Name: GCSE Geography Revision

Paper 1: Living with the physical environment

**Exam paper format**

1 hour 30 for both the Year 11 Mock and the final exam. Answer all questions in Sections A and B, and two questions in Section C (Coasts Q3 and Rivers Q4 – do not answer Q5 about Glaciers. The exam is marked out of 88. There will be three papers for the final exams.

An example of how many marks are awarded for each question is:

Section A: 2, 2, 2, 6, 2, 1, 4, 2, 9 and 3 SPaG.

Section B: 1, 2, 1, 6, 1, 1, 2, 2 and 9.

Section C: 1, 1, 1, 1, 1, 4, 6, 1, 1, 1, 1, 1, 4 and 6.

**Section A: The challenge of natural hazards**

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|  | **Natural hazards** |  | **Case studies** |  |  |
| 1a | Natural hazards pose major risks to people and property. | Definition of a natural hazard. |  |  |  |
| 1b |  | Types of natural hazard. |  |  |  |
| 1c |  | Factors affecting hazard risk. |  |  |  |

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|  | **Tectonic hazards** |  | **Case studies** |  |  |
| 2a | Earthquakes and volcanic eruptions are the result of physical processes. | Plate tectonics theory. |  |  |  |
| 2b |  | Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins. |  |  |  |
| 2c |  | Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity. |  |  |  |
| 2d | The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth. | Primary and secondary effects of a tectonic hazard. |  |  |  |
| 2e |  | Immediate and long-term responses to a tectonic hazard. |  |  |  |
| 2f |  | Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth. |  |  |  |
| 2g | Management can reduce the effects of a tectonic hazard. | Reasons why people continue to live in areas at risk from a tectonic hazard. |  |  |  |
| 2h |  | How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard. |  |  |  |

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|  | **Weather hazards** |  | **Case studies** |  |  |
| 3a | Global atmospheric circulation helps to determine patterns of weather and climate. | General atmospheric circulation model: pressure belts and surface winds. |  |  |  |
| 3b | Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions. | Global distribution of tropical storms (hurricanes, cyclones, typhoons). |  |  |  |
| 3c |  | An understanding of the relationship between tropical storms and general atmospheric circulation. |  |  |  |
| 3d |  | Causes of tropical storms and the sequence of their formation and development. |  |  |  |
| 3e |  | The structure and features of a tropical storm. |  |  |  |
| 3f |  | How climate change might affect the distribution, frequency and intensity of tropical storms. |  |  |  |
| 3g | Tropical storms have significant effects on people and the environment. | Primary and secondary effects of tropical storms. |  |  |  |
| 3h |  | Immediate and long-term responses to tropical storms. |  |  |  |
| 3i |  | Use a named example of a tropical storm to show its effects and responses. |  |  |  |
| 3j |  | How monitoring, prediction, protection and planning can reduce the effects of tropical storms. |  |  |  |
| 3k | The UK is affected by a number of weather hazards. | An overview of types of weather hazard experienced in the UK. |  |  |  |
| 3l | Extreme weather events in the UK have impacts on human activity. | An example of a recent extreme weather event in the UK to illustrate:  • causes |  |  |  |
| 3m |  | • social, economic and environmental impacts |  |  |  |
| 3n |  | • how management strategies can reduce risk. |  |  |  |
| 3o |  | Evidence that weather is becoming more extreme in the UK. |  |  |  |

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|  | **Climate change** |  | **Case studies** |  |  |
| 4a | Climate change is the result of natural and human factors, and has a range of effects. | Evidence for climate change from the beginning of the Quaternary period to the present day. |  |  |  |
| 4b |  | Possible causes of climate change:  • natural factors – orbital changes, volcanic activity and solar output |  |  |  |
| 4c |  | • human factors – use of fossil fuels, agriculture and deforestation. |  |  |  |
| 4d |  | Overview of the effects of climate change on people and the environment. |  |  |  |
| 4e | Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change). | Managing climate change:  • mitigation – alternative energy production, carbon capture, planting trees, international agreements |  |  |  |
| 4f |  | • adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels. |  |  |  |

**Section B: The living world**

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|  | **Ecosystems** |  | **Case studies** |  |  |
| 5a | Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components. | An example of a small scale UK ecosystem to illustrate the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling. |  |  |  |
| 5b |  | The balance between components. The impact on the ecosystem of changing one component. |  |  |  |
| 5c |  | An overview of the distribution and characteristics of large scale natural global ecosystems. |  |  |  |

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|  | **Tropical rainforests** |  | **Case studies** |  |  |
| 6a | Tropical rainforest ecosystems have a range of distinctive characteristics. | The physical characteristics of a tropical rainforest. |  |  |  |
| 6b |  | The interdependence of climate, water, soils, plants, animals and people. |  |  |  |
| 6c |  | How plants and animals adapt to the physical conditions. |  |  |  |
| 6d |  | Issues related to biodiversity. |  |  |  |
| 6e | Deforestation has economic and environmental impacts. | Changing rates of deforestation. |  |  |  |
| 6f |  | A case study of a tropical rainforest to illustrate:  • causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth |  |  |  |
| 6g |  | • impacts of deforestation – economic development, soil erosion, contribution to climate change. |  |  |  |
| 6h | Tropical rainforests need to be managed to be sustainable. | Value of tropical rainforests to people and the environment. |  |  |  |
| 6i |  | Strategies used to manage the rainforest sustainably – selective logging and replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction. |  |  |  |

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|  | **Cold Environments** |  | **Case studies** |  |  |
| 7a | Cold environments (polar and tundra) have a range of distinctive characteristics. | The physical characteristics of a cold environment. |  |  |  |
| 7b |  | The interdependence of climate, permafrost, soils, plants, animals and people. |  |  |  |
| 7c |  | How plants and animals adapt to the physical conditions. |  |  |  |
| 7d |  | Issues related to biodiversity. |  |  |  |
| 7e | Development of cold environments creates opportunities and challenges. | A case study of a cold environment to illustrate:  • development opportunities in cold environments: mineral extraction, energy, fishing and tourism. |  |  |  |
| 7f |  | • challenges of developing cold environments: extreme temperature, inaccessibility, provision of buildings and infrastructure. |  |  |  |
| 7g | Cold environments are at risk from economic development. | The value of cold environments as wilderness areas and why these fragile environments should be protected. |  |  |  |
| 7h |  | Strategies used to balance the needs of economic development and conservation in cold environments – use of technology, role of governments, international agreements and conservation groups. |  |  |  |

**Section C: Physical landscapes in the UK**

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|  | **UK physical landscapes** |  | **Case studies** |  |  |
| 8a | The UK has a range of diverse landscapes. | An overview of the location of major upland/lowland areas and river systems. |  |  |  |

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|  | **Coastal landscapes in the UK** |  | **Case studies** |  |  |
| 9a | The coast is shaped by a number of physical processes. | Wave types and characteristics. |  |  |  |
| 9b |  | Coastal processes:  • weathering processes – mechanical, chemical |  |  |  |
| 9c |  | • mass movement – sliding, slumping and rock falls |  |  |  |
| 9d |  | • erosion – hydraulic power, abrasion and attrition |  |  |  |
| 9e |  | • transportation – longshore drift |  |  |  |
| 9f |  | • deposition – why sediment is deposited in coastal areas. |  |  |  |
| 9g | Distinctive coastal landforms are the result of rock type, structure and physical processes. | How geological structure and rock type influence coastal forms. |  |  |  |
| 9h |  | Characteristics and formation of landforms resulting from erosion – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks. |  |  |  |
| 9i |  | Characteristics and formation of landforms resulting from deposition – beaches, sand dunes, spits and bars. |  |  |  |
| 9j |  | An example of a section of coastline in the UK to identify its major landforms of erosion and deposition. |  |  |  |
| 9k | Different management strategies can be used to protect coastlines from the effects of physical processes. | The costs and benefits of the following management strategies:  • hard engineering – sea walls, rock armour, gabions and groynes |  |  |  |
| 9l |  | • soft engineering – beach nourishment and reprofiling, dune regeneration |  |  |  |
| 9m |  | • managed retreat – coastal realignment. |  |  |  |
| 9n |  | An example of a coastal management scheme in the UK to show:  • the reasons for management |  |  |  |
| 9o |  | • the management strategy |  |  |  |
| 9p |  | • the resulting effects and conflicts. |  |  |  |

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|  | **River landscapes in the UK** |  | **Case studies** |  |  |
| 10a | The shape of river valleys changes as rivers flow downstream. | The long profile and changing cross profile of a river and its valley. |  |  |  |
| 10b |  | Fluvial processes:  • erosion – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion |  |  |  |
| 10c |  | • transportation – traction, saltation, suspension and solution |  |  |  |
| 10d |  | • deposition – why rivers deposit sediment. |  |  |  |
| 10e | Distinctive fluvial landforms result from different physical processes. | Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges. |  |  |  |
| 10f |  | Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes. |  |  |  |
| 10g |  | Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries. |  |  |  |
| 10h |  | An example of a river valley in the UK to identify its major landforms of erosion and deposition. |  |  |  |
| 10i | Different management strategies can be used to protect river landscapes from the effects of flooding. | How physical and human factors affect the flood risk – precipitation, geology, relief and land use. |  |  |  |
| 10j |  | The use of hydrographs to show the relationship between precipitation and discharge. |  |  |  |
| 10k |  | The costs and benefits of the following management strategies:  • hard engineering – dams and reservoirs, straightening, embankments, flood relief channels |  |  |  |
| 10l |  | • soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration. |  |  |  |
| 10m |  | An example of a flood management scheme in the UK to show:  • why the scheme was required |  |  |  |
| 10n |  | • the management strategy |  |  |  |
| 10o |  | • the social, economic and environmental issues. |  |  |  |