

Class VIII, Science, Chapter-7, COMBUSTION

COMBUSTION

A) Choose the correct options from the following.

1. The material which on heating in presence of oxygen catches fire easily and produces heat

and light energy is known as _____ material.

a) combustible. b) non-combustible. c) conducting. d) none

2. _____ present in air helps in combustion of fuel.

a) oxygen. b) nitrogen. c) carbon-di-oxide d) carbon –mono-oxide

3. Burning of cow dung cakes is an example of _____ combustion.

a) slow. b) rapid. c) spontaneous. d) explosive.

4. _____ is a substance which undergoes spontaneous combustion.

a) wood b) coal. c) sodium d) cow dung cakes

5. _____ is highly poisonous gas produced as a result of incomplete combustion.

a) oxygen. b) carbon dioxide. c) carbon mono oxide. d) soot

6. The middle zone of a candle flame is known as the _____ zone.

a) luminous b) non-luminous c) wax d) burning

7. The unit of calorific value of fuel is _____ .

a) KJ /Kg b) J/Kg. c) KJ /g d) J/g

8. Increase in temperature due to excess of carbon dioxide in air which traps heat energy is known as _____ .

a) global warming b) soot c) ash d) acid rain

9. _____ fuels produce least amount of harmful gases and do not leave behind solid residue on combustion.

a) solid. b) gaseous c) liquid. d) semi-solid

10. The lowest temperature at which a substance catches fire is _____ temperature.

a) ignition b) boiling c) freezing. d) none

11. The _____ gas produced during burning of coal is responsible for causing acid rain .

a) oxygen. b) sulphur dioxide. c) nitrogen d) water vapour

12. The _____ zone of a candle flame is the hottest zone.

a) innermost. b) outermost. c) middle d) none

13. On a cold winter night, the process of sleeping in a room with closed door and windows with coal fire burning inside may lead to death of a person due to excessive accumulation of

a) nitrogen monoxide b) nitrogen dioxide

c) carbon dioxide. d) carbon monoxide

14. A substance which reacts with oxygen giving heat is called a combustible substance. Which one of the following is a combustible substance?

a) iron nail b) glass c) stone piece. d) wood

15. Which one of the following has highest calorific value?

a) kerosene b) biogas. c) LPG d) petrol

16. Magnesium ribbon on burning in air produces

a) magnesium oxide, water and light c) magnesium oxide and heat

b) magnesium oxide , heat and light. d) magnesium oxide, water and heat (b)

17. Which of the following is not a combustible substance?

a) camphor. b)glass c)straw d)alcohol

18. The substance that does not burn with flame is

a) LPG b)camphor c)dry grass d)charcoal

19. On placing an inverted tumbler over a burning candle, the flame extinguishes after some –
time . This is because of non –availability of

a) oxygen b)water vapour. c)carbon dioxide d)wax

20. The substance expected to have the highest ignition temperature out of the following is

a) kerosene b)petrol c)coal d)alcohol

21. Choose the correct statement about inflammable substance from the following. They have

a) low ignition temperature and cannot catch fire easily.

b) high ignition temperature and can catch fire easily .

c) low ignition temperature and can catch fire easily

d) high ignition temperature and cannot catch fire easily (c)

22. Choose the incorrect statement from the following : Forest fires are usually due to

a) carelessness of humans. c) heat of sun

b) cutting of trees. d) lightning strike

23. The calorific value of fuel is expressed in unit called

a) kilojoule per litre c) kilogram per millilitre

b) kilogram per gram d) kilo joule per kilogram

24. The clearing of forest is called X and this can cause the soil to be washed away in the process

called soil Y. The excess carbon dioxide in the air results in Z . What can X, Y and Z be

i. X Y Z

Deforestation erosion global warming

Deforestation degradation heating

Logging erosion cooling

Logging degradation global warming

25. A heap of green leaves is lying in one corner of a park . The green leaves in the heap burn

with difficulty because

a) they contain a tough material called cellulose .

b) they contain lot of water

c) they contain a green pigment chlorophyll .

d) they do not get sufficient oxygen for burning

26. If the clothes of a person working in the kitchen catch fire , then to extinguish the fire.

a) Sand should be thrown over the burning clothes

b) Water should be thrown over the burning clothes

c) Polyester blanket should be used to cover the burning clothes .

d) Woollen blanket should be used to cover the burning clothes

27. The correct decreasing order of calorific value of the given combustible substance is

a) charcoal > petrol > LPG > wood b) LPG > petrol > charcoal > water

c) charcoal > LPG > wood > petrol d) Charcoal > petrol > wood > LPG

28. Rajni wondered why a flame always points upwards . This is because

a) The gases produced in a flame are hot . b) Hot gases are light and rise up.

c) cold gases are formed in the flame d) Both a) and b)

B) Answer the following questions.

1. Anu wants to boil water quickly in a test –tube. On observing the different zones of flame, she is not able to decide which zone of flame will be best for boiling water. Help her in the activity.

2. If you hold a piece of iron with pair of tongs inside a candle flame or Bunsen burner flame .

What will you observe? Will it produce a flame?

3. Cracker on ignition produces sound. Why?

4. What do you understand by fuel efficiency?

5. Fill in the blanks

a) A _____ process in which substance reacts with _____ to give off heat is called combustion.

b) When the clothes of a person catch _____, the person is covered with a _____ to extinguish fire.

c) The _____ temperature at which a substance catches fire is called its _____ temperature.

d) The substance which have very _____ ignition temperature can easily catch fire with flame are called _____ substances.

e) The substance which vaporize during _____, give flame.

f) The amount of heat energy produced on complete combustion of 1 kg of fuel is called its _____.

6. Indicate whether given statement are True or False

- a) Air is necessary for combustion.
- b) Magnesium is non –combustible metal.
- c) Carbon dioxide is an excellent fire extinguisher.
- d) Calorific value of wood is higher than that of coal.

7. Match the following

Column I Column II

- a) oxides of Sulphur and Nitrogen i) fire extinguisher
- b) CNG ii) incomplete combustion of coal
- c) Oxygen iii) very low ignition temperature
- d) Inflammable substance iv) acid rain
- e) Carbon dioxide v) necessary of combustion
- f) Carbon monoxide vi) fuel of automobiles

8. Why does white phosphorus catch fire spontaneously?

9. Why a match stick can be lighted by striking its tip with any rough surface?
10. The flame of a burning candle goes off when we blow air over it strongly, why?
11. Why should not we use water to extinguish the fire caused by electric short circuit?
12. Name the gas released in the environment due to combustion of fuel leading to global warming.
13. How does the burning of coal and diesel lead to acid rain?
14. In which part of the candle flame do you find the un-burnt wax vapour?
15. If we hold a glass slide in the luminous part of the flame, we see a circular greyish black ring on the slide with no deposition in the centre of the ring . Explain what causes such a formation?
16. What is an explosive combustion?
17. What do you understand by kindling temperature?
18. How is smog produced?

19. Why is use of fuel like petrol, diesel in automobiles being replaced by CNG?

20. If we bring a burning matchstick near a paper and a piece of wood .Which of them will burn and why?

21. Give one word for following :

a) Amount of heat energy produced on completely burning one kilogram of a fuel in pure oxygen.

b) The minimum temperature at which a given substance begins to burn.

c) A region of burning gases.

22. What happens when there is incomplete combustion of fuel?
