

PAPER 1 – PHYSICAL GEOGRAPHY

WATER AND CARBON CYCLES

- ☐ Understand the concept of systems within Geography
- ☐ Apply the systems concept to the water cycle
- ☐ Apply the systems concept to the carbon cycle
- ☐ Describe the global distribution of the Earth's major stores of water
- ☐ Explain and assess the role of different processes in altering the global distribution of the Earth's major water stores
- ☐ Explain the concept and features of drainage basins as an open system
- ☐ Identify the inputs, outputs, stores, and flows within a drainage basin
- ☐ Explain the concept of the water balance and factors affecting equilibrium
- ☐ Explain a range of hillslope processes and evaluate the factors affecting runoff variation
- ☐ Draw, interpret, and analyse storm hydrographs
- ☐ Evaluate the drainage basin characteristics affecting storm hydrograph dynamics
- ☐ Explain how natural and human actions can change the water cycle over time
- ☐ Describe the global distribution of the Earth's major stores of carbon
- ☐ Explain the processes responsible for moving carbon through the fast carbon cycle
- ☐ Evaluate the impact of natural variations in the carbon cycle over time
- ☐ Explain the concept of the carbon budget
- ☐ Evaluate the impact of the changing carbon cycle on the land, oceans, atmosphere, and climate
- ☐ Evaluate the role of water and carbon in supporting life on earth
- ☐ Explain how feedback loops operating between water and carbon cycles affect climate change and therefore life on Earth
- ☐ Evaluate the options for human intervention that can help to mitigate the impacts of climate change
- ☐ **CASE STUDY:** How water and carbon cycles function within the Amazon Rainforest
- ☐ **CASE STUDY:** Characteristics and factors affecting flood risk within the River Eden drainage basin

COASTAL LANDSCAPES AND SYSTEMS

- ☐ Apply the 'systems theory' to the coastal system
- ☐ Identify sources of energy in the coastal system and explain factors affecting these sources
- ☐ Describe the characteristics of high and low energy coastlines
- ☐ Contrast the characteristics of constructive and destructive waves
- ☐ Explain how wave refraction, currents, and tides can affect the impact of wave action and movement of sediment
- ☐ Explain the concept of a sediment cell and the factors affecting the sediment sources within these cells
- ☐ Explain the concept of the sediment budget and explain how the budget can change

- ☐ Describe the main processes of weathering affecting the coastal zone and evaluate their varying impact on different coastlines
- ☐ Describe the main processes of erosion affecting the coastal zone and evaluate their varying impact on different coastlines
- ☐ Describe the main processes of mass movement affecting the coastal zone and evaluate their varying impact on different coastlines
- ☐ Describe how material can be transported within the coastal system and evaluate the factors affecting these processes
- ☐ Describe the conditions leading to deposition within the coastal system and evaluate the factors affecting this process
- ☐ Evaluate the factors affecting coastal landform and landscape development
- ☐ Explain the formation of erosional landforms and landscapes, evaluating the factors and processes in their development
- ☐ Explain the formation of depositional landforms and landscapes, evaluating the factors and processes in their development
- ☐ Explain the formation of mudflat/saltmarshes, evaluating the factors and processes in their development
- ☐ Explain the processes of isostatic, eustatic and tectonic sea level change
- ☐ Describe the major changes in sea level in the last 10,000 years
- ☐ Describe and explain the formation of emergent and submergent coastal features and be able to identify evidence for them on maps and photographs
- ☐ Explain how processes can create and alter landforms and landscapes over time and space
- ☐ Describe and explain recent and predicted impacts of climate change on coastal areas
- ☐ Explain why we need to protect some coastlines and the role of cost-benefit analysis in deciding this
- ☐ Describe and explain traditional approaches to coastal management (hard and soft engineering strategies)
- ☐ Evaluate the usefulness of traditional coastal management methods, using examples to show their effectiveness and sustainability
- ☐ Describe, explain, and evaluate more sustainable approaches to coastal management (shoreline management plans and integrate coastal zone management)
- ☐ **CASE STUDY:** Characteristics and sustainable management of a coastline at a local scale (Holderness Coastline)
- ☐ **CASE STUDY:** Contrasting coastal landscape beyond the UK to illustrate and analyse how it presents risks and opportunities for human occupation (Sundarbans)

HAZARDS

- ☐ The concept of hazard risk and varying perceptions of hazards
- ☐ The nature, form, and classification of different hazards
- ☐ Models used to represent hazard impacts and management (Park Model and Hazard Management Cycle)
- ☐ Earth structure and internal energy sources
- ☐ Plate tectonic theory of crustal evolution, including convection currents, ridge push, and slab pull

- ☐ Processes and associated landforms of convergent, divergent, and conservative plate margins
- ☐ Magma plumes and their relationship to plate movement
- ☐ The nature of volcanicity and its relation to plate tectonics
- ☐ Spatial distribution, magnitude, frequency, regularity and predictability of volcanic events
- ☐ A range of case studies to illustrate and assess the impacts and responses to recent volcanic events
- ☐ The nature of seismicity and its relation to plate tectonics
- ☐ Spatial distribution, randomness, magnitude, frequency, regularity, predictability of seismic events
- ☐ A range of case studies to illustrate and assess the impacts and responses to recent seismic events
- ☐ The nature of tropical storms and their underlying causes
- ☐ Spatial distribution, magnitude, frequency, regularity, predictability of storm events
- ☐ A range of case studies to illustrate and assess the impacts and responses to recent tropical storm events
- ☐ Characteristics and causes of wildfires as quasi-natural hazards and the factors affecting their spread and distribution
- ☐ A range of case studies to illustrate and assess the impacts and responses to recent wildfire events
- ☐ **CASE STUDY:** A multi-hazardous environment beyond the UK to illustrate and analyse the nature and risks of the hazards and the resilience, adaptation, mitigation, and management contributing to its continuing human occupation
- ☐ **CASE STUDY:** A local scale of a specified place in a hazardous setting to illustrate the physical nature of the hazard and to analyse how the economic, social and political character of its community reflects the presence of the hazard and the community's response to the risk

PAPER 2 – HUMAN GEOGRAPHY

GLOBAL SYSTEMS AND GOVERNANCE

- ☐ Dimensions of globalisation: flows of capital, labour, products, services and information; global marketing; patterns of production, distribution and consumption
- ☐ Factors in globalisation: the development of technologies, systems and relationships, including financial, transport, security, communications, management and information systems and trade agreements
- ☐ Global features and trends in international trade and investment, unequal flows and power dynamics
- ☐ Differential access to markets associated with levels of economic development and trading agreements and its impacts on economic and societal well-being
- ☐ The nature and role of TNCs, including their spatial organisation, production, linkages, trading and marketing patterns.
- ☐ Detailed reference to a specific TNC including its impacts on those countries in which it operates (Apple)
- ☐ A case study of world trade in a food commodity (Coffee)
- ☐ The emergence and developing role of norms, laws and institutions in regulating and reproducing global systems
- ☐ The concept of the global commons
- ☐ The physical environment of Antarctica and the continent as a fragile ecosystem
- ☐ Threats to Antarctica arising from: climate change, fishing and whaling, the search for mineral resources, tourism and scientific research
- ☐ Critical appraisal of the developing governance of Antarctica. International government organisations to include UN agencies such as the UNEP and the IWC. The Antarctica Treaty (1959), the Protocol on Environmental Protection to the Antarctic Treaty (1991); IWC Whaling Moratorium (1982) – their purpose, scope and systems for inspection and enforcement
- ☐ The role of NGOs in monitoring threats and enhancing protection of Antarctica
- ☐ Analysis and assessment of the geographical consequences of global governance (Antarctica)
- ☐ The impacts of globalisation to consider the benefits of growth, development, integration, stability against the costs of inequalities, injustice, conflict and environmental impact

CHANGING PLACES

- ☐ The concept of place and Insider and outsider perspectives on place
- ☐ Categories of place (near/far, experienced/media)
- ☐ Factors contributing to the character of places (endogenous/exogenous)
- ☐ How the demographic, socio-economic and cultural characteristics of places are shaped by shifting flows

- ☐ The characteristics and impacts of external forces operating at different scales, either government or decisions of TNCS or international or global institutions
- ☐ How past and present connections, within and beyond localities, shape places and embed them in regional, national, global scales
- ☐ How humans perceive and form attachments to places and represent the world to others, including the way in which place meanings are bound up with different identities (etc.)
- ☐ How external agencies and community or local groups make attempts to create specific place-meanings and shape actions and behaviours
- ☐ How places may be represented in different forms in diverse media that give contrasting images to that presented formally or statistically
- ☐ How past and present processes of development influence social and economic characteristics of places and are implicit in present meanings
- ☐ Know a range of quantitative and qualitative approaches across the theme as a whole
- ☐ Use of geospatial data, must be used to investigate and present place characteristics
- ☐ Qualitative approaches involved in representing place
- ☐ Analysing critically the impacts of different media on place meanings and perceptions
- ☐ Development of critical perspectives on the data categories and approaches.
- ☐ **CASE STUDY:** People's lived experience of a **local** place in the past and at present and how either changing demographic and cultural characteristics or economic change and social inequalities have shaped the place - Brixton
- ☐ **CASE STUDY:** People's lived experience of a **distant** place in the past and at present and how either changing demographic and cultural characteristics or economic change and social inequalities have shaped the place - Detroit

POPULATION AND THE ENVIRONMENT

- ☐ The environmental context for human population characteristics and change
- ☐ Key elements in the physical environment: climate, soils, resource distribution including water supply
- ☐ Key population parameters: distribution, density, numbers, change
- ☐ Key role of development processes
- ☐ Global patterns of population numbers, densities and change rates
- ☐ Global and regional patterns of food production and consumption
- ☐ Agricultural systems and productivity. Relationship with key physical environmental variables – climate and soils
- ☐ Characteristics and distribution of two major climatic types to exemplify relationships between climate and human activities and numbers
- ☐ Climate change as it affects agriculture
- ☐ Characteristics and distribution of two key zonal soils to exemplify relationships between soils and human activities, especially agriculture
- ☐ Soil problems and their management as they relate to agriculture: soil erosion, waterlogging, salinisation, structural deterioration
- ☐ Strategies to ensure food security

- ☐ Global patterns of health, mortality and morbidity
- ☐ Economic and social development and the epidemiological transition
- ☐ The relationship between environmental variables e.g. climate, topography (drainage) and incidence of disease
- ☐ Water and air quality and health
- ☐ The global prevalence, distribution, seasonal incidence of one specified biologically transmitted disease e.g. malaria including impacts of environmental variables on transmission vectors. Impacts on health and well-being. Management and mitigation strategies
- ☐ The global prevalence and distribution of one specified non-communicable disease, e.g. a specific type of cancer, coronary heart disease, asthma; its links to physical and socio-economic environment including impact of lifestyles. Impact on health and well-being. Management and mitigation strategies
- ☐ Role of international agencies and NGOs in promoting health and combating disease at the global scale
- ☐ Factors natural population change: the demographic transition model, key vital rates, age-sex composition; cultural controls
- ☐ Models of natural population change, and their application in contrasting physical and human settings
- ☐ Concept of the demographic dividend
- ☐ International migration: refugees, asylum seekers and economic migrants; environmental and socio-economic causes, processes. Demographic, environmental, social, economic, health and political implications of migration
- ☐ Population growth dynamics: Overpopulation, underpopulation and optimum population
- ☐ Population, resources and pollution model: positive and negative feedback
- ☐ Perspectives on population growth and implications: Malthusian, neo-Malthusian and alternatives such as associated with Boserup and Simon
- ☐ Health impacts of global environmental change: ozone depletion – skin cancer, cataracts; climate change – thermal stress, emergent and changing distribution of vector borne diseases, agricultural productivity and nutritional standards
- ☐ Prospects for the global population. Projected distributions. Critical appraisal of future population – environment relationships
- ☐ **CASE STUDY:** A country/society experiencing specific patterns of overall population change - Japan
- ☐ **CASE STUDY:** Knowledge and understanding of patterns of health and morbidity related to physical and socio-economic characteristics at a local scale - Knowsley