**Question 1:**

**1. (a)** Arrange the statements A to G in the correct order describing the process of eutrophication.

* **Mark Scheme:**
  + Correct Order: F, C, E, G, A, B, D.
  + F: Overuse of fertiliser.
  + C: Excess fertiliser runs off into rivers.
  + E: Nutrient enrichment causes algal bloom.
  + G: Sunlight blocked, reducing photosynthesis.
  + A: Algae and aquatic plants die.
  + B: Decomposers use up oxygen.
  + D: Fish and other organisms die.
  + [3 marks]

**1. (b)** Describe the meaning of bioaccumulation.

* **Mark Scheme:**
  + Bioaccumulation is the accumulation of substances, such as pesticides, or other chemicals in an organism.
  + Occurs when an organism absorbs a toxic substance at a rate greater than that at which the substance is lost.
  + [2 marks]

**Question 2:**

**2. (a)** State the name of one sedimentary rock.

* **Mark Scheme:** Limestone/sandstone/shale. [1 mark]

**2. (b)** State two environmental impacts of the quarry shown in the photograph.

* **Mark Scheme:**
  1. Loss of habitat/vegetation dies/deforestation.
  2. Noise/water/air/visual pollution. [2 marks]

**2. (c)** Suggest ways this quarry benefits the local community.

* **Mark Scheme:**
  1. Provides employment opportunities.
  2. Contributes to the local economy. [2 marks]

I will continue with the next set of questions and their mark schemes in the following response.

Continuing with the exact questions and their corresponding mark schemes from the Cambridge IGCSE™ Environmental Management exam paper (0680/11), Paper 1 Theory from October/November 2021:

**Question 3:**

**3. (a)** Use the key to draw the major currents in the South Atlantic Ocean on the map.

* **Mark Scheme:** Correct placement of warm and cold currents as per the key. [2 marks]

**3. (b)** Explain why the El Niño Southern Oscillation (ENSO) phenomenon reduces the number of fish along the Pacific coast of South America.

* **Mark Scheme:** During El Niño, the upwelling of nutrient-rich cold water is reduced, leading to a decrease in plankton levels, which reduces the food available for fish, thereby reducing fish populations. [3 marks]

**Question 4:**

**4. (a)** State two causes of deforestation.

* **Mark Scheme:**
  1. Timber extraction/logging.
  2. Agriculture/farming. [2 marks]

**4. (b)** State the name of the producer in the forest food chain.

* **Mark Scheme:** Tree. [1 mark]

**4. (c)** Explain other reasons why forests should not be cut down.

* **Mark Scheme:**
  + Forests act as carbon sinks.
  + Important for biodiversity.
  + Prevent soil erosion.
  + Sources of medicines and raw materials. [2 marks]

**Question 5:**

**5. (a) (i-ii)** State two natural causes of soil erosion and suggest strategies to reduce it.

* **Mark Scheme:**
  + Natural causes: Water runoff and wind.
  + Strategies: Terracing, wind breaks, maintaining vegetation, afforestation. [5 marks total]

**5. (b)** Various questions related to soil pH and its effects on crop yield.

* **Mark Scheme:**
  + Correct completion of the table with more than (✓) or less than (✗) the average yield for each pH.
  + Conclusion about soil pH effect on crop: good yield pH 5.0 to 7.0, poor yield above pH 7.0, optimum pH is 6.0, grows best in acidic conditions, grows poorly in alkaline conditions, neutral pH higher than average yield.
  + One reason for soil pH effect: affects nutrient uptake.
  + One other factor affecting soil quality: organic matter content. [6 marks total]

**Question 6:**

**6. (a) (i-ii)** Explain the distribution of earthquakes and draw arrows to show plate movement at the mid-Atlantic ridge.

* **Mark Scheme:**
  + Distribution: Earthquakes are mainly located along tectonic plate boundaries due to plate movements.
  + Arrows: pointing apart at the mid-Atlantic ridge.
  + [3 marks]

**6. (b) (i-ii)** Discuss the primary and secondary effects of the Haiti earthquake and evaluate Haiti's preparedness.

* **Mark Scheme:**
  + Discussion of primary (immediate) effects such as deaths and injuries, and secondary (long-term) effects such as homelessness, disease outbreaks, and starvation.
  + Evaluation of Haiti's preparedness should consider factors like government planning, building standards, and emergency response.
  + [9 marks total]

**Question 7:**

**7. (a-d)** Various questions related to human population, including distribution, population of Brazil, percentage of global population in Europe, and economic challenges for MEDCs in 2050.

* **Mark Scheme:**
  + Description of population distribution: high in Asia, lower in Africa, etc.
  + Population of Brazil: extraction from the bar chart.
  + Percentage of global population in Europe: calculation based on given data.
  + Economic challenges for MEDCs: aging population, healthcare costs, pension schemes.
  + [9 marks total]

**7. (e)** Suggest one strategy a government can use to encourage people to have more children.

* **Mark Scheme:**
  + Providing financial incentives or benefits for families with children.
  + [1 mark]

**7. (f)** Question about population growth curve.

* **Mark Scheme:**
  + Description of the growth curve: rapid increase, stabilization, or decline based on the graph.
  + [1 mark]

**Question 8:**

**8. (a-c)** Various questions related to large marine oil spills, including plotting a bar chart, calculating the average mass of oil lost, and describing strategies for preventing spills.

* **Mark Scheme:**
  + Bar chart plotting: correct representation of data.
  + Average mass calculation: division of total mass by the number of spills.
  + Strategies for prevention: improved technology, stricter regulations, etc.
  + [7 marks total]

**Question 9:**

**9. (a)** Calculate the sea level rise from 2021 to 2030 if the sea level continues to rise at 3.3mm per year.

* **Mark Scheme:**
  + 3.3 mm/year × 10 years = 33 mm.
  + [2 marks]

**9. (b)** State two impacts of climate change other than sea level rise.

* **Mark Scheme:**
  1. Increase in extreme weather events (e.g., storms, droughts).
  2. Changes in ecosystems and biodiversity (e.g., loss of habitat).
  3. [2 marks]

**9. (c)** Describe how some vehicles increase atmospheric carbon dioxide.

* **Mark Scheme:**
  + Combustion of fossil fuels in vehicles releases carbon dioxide as a by-product.
  + [2 marks]

**9. (d)** Discuss the statement: "The best strategy for stopping climate change is to ban the cutting down of trees."

* **Mark Scheme:**
  + Evaluation of the statement should include the role of deforestation in climate change, the importance of trees in carbon sequestration, and the need for comprehensive strategies beyond just banning deforestation.
  + [6 marks]