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### Exercise

1. List conditions under which combustion can take place.

Answer:

The conditions required for combustion to take place are:

- Presence of a fuel
- Air (or oxygen)
- Ignition temperature (minimum temperature at which a substance catches fire).

2. Fill in the blanks:

(a) Burning of wood and coal causes \_\_\_\_\_ of air.

(b) A liquid fuel used in homes is \_\_\_\_\_.

(c) Fuel must be heated to its \_\_\_\_\_ before it starts burning.

(d) Fire produced by oil cannot be controlled by \_\_\_\_\_.

Answer:

(a) Burning of wood and coal causes pollution of air.

(b) A liquid fuel used in homes is LPG.

(c) Fuel must be heated to its ignition temperature before it starts burning.

(d) Fire produced by oil cannot be controlled by water.

3. Explain how the use of CNG in automobiles has reduced pollution in our cities.

Answer:

Combustion of fuels like petroleum causes formation of un-burnt carbon particles along with carbon monoxide gas. These harmful pollutants enter the air and cause respiratory diseases. Compressed Natural Gas (CNG) produces these harmful products in very less quantity. It is a comparatively cleaner fuel. Therefore, the use of CNG has reduced pollution in our cities.

4. Compare LPG and wood as fuels.

Answer:

LPG	Wood
It has more calorific value about 55000 kJ/kg	It has less calorific value about 17000 to 22000 kJ/kg
It does not cause any environmental problem.	On burning wood release unburnt carbon particles which cause diseases such as asthma
It is smokeless fuel.	It gives out lot of smoke
It is easy to store and can be easily transported in cylinders and pipelines.	It needs a lot of space to store also very difficult to transport.

Low Ignition temprature	High Ignition temprature
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