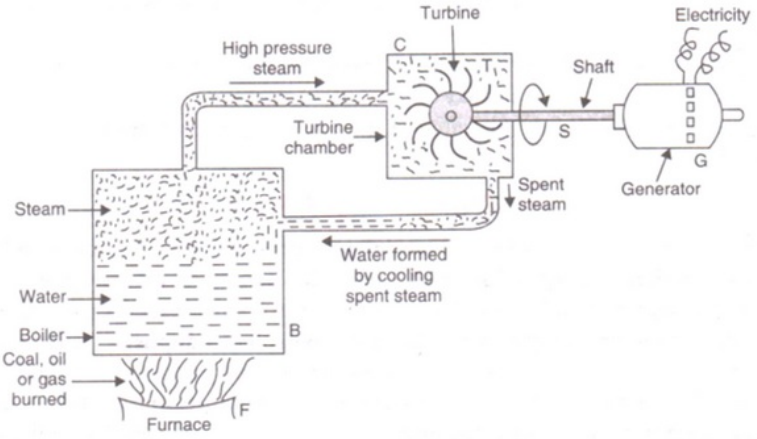
PAGE 130

Q1.
Diesel.
Q2.
LPG.
Q3.
Kerosene.
Q4.
Coal, oil or gas.
Q5.
Fractions obtained from petroleum:
Diesel, petrol, kerosene, petroleum gas etc.

PAGE 131

Q6.
LPG consists mainly of butane, alongwith smaller amounts of propane and ethane.
Q7.
Compressed Natural Gas (CNG)
Q8.
(i) LPG-Liquified Petroleum Gas.
(ii) CNG-Compressed Natural Gas.
Q9.
(i) Main constituent of petroleum gas is butane.
(ii) Main constituent of natural gas is methane.
Q10.
Methane.
Q11.
Uses of natural gas:
(i) As a fuel in thermal power plants.
(ii) As a fuel in transport vehicles.
Q12.
CNG is used as a fuel in transport vehicles.
Q13.
butane.
Q14.
Natural gas is considered to be a good fuel because it has a high calorific value, burns with a smokeless flame, causes no air pollution and does not produce any poisonous gas.
Q15.
The traditional sources of energy which are familiar to most people are called conventional source of energy.
Ex. Wood, coal etc.
Q16.
In a thermal power plant, heat produced by burning coal is used to boil water to form steam. The steam, at high temperature and pressure, rotates the turbine and its shaft, which drives the generator to produce electricity.



Q17.
Disadvantages of burning the fossil fuels are:
(i) The burning of fossil fuels produce acidic gases.
(ii) The burning of fossil fuels produce large amount of CO_2 gas, which increases greenhouse effect.
(iii) The burning of fossil fuels produce smoke and leaves behind a lot of ash.
Q18.
Burning of fossil fuels leads to the production of many acidic gases like sulphur-dioxide and nitrogen dioxides. These gases causes acid rain which damages trees, plants and buildings, reduces fertility of soil, and poses danger to aquatic life. The burning of fossil fuels puts a poisonous gas carbon monoxide in air. It also produces large amount of CO_2 gas which damages the environment in the long run by increasing the greenhouse effect. Also, burning of fossil fuels produces smoke and a lot of ash.
Q19.
Pollution caused by the burning of fossil fuels can be controlled by the increasing the efficiency of combustion process and by using various techniques to reduce the escape of harmful gases and ash into the surrounding air.
Q20.
We will use LPG due to its high calorific value and smokeless flame.
Q21.
LPG is considered as good fuel because it has a high calorific value gives a smokeless flame.
Q22.
LPG is considered as a better fuel than coal because it has a higher calorific value, while burning it does not produce any smoke.
Q23.
For the detection of leakage, a foul smelling substance called ethyl mercaptan is added to the LPG.
In case of LPG leakage in the kitchen, following steps must be taken:
1. The door and windows should be opened at once to allow the gas to escape.
2. The source of gas leakage should be checked and then set right with the help of a gas mechanic.
Q24.
(a) Natural fuels formed deep under the earth from the pre-historic remains of the organisms (like plants and animals) are called fossil fuels.
Ex. Coal, petroleum and natural gas.
(b) The plants and animals which died millions of years ago and got buried deep in the earth, away from the reach of oxygen, got converted into fossil fuels due to the chemical effects of pressure, heat and bacteria.
(c) Sun is considered to be the ultimate source of fossil fuels because it was the sunlight of long ago that made plants grow and

the animals which got buried in the earth also ate plants. So, plants and animals which were originally made by sun's energy only have been converted into fossil fuels.
(d) Petroleum and natural gas.
(e) Coal.

PAGE 132

Q37.
(a) X = Carbon
(b) Another element which is usually found in combination with carbon in fossil fuels is hydrogen.
Q38.
Petrol is obtained from petroleum, which is a fossil fuel. Fossil fuels were originally made by sun's energy because it was the sunlight of long ago that made plants and animals grow. So, the energy in petrol originally came from the sun.
Q39.
(a) X is ethyl mercaptan
(b) Ethyl mercaptan has a foul smell that can be detected easily.
Q40.
(a) Catalytic converter
(b) It converts poisonous carbon monoxide into non-poisonous carbon dioxide and harmful nitrogen oxides into harmless nitrogen gas.

********** END **********