## Homework 7.3

1. Complete the following table on the properties of crude oil fractions.

|                        | _           |              |           | ,             |
|------------------------|-------------|--------------|-----------|---------------|
| Fraction               | evaporation | flammability | viscosity | boiling point |
| Gas Fraction           |             |              |           |               |
| Naphtha Fraction       |             | <b>†</b>     |           |               |
| Kerosene Fraction      |             |              |           |               |
| Gas Oil Fraction       |             |              |           |               |
| Heavy Gas Oil Fraction |             |              | ↓         |               |
| Residue                |             | <u>-</u>     |           |               |

2. a) When long chain hydrocarbons are broken down into shorter, more useful hydrocarbons, the process is called .......

b) Complete the following example of cracking:

$$C_{14}H_{30} \longrightarrow C_8H_{16} +$$

b) Two substances formed by the incomplete combustion of hydrocarbon fuels are ...... and ...... and ......

1

1

2

| 5. | Sparks inside a petrol engine can join up nitrogen and oxygen to form nitroge dioxide. Nitrogen dioxide dissolves in water to form | n<br>1 |
|----|--|--------|
| 6. | a) Car exhausts are fitted with a device to turn harmful exhaust gases into harmless gases   | 1      |
|    | b) in petrol will stop the device from working.  | 1      |
|    | Unleaded petrol contains the chemical benzene which can cause in the human body.   | n<br>1 |

<u>total</u>

15