CLASS-VIII SCIENCE CHAPTER-6

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*Answer: [★]25°C

Very Short Answer Questions

 $\stackrel{\sim}{\downarrow}$ Question 1. Name the most common fuel used in homes. Answer: Liquefied Petroleum Gas. (LPG) 💆 Question 2. Name the most common fire extinguisher. Answer: \bigstar Question 3. **☆What are the states in which a fuel may exist?** Answer: 🛪 A fuql may exist in solid, liquid or gaseous state. Question 4. Name any two combustible substances. **☆Answer: ☆** Charcoal, wood Question 5. Does magnesium produce heat and light during its combustion? Answer: Yes, it does. Question 6. ★What acts as a fuel for our body? **Answer: ☆** Food Cuestion 7. 🛣 Give two examples of non-combustible substances. . Answer: Water, sand **☆ Question 8.** ★How are heat and light produced in the sun? 🙀 Answer: $\frac{1}{N}$ In the sun, heat and light are produced by nuclear reactions. Question 9. Where were matchsticks first used? **☆**Answer: **☆** Egypt Cuestion 10. What are the three essential requirements for combustion? Answer: 🛴 Fuel, air (to supply oxygen) and heat (to raise the temperature of the fuel beyond the ignition 🔆 temperature). **♦ Question 11. ★What is the ignition temperature of phosphorus?**

********** Question 12. What is the colour of an LPG flame? Answer: **☆Blue ♦ Question 13. ★What type of process is combustion? Answer:** 🚧 A chemical process Question 14. Name an ideal fuel. Answer: ★ Compressed Natural Gas (CNG) **★ Ouestion 15.** ★What is the composition of the head of a matchstick? Answer: Antimony trisulphide and potassium chlorate. Question 16. **★Which part of a flame does a goldsmith blow for melting gold and silver? ☆**Answer: ★The goldsmith blows the outermost zone of a flame for melting gold and silver. Question 17. What is the unit for expressing the calorific value of a fuel? Answer: 💫 Kilojoules per kilogram (kJ/kg) **♦ Ouestion 18. ★ Comparing the calorific values of coal and petrol, state which fuel is better.** *Answer: The calorific value of coal is about 25,000 - 33,000 kJ/kg, whereas that of petrol is 45,000 kJ/kg. $\stackrel{\bigstar}{\sim}$ Hence, petrol is a better fuel. Question 19. **₩hat is deforestation? ☆**Answer: ★ The cutting down of trees on a large scale is termed as deforestation. Cuestion 20. Give any two examples of carbon fuels. Answer: 🖟 Coal, petroleum **♦ Question 21. ★What does magnesium burn to form?** Answer: Magnesium burns to form magnesium oxide and produces heat and light. Ouestion 22. What does coal produce during its combustion? **Answer**: ★ Coal produces carbon dioxide, heat and light during its combustion. **☆ Question 23. ★What is combustion?** Answer: $\overset{\sim}{\mathbb{Z}}$ Combustion is a chemical process in which a substance reacts with oxygen to give off heat. Question 24. Define ignition temperature of a fuel.

Answer: The lowest temperature at which a fuel catches fire is called its ignition temperature. Question 25. How does a matchstick catch fire? **♦** Answer: By rubbing a matchstick against a rough surface (friction), it attains its ignition temperature and thus catches fire. Cuestion 26. Why is sodium kept immersed in kerosene? Answer: $rac{7}{8}$ Sodium has very low ignition temperature, i.e., it catches fire on coming in contact with air, so it is ★ kept in kerosene. **☆ Question 27.** What are combustible and non-combustible substances? Answer: Substances which undergo combustion are said to be combustible, whereas non-combustible substances are those which don't burn. **♦ Question 28. ★What are inflammable substances? Give examples.** Answer: The substances which have very low ignition temperature and can easily catch fire with a flame are called inflammable substances; e.g., LPG, petrol, alcohol, etc. Ouestion 29. What is rapid combustion? **☆**Answer: ☆ When a substance burns instantly and produces a huge amount of heat and light, the combustion is called rapid combustion; e.g., the instant burning of LPG in a gas stove. Cuestion 30. Define spontaneous combustion. Answer: A type of combustion in which the substance suddenly catches fire without the supply of heat or friction externally is called spontaneous combustion; e.g., forest fires. \rightleftharpoons Question 31. Define explosion. Answer: A type of combustion during which a huge amount of heat and light is evolved with a boom, along with the production of gas, is known as explosion; e.g., the exploding of fireworks, i.e., crackers, **⇔** etc. **☆ Question 32. ☆ What is flame?** Answer: Flame is a region where the burning or combustion of gaseous substances take place. Question 33. Define fuel. **♦** Answer: ★Those substances which provide energy on burning are called 'fuels'; e.g., coal, petroleum, LPG, retc. Question 34. Give two examples each of solid fuels, liquid fuels and gaseous fuels.

Answer:

Solid fuels - Wood, cow dung, etc.

☆Liquid fuels – Kerosene, petrol, etc.

🔀 Gaseous fuels – Hydrogen, methane, etc.

Question 35.

Give two examples of fuels that are used to generate electricity.

☆Answer:

☆ Two examples of fuels that are used to generate electricity are petrochemicals and coal.

★ Ouestion 36.

Define calorific value.

Answer:

The amount of heat produced on burning one kilogram of fuel completely is called its calorific value.

♦ Question 37.

★ 60 kg of fuel was completely burnt for an experiment. The amount of heat energy was found to be ★ 1,80,000 kJ. Calculate the calorific value of the fuel.

🥇 Answer:

Amount of fuel burnt = 60 kg

Amount of heat produced = 1,80,000 kJ

Calorific value of the fuel = $\frac{\text{Heat produced}}{\text{Amount of fuel}}$

$$\frac{1,80,000}{60}$$
 = 3,000 kJ/kg

2 Calorific value of the fuel is 3,000 kJ/kg.

Ouestion 38.

🛣 Define dark zone of a flame.

Answer:

♣ The innermost zone of a flame around the wick is called its dark zone. It is the least hottest zone ★ comparatively to other.

 \rightleftharpoons Question 39.

Mention any three characteristics of a good fuel.

Answer:

Any three characteristics of a good fuel are following:

- It has high calorific value.
- It is very easy to transport.
- It is cheap, affordable and economic.

🔯 Question 40.

🔭 What is global warming?

Answer:

An increase in the average temperature of the earth's atmosphere, especially a sustained increase that causes climatic changes, is termed as 'global warming'.

Multiple Choice Questions

Question 1.

Which of the following fuels is used for running automobiles?

[×]
_★(a) CNG

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- (b) Petrol
- **☆** (c) Both (a) and (b)
- ☆(d) Wood

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Question 2.
Magnesium burns to form
(a) calcium carbonate
(b) magnesium oxide
(c) calcium oxide
★(d) magnesium sulphate
★Question 3.
Coal burns to produce
(a) calcium bicarbonate
🏅 (b) magnesium
(c) carbon dioxide
☆ Question 4.
Name the chemical process in which a substance reacts with oxygen to give out heat.
(a) Reaction
\frac{\kappa}{2} (b) Junction
\frac{2}{3} (c) Combustion

★ (d) All of these

☆Question 5.
The substance that undergoes combustion is said to be
🌣 (a) burning
(b) flame
🛴(c) charcoal
(d) combustible
♦ Question 6.
☆ Combustible substances are also known as
☆(a) inflammable
(b) flaming
\frac{1}{2} (c) illuminous
Question 7.
★Which of the following is a combustible?
☆(a) Stone piece
☆(b) Wood
🧏 (c) Glass
(d) None of these
Question 8.
☆ In the sun, light and heat are produced by
☆(a) chemical reactions
☆(b) nuclear reactions
(c) burning reactions
(d) bunsen burner
Question 9.
Lowest temperature at which a substance catches fire is known as

★ (a) lowest temperature

☆(b) burning temperature
☆(c) ignition temperature
(d) flaming temperature
Question 10.
Long, long ago, which of the following trees was used to produce matchsticks?

★ (a) Mango
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☆ (b) Deodar	*
(c) Banyan (d) Pine	☆
(d) Pine	
Question 11.	₩
Which chemical is used in the rubbing surface provided for matchsticks?	☆
☆(a) Sulphur	☆
☆(b) Gold	☆
🌣 (c) Rad phosphorus	
(d) White phosphorus	$\stackrel{\wedge}{\Rightarrow}$
Question 12.	$\stackrel{\bigstar}{\sim}$
Substances which have very low ignition temperature and can catch fire easily are called	₩
☆ (a) flammable substances	₩ ⊹
★(b) inflammable substances	☆
★(c) combustible substances	☆
(c) combustible substances (d) all of these (Ougstion 12)	☆
Question 13.	$\stackrel{\wedge}{\Rightarrow}$
Which of the following is an example of inflammable substance?	**
★(a) Iron	₩
★(b) Glass	₩ ⊹
★(c) LPG	☆
(c) LPG (d) Stone Question 14. Which of the following are required essentially for producing fire?	☆
Ouestion 14	$\stackrel{\wedge}{\Longrightarrow}$
Which of the following are required essentially for producing fire?	☆
(a) Glass, coal, water	$\stackrel{\bigstar}{\sim}$
★ (b) Fuel, coal, straw	₩
☆(c) Fire, wood, burner	
(c) Fire, wood, burner (d) Fuel, air, heat	☆
Question 15.	☆
The most common element used as fire extinguisher is	☆
(a) CO.	☆
$(a) CO_2$	☆
(b) oxygen	☆
★(c) phosphorous	₩
☆ (d) oxygen	☆
Question 16. Baking soda constitutes (a) hydrogen chloride	☆
A Baking soda constitutes	☆
(a) nydrogen chloride	$\stackrel{\wedge}{\Longrightarrow}$
(b) sodium oxide	☆
(c) sodium bicarbonate	$\stackrel{\bigstar}{\sim}$
★(d) oxygen	₩
★ Question 17.	₩
LPG means (a) Liquefied Petroleum Gas (b) Liquefied Petrol Cos	☆
(a) Liquefied Petroleum Gas	☆
(b) Liquetieu reu oi Gas	$\stackrel{\wedge}{\Longrightarrow}$
(c) Liquid Petrol Godown	
(d) Liquid Petroleum Gas	☆
★ Question 18.	☆
* Phosphorus burns at	₩ .~
(a) room temperature (b) 100°C	₩ ⊹
(b) 100°C	☆
(c) cool temperature	☆
🙀 (d) any temperature	☆

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☆☆ ☆ ☆☆ $\stackrel{\wedge}{\swarrow}$ ☆☆ ☆ $\stackrel{\wedge}{\Rightarrow}$ ☆ ☆ ☆ ☆ ☆☆ ☆ ☆

☆☆ ☆ ☆☆ $\stackrel{\wedge}{\swarrow}$ $\stackrel{\wedge}{\swarrow}$ ☆ $\stackrel{\wedge}{\swarrow}$ $\stackrel{\wedge}{\sim}$ ☆ ☆ ☆

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 $\frac{2}{6}$ (c) 1,50,000 kJ/kg

★(d) 6,000 kJ/kg

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