

gases, do not condense
of the tower.

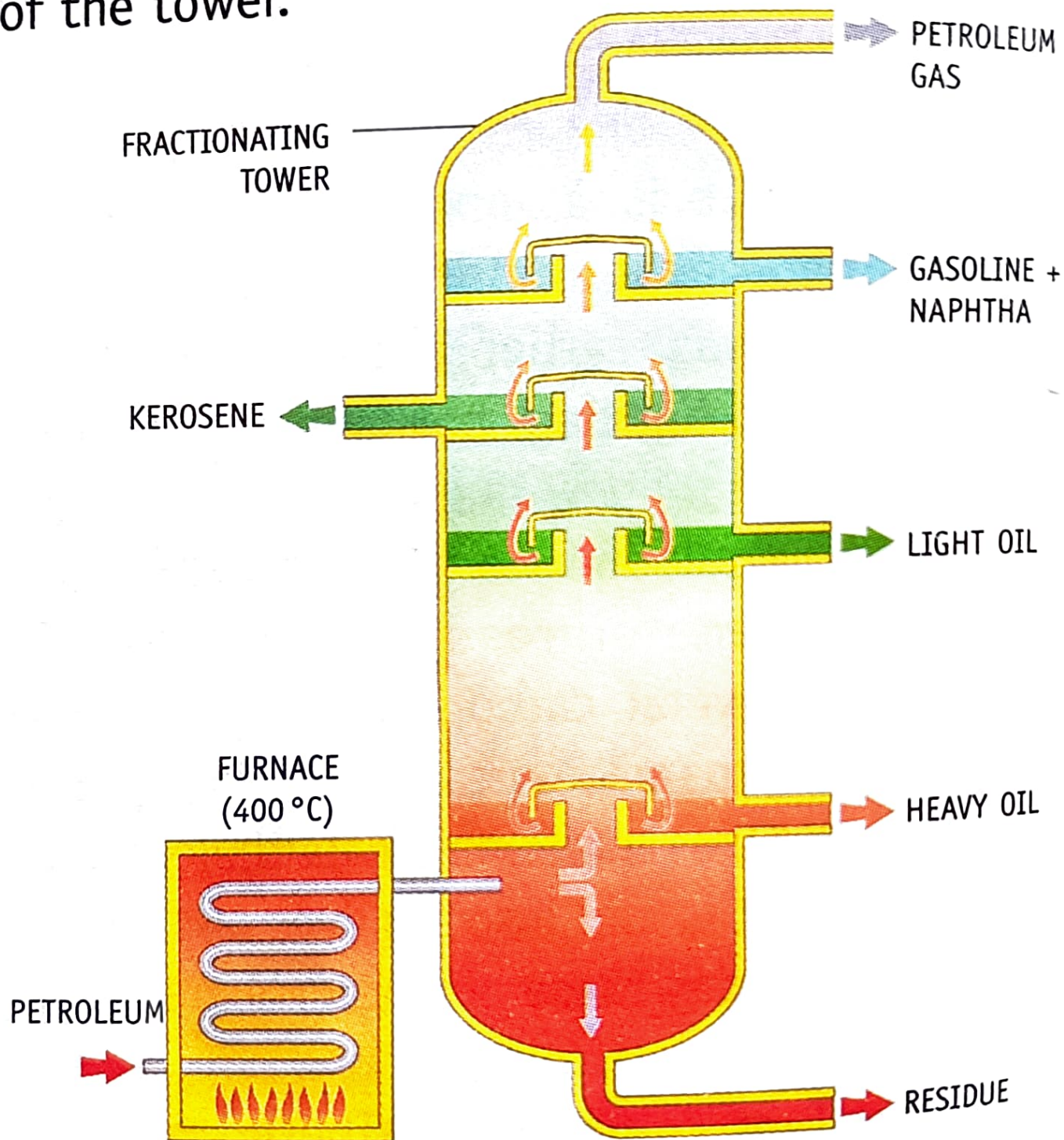


FIG. 5.7 Fractional distillation of petroleum

TABLE 5.1 Some important fractions of petroleum and their uses*

FRACTION	BOILING POINT	NUMBER OF CARBON ATOMS	PRODUCTS OBTAINED/USES
Petroleum gas	below 40 °C	1–4	LPG (liquefied petroleum gas)—fuel for home and industry
Gasoline and naphtha	90–165 °C	4–10	Petrol—motor fuel, aviation fuel, solvent for dry-cleaning
Kerosene	150–245 °C	10–16	Kerosene—domestic fuel, jet engine fuel
Light oil	215–315 °C	16–20	Diesel—fuel for motor vehicles (especially heavy vehicles), electric generators
Heavy oil	285–370 °C	20–25	Useful organic chemicals
Residue	over 370 °C	over 25	Lubricating oil—lubricating machinery; Paraffin wax—candles, vaseline, ointments, etc; Asphalt (bitumen)—paints, road surfaces

* Petroleum extracted from different wells around the world is not uniform in composition. It varies not only in its composition of hydrocarbons but also in several other ways, for example density and presence of impurities such as sulphur, lead, arsenic, arene etc. This makes the composition and boiling points of the fractions differ considerably. The data regarding the composition and boiling points in Table 5.1 is only indicative and may vary considerably in different samples of petroleum.

4. How is CNG obtained? What are its main uses?



HOTS QUESTIONS: Think and answer.

1. If a resource can be replaced within ten years by natural processes, would you classify it as renewable or non-renewable?
2. All renewable resources are inexhaustible. Do you agree? Give reasons.
3. All combustible substances are not fuels. Why?
4. Can fossil fuels be made in the laboratory?
5. Conservation of resources means avoiding their wasteful use. Does this definition cover all aspects of conservation? Explain.
6. In a petroleum well, crude oil is found above water. Which two properties of petroleum make it possible to form a layer of it above water?