer:**

The correct option is b) which transfers heat from reactor to water in heat exchanger

**Q32. Which of the following is ultimately not derived from the sun's energy?**

- a) wind energy
- b) nuclear energy
- c) biomass energy
- d) ocean thermal energy

**Answer:**

The correct option is b) nuclear energy

**Q33. One atomic mass unit is equivalent to an energy of:**

- a) 931 eV
- b) 9.31 MeV
- c) 1 MeV
- d) 931 MeV

**Answer:**

The correct option is d) 931 MeV

**Q34. The energy in the reactor of a nuclear power station is produced by the process of:**

- a) nuclear diffusion
- b) nuclear fission
- c) nuclear fusion
- d) nuclear fermentation

**Answer:**

The correct option is b) nuclear fission

**Q35. One eV of nuclear energy is equivalent to:**

- a)  $1.6 \times 10^{-14}$  J
- b)  $1.6 \times 10^{-12}$  J
- c)  $1.6 \times 10^{-19}$  J
- d)  $1.6 \times 10^{-13}$  J

**Answer:**

The correct option is c)  $1.6 \times 10^{-19}$  J

**Q36. Which of the following can be produced during the nuclear fission as well as nuclear fusion reactions?**

- a) protons
- b) deuterons
- c) electrons
- d) neutrons

**Answer:**

The correct option is d) neutrons

**Q37. Nuclear fission reactions are not a source of energy for one of the following. This is:**

- a) atom bomb
- b) power plants
- c) sun
- d) pacemaker

**Answer:**

The correct option is c) sun

**Q38. The energy produced by converting 1 gram mass of a nuclear fuel into energy completely is:**

- a)  $9 \times 10^{16}$  J
- b)  $9 \times 10^{14}$  J
- c)  $9 \times 10^{15}$  J
- d)  $9 \times 10^{13}$  J

**Answer:**

The correct option is d)  $9 \times 10^{13}$  J

**Q39. The source of energy of the sun is:**

- a) conversion of hydrogen gas into helium
- b) conversion of carbon fuel into carbon dioxide
- c) burning of hydrogen gas present in the sun
- d) disintegration of uranium into barium and krypton

**Answer:**

The correct answer is a) conversion of hydrogen gas into helium

**Q40. An uncontrolled nuclear chain reaction forms the basis of:**

- a) nuclear power plant
- b) hydrogen bomb
- c) thermal power station
- d) atom bomb

**Answer:**

The correct answer is d) atom bomb

**Q41. One MeV of nuclear energy is equivalent to:**

- a)  $1.6 \times 10^{-13}$  J
- b)  $1.6 \times 10^{-19}$  J
- c)  $1.6 \times 10^{-16}$  J
- d)  $1.6 \times 10^{-15}$  J

**Answer:**

The correct option is a)  $1.6 \times 10^{-13}$  J

**Q42. One type of energy which has not been controlled so far is**

- a) ocean thermal energy
- b) nuclear fusion energy
- c) geothermal energy
- d) nuclear fission energy

**Answer:**

The correct option is b) nuclear fusion energy

**Q43. The disposal of wastes produced in a nuclear power plant poses a big problem because it is:**

- a) too heavy
- b) highly inflammable
- c) extremely foul smelling
- d) highly radioactive

**Answer:**

The correct option is d) highly radioactive

**Q44. The heat energy released during nuclear fission and fusion is due to the:**

- a) conversion of stored chemicals into energy
- b) conversion of momentum into energy
- c) conversion of mass into energy
- d) conversion of magnetism into energy

**Answer:**

The correct option is c) conversion of mass into energy

**Q45. Which of the following can undergo nuclear fusion reaction?**

- a) uranium
- b) deuterium
- c) barium
- d) krypton

**Answer:**

The correct option is b) deuterium

No: 161



### Multiple Choice Questions

**Q9. The major cause of environmental pollution is the use of:**

- a) hydrogen as fuel
- b) biomass energy
- c) ocean energy
- d) fossil fuels

**Answer:**

The correct option is d) fossil fuels

**Q10. The world's known coal reserves are expected to last for about:**

- a) 200 years
- b) 400 years
- c) 500 years
- d) 100 years

**Answer:**

The correct option a) 200 years

**Q11. The fossil fuel whose known reserves in the earth are expected to last for the minimum period is:**

- a) coal
- b) uranium
- c) petroleum

**d) natural gas**

**Answer:**

The correct option c) petroleum

**Q12. An energy efficient device for producing light is:**

**a) DLF**

**b) CFL**

**c) FCL**

**d) LPG**

**Answer:**

The correct option b) CFL

