**Wet scrubbing:**

Alkali:

* Sulphur dioxide gas from flue is bought into contact with a slurry (liquid containing solid particles) of limestone or calcium oxide and water
* Alkaline slurry reacts with acidic sulphur dioxide to form calcium sulphate

Seawater:

* Flue gases washed with seawater which dissolves sulphur dioxide
* Acidic sulphur oxides react with alkali’s (hydrogen carbonates) in the seawater
* Produce sulphate salts

**Energy choices:**

Benefits of choice must be compared to problems; different areas will have different needs e.g. town and countryside

Global choice:

* **KYOTO** agreement between nations promise to lower CO2 emissions

National choice:

* Catalytic converters compulsory
* Vehicle emissions limit (MOT)
* Car taxing – bigger car, more tax

Local choice:

* Park and ride
* Congestion charge
* Pedestrianised areas

Personal choice:

* Turn off lights
* Wear extra clothing
* Recycle
* Use energy saving bulbs
* Walk/cycle

Q) Think of a benefit and a problem of having electricity, hydrogen and biofuels as types of fuel for a car.

**Remember when answering questions regarding a factor affecting an outcome, that other factors may be involved/need to be considered**

**Q)** Explain how the size of the forces between hydrocarbon molecules relates to the size of the hydrocarbon molecule

**Modified polymers:**

Crystalline:

* Polymer chains packed closer together. Increases intermolecular forces between chains. Polymer becomes stronger, denser and has a higher melting point.

Explain how:

* Cross linking
* Increasing chain length
* Plasticisers

Produce changes to the property of polymers.

**Nanoparticles:**

Benefits:

* Modify properties of materials
* E.g. added to plastics to make them stronger while keeping them light
* E.g. silver nanoparticles have antibacterial properties e.g. food wrapping, medical dressing
* E.g nanoparticles absorb/reflect harmful UV rays

Risks:

* Extremely tiny, therefore risk of nanoparticles entering human body e.g. sunscreen
* Little is known about effects yet, more will be known in the future
* Regulations can check effects