



KINETICS

We Nurture The Future

IIT-JEE | Medical | Foundations

Combustion and Flame

Question 1.

Which of the following fuel produces ash on burning:

- (a) wood
- (b) LPG
- (c) petrol
- (d) diesel

▼ [Answer](#)

- (a) wood

Wood produces ash on burning.

Question 2.

The zone of a flame used by goldsmith for melting gold and silver is:

- (a) innermost zone
- (b) middle zone
- (c) outermost zone
- (d) all of these

▼ [Answer](#)

- (c) outermost zone

The zone of a flame used by goldsmith for melting gold and silver is outermost zone because it is the hottest zone.

Question 3.

Can the process of rusting be called combustion ?

- (a) yes
- (b) no
- (c) can't say
- (d) none of these

▼ [Answer](#)

- (a) yes

Yes, the process of rusting can be called combustion because it produces heat.

Question 4.

Is heat and light produced by Sun a combustion process?

- (a) yes
- (b) no
- (c) can't say
- (d) none of these

▼ Answer

(b) no

No, heat and light produced by sun is not a combustion process.

Question 5.

Heat and light produced in the sun is by:

- (a) combustion
- (b) nuclear reactions
- (c) burning
- (d) none of these

▼ Answer

(b) nuclear reactions

Heat and light produced in the sun is by nuclear reactions.

Question 6.

Ignition temperature is the:

- (a) temperature at which a substance catches fire
- (b) highest temperature at which a substance catches fire
- (c) lowest temperature at which a substance catches fire
- (d) none of these

▼ Answer

(c) lowest temperature at which a substance catches fire

Ignition temperature is the lowest temperature at which a substance catches fire

Question 7.

Which of them can be easily burnt with the help of a matchstick?

- (a) wooden chips
- (b) straw
- (c) wooden log
- (d) all of them

▼ Answer

(b) straw

Straw can be easily burnt with the help of a matchstick because the ignition temperature of straw is very less and heat produced from lighted matchstick is more than the ignition temperature of straw and therefore it starts burning.

Question 8.

A matchstick does not catch fire on its own at room temperature because its:

- (a) ignition temperature is more than room temperature
- (b) ignition temperature is less than room temperature

- (c) ignition temperature is same as room temperature
- (d) none of these

▼ [Answer](#)

(a) ignition temperature is more than room temperature
A matchstick does not catch fire on its own at room temperature because its ignition temperature is more than room temperature.

Question 9.

Which of the following gas extinguishes fire:

- (a) oxygen
- (b) hydrogen
- (c) carbon dioxide
- (d) nitrogen

▼ [Answer](#)

(c) carbon dioxide
Carbon dioxide gas extinguishes fire.

Question 10.

Combustion that takes place at a very fast rate is called:

- (a) rapid combustion
- (b) spontaneous combustion
- (c) explosion
- (d) none of these

▼ [Answer](#)

(a) rapid combustion
Combustion that takes place at a very fast rate is called rapid combustion.

Question 11.

The coldest zone of candle is:

- (a) the middle zone
- (b) the innermost zone
- (c) the outermost zone
- (d) none of these.

▼ [Answer](#)

(b) the innermost zone
The coldest zone of candle is the innermost zone.

Question 12.

Smoke contains:

- (a) unburnt carbon particles

- (b) burnt carbon particles
- (c) unburnt sulphur particles
- (d) unburnt lead particles.

▼ [Answer](#)

(b) burnt carbon particles
Smoke contains unburnt carbon particles.

Question 13.

The colour of the non-luminous zone is:

- (a) white
- (b) yellow
- (c) blue
- (d) black

▼ [Answer](#)

(c) blue
The colour of the non-luminous zone is blue.

Question 14.

Which of the following fuel has the highest calorific value:

- (a) cow dung cake
- (b) Wood
- (c) coal
- (d) Petrol

▼ [Answer](#)

(d) Petrol
Petrol has higher calorific value than petrol.

Question 15.

The fuel which replaces use of diesel and petrol as fuels in automobiles is:

- (a) LPG
- (b) biogas
- (c) CNG
- (d) none of these

▼ [Answer](#)

(c) CNG
CNG has replaced use of diesel and petrol as fuels in automobiles because it is non-pollutant fuel.

Question 16.

Which of following does not produce flame on burning:

- (a) LPG
- (b) charcoal
- (c) paper
- (d) kerosene

▼ [Answer](#)

- (b) charcoal

LPQ paper and kerosene produces flame on burning whereas charcoal does not produce flame on burning.

Question 17.

Which of the following is best fuel for automobiles:

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

▼ [Answer](#)

- (b) CNG

CNG is best fuel for automobiles as it produces pollutants in very small amounts.

Question 18.

which of the following causes global warming:

- (a) carbon dioxide
- (b) carbon monoxide
- (c) nitrogen dioxide
- (d) none of these

▼ [Answer](#)

- (a) carbon dioxide

Carbon dioxide causes global warming.

Question 19.

The unit of calorific value is:

- (a) kilojoules per kg
- (b) joules per kg
- (c) kilojoules per grain
- (d) joules per gram

▼ [Answer](#)

- (a) kilojoules per kg

The unit of calorific value is Kilojoules per kg.

Question 20.

The hottest zone of candle flame is:

- (a) outermost zone
- (b) in middle zone
- (c) middle zone
- (d) all of these

▼ [Answer](#)

- (a) outermost zone

The hottest zone of candle flame is outermost zone.

Question 21.

A chemical process in which a substance reacts with oxygen to give off heat is called.

- (a) reduction
- (b) evaporation
- (c) combustion
- (d) none of these

▼ [Answer](#)

- (c) combustion

Combustion is a chemical process in which a substance reacts with oxygen to give off heat.

Question 22.

Which of the following burns with flame:

- (a) coal
- (b) cow dung
- (c) candle
- (d) all of these

▼ [Answer](#)

- (c) candle

Candle burns with a flame, coal, cow dung does not burn with a flame.

Question 23.

Magnesium burns in air to form

- (a) magnesium oxide
- (b) heat
- (c) light
- (d) all of these

▼ [Answer](#)

- (d) all of these

Magnesium burns in air to form magnesium oxide, heat and light.

Question 24.

Which of the following substance is not combustible:

- (a) matchstick
- (b) straw
- (c) charcoal
- (d) glass

▼ [Answer](#)

(d) glass

Glass is not combustible. Matchstick, straw and charcoal are combustible.

Question 25.

In which of the following conditions combustion takes place:

- (a) the presence of a combustible substance
- (b) the presence of air with sufficient amount of oxygen
- (c) the temperature of combustible substance should be more than its ignition temperature
- (d) all the above conditions are necessary

▼ [Answer](#)

(d) all the above conditions are necessary

The conditions under which combustion takes place is the presence of a combustible substance, air with sufficient amount of oxygen and ignition temperature of the combustible substance.

Question 26.

Which of the following is smoke free fuel:

- (a) wood
- (b) LPG
- (c) charcoal
- (d) coal

▼ [Answer](#)

(b) LPG

LPG is smoke free fuel, wood, charcoal and coal produces smoke on burning.

Question 27.

Coal mainly contains:

- (a) carbon
- (b) nitrogen and Sulphur
- (c) carbon, hydrogen and nitrogen
- (d) none of these

▼ [Answer](#)

(a) carbon

Coal mainly contains carbon.

Question 28.

Which poisonous gas is formed as a result of incomplete combustion ?

(a) carbon monoxide

(b) coal gas

(c) carbon dioxide

(d) nitrogen oxide

▼ [Answer](#)

(a) carbon monoxide

The poisonous gas formed as a result of incomplete combustion is carbon monoxide.

Question 29.

The natural solid fuel is:

(a) coal

(b) charcoal

(c) coke

(d) LPG

▼ [Answer](#)

(a) coal

The natural solid fuel is coal.

Question 30.

Which of the following give us pollution free environment on burning:

(a) wood

(b) kerosene

(c) cow dung cakes

(d) biogas

▼ [Answer](#)

(d) biogas

Biogas gives us pollution free environment on burning.

[Match the Column-A with Column-B:](#)

Question 1.

Column-A	Column-B
(a) Charcoal	(i) Inflammable substance
(b) Iron nails	(ii) Combustible substance
(c) Petrol	(iii) Non-combustible substance

▼ Answer

Column-A	Column-B
(a) Charcoal	(ii) Combustible substance
(b) Iron nails	(iii) Non-combustible substance
(c) Petrol	(i) Inflammable substance

Question 2.

Column-A	Column-B
(a) Rapid Combustion	(i) When a sudden reaction takes place with the evolution of heat, light, sound and large amount of gas.
(b) Spontaneous Combustion	(ii) When gas burns rapidly and produces heat and light.
(c) Explosion	(iii) When a material suddenly bursts into flames, without , the application of any apparent cause

▼ Answer

Column-A	Column-B
(a) Rapid Combustion	(ii) When gas burns rapidly and produces heat and light.
(b) Spontaneous Combustion	(iii) When a material suddenly bursts into flames, without , the application of any apparent cause
(c) Explosion	(i) When a sudden reaction takes place with the evolution of heat, light, sound and large amount of gas.

Question 3.

Column-A	Column-B
(a) Ignition temperature	(i) The substances which burn in air.
(b) Combustion	(ii) Substances having very low ignition temperature.
(c) Inflammable substances	(iii) The lowest temperature at which a combustible substance catches fire.

▼ Answer

Column-A	Column-B
(a) Ignition temperature	(iii) The lowest temperature at which a combustible substance catches fire.
(b) Combustion	(i) The substances which burn in air.
(c) Inflammable substances	(ii) Substances having very low ignition temperature.

State whether the following statements are True or False:

Question 1.

Unburnt carbon particles in air are dangerous pollutants causing respiratory problems.

▼ [Answer](#)

True

Question 2.

Decreased percentage of carbon dioxide in air has been linked to global warming.

▼ [Answer](#)

False

Question 3.

Water can be used to control fires involving electric equipment or oils.

▼ [Answer](#)

False

Question 4.

LPG is a better domestic fuel than wood.

▼ [Answer](#)

True

Question 5.

In the sun heat and light are produced by nuclear reactions.

▼ [Answer](#)

True

Question 6.

Coal is not a fossil fuel.

▼ [Answer](#)

False

Question 7.

Wildlife and minerals are exhaustible natural resources.

▼ [Answer](#)

True

Question 8.
Coal mainly contains hydrogen.

▼ [Answer](#)

False

Question 9.
Petroleum is a dark oily liquid.

▼ [Answer](#)

True

Question 10.
CNG is Compressed Natural Gas.

▼ [Answer](#)

True

Question 11.
LPG has more calorific value than wood.

▼ [Answer](#)

True

Question 12.
A goldsmith use the middle zone of a flame for melting gold, and silver.

▼ [Answer](#)

False

Question 13.
The hottest zone of the flame is outermost zone.

▼ [Answer](#)

True

Question 14.
A piece of charcoal burns in air and produces carbon monoxide.

▼ Answer

False

Question 15.

The ignition temperature of wood is lower than that of kerosene oil.

▼ Answer

False

Fill in the blanks:

Question 1.

Burning of wood and coal causes of air.

▼ Answer

pollution

Question 2.

The unit of calorific value of a fuel is

▼ Answer

kilojoules/kilogram

Question 3.

Cement is a substance.

▼ Answer

non-combustible substance

Question 4.

The slow process of conversion of dead vegetation into coal is called

▼ Answer

carbonisation

Question 5.

..... is a tough, porous and black substance.

▼ Answer

Coke

Question 6.

A combustible substance cannot catch fire or burn as long as its temperature is lower than its temperature.

▼ [Answer](#)

ignition

Question 7.

The three essential requirements for producing fire are, and

▼ [Answer](#)

fuel, air, heat

Question 8.

LPG is

▼ [Answer](#)

Liquefied Petroleum Gas

Question 9.

Process of separation of different constituents from petroleum is called

▼ [Answer](#)

refining

Question 10.

..... is the rise in temperature of the environment of the earth.

▼ [Answer](#)

Global warming

Question 11.

A liquid fuel, used in homes is

▼ [Answer](#)

kerosene

Question 12.

Fuel must be heated to its before it starts burning.

▼ [Answer](#)

ignition temperature

Question 13.

Fire produced by oil cannot be controlled by

▼ [Answer](#)

water

Question 14.

Fuels are stores of energy which of burning give and

▼ [Answer](#)

heat and light

Question 15.

The colour of outermost zone is

▼ [Answer](#)

blue

Question 16.

The colour of innermost zone of the flame is

▼ [Answer](#)

dark

Question 17.

Fire brigade uses to extinguish the fire.

▼ [Answer](#)

water

Question 18.

Incomplete combustion of a fuel gives poisonous gas.

▼ [Answer](#)

carbon monoxide

Question 19.

Inflammable substances have very ignition temperature.

▼ Answer

low

Question 20.

The substances which burn in air are called

▼ Answer

combustible
