Rocks Revision Notes

Rock Types

- 1. Igneous: Formed when magma or lava cools and hardens e.g. basalt or granite
- 2. Sedimentary: Formed when sediments (old rocks, dead plant and animal remains) are compacted together e.g. limestone, sandstone
- 3. Metamorphic: When igneous or sedimentary rocks come under great heat or pressure e.g. limestone changes to marble and sandstone turns into quartzite

Common rock formations and physical characteristics

Igneous: Basalt (Marking scheme: 3 marks, Name it 1 mark, Explain 2 marks)

- Formed when lava cooled quickly on the earth's surface
- Black in colour with tiny crystals
- Example: Giants Causeway, Co. Antrim

Igneous: Granite

- Formed when lava cooled slowly inside the earth's crust
- Made of minerals feldspar, mica and quartz
- Grey, pink and black in colour with large crystals
- Example: Wicklow Mountains

Sedimentary: Limestone

- Formed in shallow seas from the compacted remains of dead sea creatures
- Grey in colour and the most common rock in Ireland
- Can contain fossils, preserved remains of living things
- Permeable allows water to pass through it
- Soluble can be dissolved by rainwater
- Laid down in layers called strata. The gaps between these are called bedding planes
- Example: Burren, Co. Clare

(Hint: Often linked to chemical weathering and Karst)

Sedimentary: Sandstone

- Formed when sand was compacted together and cemented with seawater
- Reddish brown in colour
- Example: Comeragh Mountains, Co. Tipperary

Metamorphic: Marble

- It was once limestone that came under great heat or pressure
- It is a hard rock and is white, red or green in colour
- Example: Connemara, Co. Galway

Metamorphic: Quartzite

- It was once sandstone that came under great heat or pressure
- White or grey coloured rock
- Example: Sugarloaf, Co. Wicklow

Economic importance of rocks

(Marking Scheme: 6 marks, two economic uses @ 3 marks each, 2 marks statement, 1 mark explain)

- Building materials: Limestone is used on the front of town buildings
- Roads: Basalt is used for road chippings
- Monuments: Marble is used for headstones
- Ornamental: Marble is used in people's homes for fireplaces
- Farming: Ground up limestone is used as a fertilizer

Extracting rocks

- 1. Open cast mining/ Quarrying: This method is used if the rock is close to the surface. It is the cheapest e.g. Bord na Mona. Quarrying is very noisy, dusty and can look unsightly.
- 2. Off shore drilling: Drilling is used if oil and gas are found under the sea. It is done from a rig and is pumped ashore through a pipeline e.g. Kinsale Gas. Off-shore drilling is very costly and there can be oil spillages.
- 3. Shaft mining: This is used if the resource is deep in the earth, they construct vertical shafts to bring it up e.g. Lisheen mine, Co. Tipperary. This mining is expensive and dangerous shafts can collapse, it can also look unsightly.

(Hint: This unit comes up a lot on the Higher Level paper, both as long and short questions.)