



**GCE A LEVEL
GEOGRAPHY
A110QS**

Summer 2022 examinations

Component 1	Changing Landscapes and Changing Places	Friday, 27 May 2022
Component 2	Global Systems and Global Governance	Wednesday, 8 June 2022
Component 3	Contemporary Themes in Geography	Friday, 17 June 2022

Advance Information

General information for students and teachers

This advance information provides the focus of the content of the summer 2022 examination papers.

It does not apply to any other examination series.

It is intended to support revision.

It may be used at any time from the date of release.

It must not be taken into the examination.

Subject information for students and teachers

A guidance document on advance information has been produced by The Joint Council for Qualifications (JCQ) on behalf of all awarding organisations. It can be found [here](#).

The following areas of content are suggested as key areas of focus for revision and final preparation in relation to the Summer 2022 examinations. The aim should still be to cover all specification content in teaching and learning. The information is presented in specification order and not in question order.

Due to the synoptic nature of the assessments, students will be expected to apply their knowledge and understanding to interpret, analyse and evaluate geographical information and issues relating to the content listed within this notification, but may draw upon other areas of specification content where relevant, and credit will be given for this where appropriate. Students and teachers are also reminded that the assessments require students to demonstrate understanding of the specialised concepts.

Suggested key areas of focus for revision and final preparation in relation to 21st Century Challenges (Component 2 - Section C) and geographical skills (Appendix A of specification) are listed separately within this notification.

Component 1: Either 1.1: Coastal Landscapes

Focus	Geographical content
1.1.5 Processes of coastal weathering, mass movement, erosion and the characteristics and formation of associated landforms and landscapes	<ul style="list-style-type: none">• Sub aerial processes of weathering (physical, chemical and biotic) and mass movement including landslides, slumps and rock falls• Marine erosional processes of hydraulic action, abrasion (corrasion), corrosion and attrition• Characteristics of coastal landforms and landscapes both for and beyond the UK, including cliffs, headlands and bays, cave-arch-stack-stump sequence and wave-cut platforms, geos and blowholes
1.1.7 Aeolian, fluvial and biotic processes, the characteristics and the formation of landforms in coastal environments	<ul style="list-style-type: none">• Action of wind and associated landforms of sand dunes
1.1.9 Coastal processes are a vital context for human activity	<ul style="list-style-type: none">• Positive impacts of coastal processes on human activity including the growth of tourism• Negative impacts of coastal processes on human activity including economic and social losses associated with coastal erosion• Case study of one management strategy to manage the impacts of coastal processes on human activity
1.1.10 The impact of human activity on coastal landscape systems	<ul style="list-style-type: none">• Positive impacts of human activity on coastal processes and landforms including management and conservation• Negative impacts of human activity on coastal processes and landforms including offshore dredging and erosion of sand dunes• Case study of one management strategy to manage the impacts of human activity on coastal processes and landforms and landscapes

Or 1.2: Glaciated Landscapes

Focus	Geographical content
1.2.5 Processes of glacial weathering, erosion and the characteristics and the formation of associated landforms and landscapes	<ul style="list-style-type: none"> • Freeze-thaw weathering • Erosional processes of abrasion, plucking and sub-glacial fluvial erosion • Factors affecting glacial erosion including basal thermal regime, ice velocity, ice thickness, bedrock permeability and jointing • Characteristics of macro-scale glacial erosional landforms and landscapes both for and beyond the UK including cirques, pyramidal peaks, arêtes, glacial troughs, ribbon lakes, hanging valleys and truncated spurs; meso-scale glacial landforms and landscapes both for and beyond the UK including roches moutonnees, crag and tail; micro-scale glacial landforms including striations both for and beyond the UK
1.2.6 Processes of glacial and fluvioglacial transport and glacial and fluvioglacial deposition and the characteristics and the formation of associated landforms and landscapes	<ul style="list-style-type: none"> • Processes of glacial and fluvioglacial transport including supraglacial, englacial and sub glacial transfers and their resultant sediment characteristics (size, shape and sorting) • Landforms and landscapes of glacial deposition including types of till (ablation, lodgement and deformation) and types of moraine (terminal, recessional, lateral, medial and push) and drumlins • Processes of fluvioglacial transport and deposition lead to ice- contact features both for and beyond the UK including eskers, kames, kame terraces and proglacial features including sandurs, varves, kettle holes and kettle lakes
1.2.10 Glacial processes are a vital context for human activity	<ul style="list-style-type: none"> • Impacts of glacial processes and landforms and landscapes on human activity including glacial lake outburst floods (GLOFs) • Impacts of human activity on glacial processes and landforms and landscapes including extraction of sands and gravels and creation of reservoirs • (Case study of one) management strategy to manage either the impacts of glacial processes / landforms / landscapes on human activity or human activity impacts on glacial processes / landforms / landscapes • Permafrost degradation through human activity

Component 1: Changing Places

Focus	Geographical content
1.3.1 Changing place; changing places – relationships and connections	<ul style="list-style-type: none">• The demographic, socio-economic and cultural characteristics of places as exemplified by the 'home' place (this may be a locality, neighbourhood or a small community) and at least one further contrasting place
1.3.6 The 21st century knowledge economy (quaternary) and its social and economic impacts	<ul style="list-style-type: none">• Knowledge economy clusters including education, research, culture / creative industries, digital / IT companies, science and biotechnology• Locational factors encouraging cluster growth including proximity to universities and research institutes, government support, planning regulations and infrastructure• Impacts of quaternary industry clusters on people and places including place making and marketing, demographic change and global connectivity
1.3.7 The rebranding process and players in rural places	<ul style="list-style-type: none">• Diversification in the post-productive countryside is achieved through re-imaging and regenerating rural places through recreation, heritage, media and event management that have been driven by local groups and external agencies• The consequences of rebranding on the perceptions, actions and behaviours of people, including those in other places who choose to relocate there, changes to businesses and the local community
1.3.9 The rebranding process and players in urban places	<ul style="list-style-type: none">• Re-imaging and regenerating urban places through sport / music stadia, cultural quarters, festivals, industrial heritage and flagship developments• Re-imaging and regenerating urban places through external agencies including governments, corporate bodies and community groups

Component 2: Global Systems - Water and Carbon Cycles

Focus	Geographical content
2.1.1 The concepts of system and mass balance	<ul style="list-style-type: none"> • Change in size of stores over space and time including , sea- level change and cryospheric processes (ice accumulation and ablation)
2.1.2 Catchment hydrology – the drainage basin as a system	<ul style="list-style-type: none"> • Input: precipitation type, amount, duration and intensity • Flows: throughfall and stemflow, infiltration, overland (saturation and infiltration excess) flow, throughflow, percolation, groundwater flow and channel flow • Stores: interception store, vegetation store, surface store, soil moisture store, channel store, groundwater store • Outputs: evaporation, transpiration and channel discharge to oceans
2.1.3 Temporal variations in river discharge	<ul style="list-style-type: none"> • Characteristics of river regimes including simple and complex regimes • Factors influencing river regime characteristics including climate, season, geology, vegetation and land use • The components and shape of storm hydrographs • Climatic factors influencing storm hydrographs including precipitation type, amount, duration and intensity, temperature, evaporation, transpiration and antecedent conditions • River catchment characteristics influencing storm hydrographs including size and shape, drainage density, porosity and permeability of soils and rock types, slopes, vegetation and land use
2.1.5 Deficit within the water cycle	<ul style="list-style-type: none"> • Meteorological causes, including seasonal variation or longer- term climate change • Human causes, including depleting aquifers and surface water resources by extraction • Natural and artificial recharge of aquifers to address the deficit
2.1.7 Carbon stores in different biomes	<ul style="list-style-type: none"> • Changes in the size of carbon stores due to human activity including land-use change (deforestation, afforestation and agricultural activity)
2.1.8 Changing carbon stores in peatlands over time	<ul style="list-style-type: none"> • The accumulation of the carbon store through the process of peat formation • The reduction of the carbon store through peat extraction and drainage • The restoration of the carbon store through management of peatlands
2.1.9 Links between the water and carbon cycles	<ul style="list-style-type: none"> • Causes of recent increases in the atmospheric carbon store • Relationship between recent increases in the atmospheric carbon store and the energy budget • Impacts of recent increases in the atmospheric carbon store on the water cycle and oceans, including: amount, type and patterns of precipitation, extreme weather, river discharge, sea level rise, acidification of the oceans • Links between the water and carbon cycles at the local scale
2.1.10 Feedback within and between the carbon and water cycles	<ul style="list-style-type: none"> • Positive and negative feedback loops, thresholds and equilibrium in natural systems

Component 2: Global Governance - Processes and Patterns of Global Migration

Focus	Geographical content
2.2.1 Globalisation, migration and a shrinking world	<ul style="list-style-type: none"> • Growth of global systems; connections and global flows of goods, money, people, technology and ideas • Classification of migrants and quantification and mapping of global patterns of migration • Factors creating a shrinking world for potential migrants including transport, communication and media representation
2.2.2 Causes of international economic migration	<ul style="list-style-type: none"> • Factors driving international out-migration, including poverty, primary commodity prices and poor access to markets within global systems • Recent drivers of migration including the development of diaspora communities, colonial and Commonwealth links and legislation permitting freedom of movement, including the EU • How powerful superpowers exert influence and disproportionately attract international migrants to their own advantage, including political strategies to develop cities as global hubs for investment and migration
2.2.3 Consequences and management of international economic migration	<ul style="list-style-type: none"> • Flows of money, ideas and technology linked with economic migration that reduce or exacerbate global economic inequalities, including remittances and the 'brain drain' of skilled workers. These factors can cause conflict but promote growth and stability • Increased economic, social, political and environmental interdependency of host and source countries and the people who live there • Migration policies of host and source countries, including the management of conflicting views about cultural change and migration held by individual UK citizens (and learners' own lives)
2.2.5 Causes, consequences, and management of rural-urban migration in developing countries	<ul style="list-style-type: none"> • Push factors in rural areas, including mechanised agriculture, MNCs, land grabs and the displacement of indigenous peoples by global systems • Employment pull factors in urban areas in developing and emerging economies, including global supply chain growth in export processing zones (EPZs)

Component 2: Global Governance - Global Governance of the Earth's Oceans

Focus	Geographical content
2.2.6 Global governance of the Earth's oceans	<ul style="list-style-type: none">• Post-1945 supranational institutions for global governance including UN and UNESCO, EU, G7/G8, G20, G77 and NATO• Laws and agreements regulating the use of the Earth's oceans in ways that promote sustainable economic growth and geopolitical stability• Strategic value of the oceans for global superpowers and security issues affecting maritime trade, including the governance of oil transit chokepoints, the Suez and Panama canals and piracy hotspots• Connections between places and the lives of people across the globe created by the UK's past role as a maritime power, including the Commonwealth
2.2.7 Global flows of shipping and sea cables	<ul style="list-style-type: none">• Changing trends, patterns, networks and regulation of shipping including containers and oil tankers• Growth of smuggling and people trafficking and international efforts to manage these flows• Growth of seafloor cable data networks including causes, trends, patterns and uses• Risks to seafloor cable data networks including those from tsunamis and undersea landslides, and international conventions to protect seafloor data cables
2.2.8 Sovereignty of ocean resources	<ul style="list-style-type: none">• Distribution and ownership of major ocean resources including minerals and fossil fuels, including the establishment and reproduction of territorial limits and sovereign rights that benefit some states but not others• Geopolitical tensions including the contested ownership of islands and surrounding seabeds and attempts to establish ownership of Arctic Ocean resources• Injustices arising from unequal access to ocean resources, including the geographical consequences for poor landlocked countries and indigenous people in some coastal areas
2.2.10 Managing ocean pollution	<ul style="list-style-type: none">• Main sources, causes and consequences of ocean pollution including terrestrial run-off, waste disposal and oil spillage, eutrophic dead-zones, plastic garbage patches and the role of ocean currents

Component 3: Section A - Tectonic Hazards

This section is compulsory.

Focus	Geographical content
3.1.1 Tectonic processes and hazards	<ul style="list-style-type: none">• Characteristics of the Earth's structure including core, mantle and crust and the boundaries between them• Mechanisms of plate movement including internal heating within the Earth, convection currents, ridge push and slab pull• Plate distribution and the processes operating at different margins including diverging, converging and conservative margins; and tectonic activity at hot spots• Global distribution of tectonic hazards and their link to tectonic processes• Characteristics of the physical hazard profile that influence its impact including magnitude (as measured on Mercalli and Richter scales and Volcanic Explosivity Index), predictability, frequency, duration, speed of onset and areal extent
3.1.2 Volcanoes, processes, hazards and their impacts	<ul style="list-style-type: none">• Types of volcano including shield, composite and cinder and types of volcanic eruption including explosive and effusive• Volcanic processes and the production of associated hazards including pyroclastic flows, lava flows, ash falls, lahars, jökulhlaups, volcanic landslides and toxic gases• Environmental, demographic, economic and social impacts of volcanic hazards on people and the built environment including primary and secondary effects• Local scale, regional scale and global scale impacts of volcanic activity• Use examples of at least two contrasting contexts to demonstrate the varied degree of risk and impacts of volcanic activity
3.1.3 Earthquakes, processes, hazards and their impacts	<ul style="list-style-type: none">• Earthquake characteristics to include P and S waves, focus, depth and epicentre• Earthquake processes and the production of associated hazards including ground shaking, liquefaction, landslides and tsunami• Environmental, demographic, economic and social impacts of earthquake activity on people and the built environment including primary and secondary effects• Local scale, regional scale and global scale impacts of earthquake activity• Use examples of at least two contrasting contexts to demonstrate the varied degree of risk and impacts of earthquake activity
3.1.4 Human factors affecting risk and vulnerability	<ul style="list-style-type: none">• Economic factors including level of development and level of technology• Social factors including the population density, population profile (age, gender) and levels of education• Political factors including the quality of governance• Geographical factors including rural / urban location, time of day and degree of isolation

Component 3: Section B - Contemporary Themes in Geography

This section is based on four optional themes. Two optional themes must be selected for study.

3.2: Ecosystems

Focus	Geographical content
3.2.1 The value and distribution of ecosystems	<ul style="list-style-type: none">• The value of ecosystems as providers of goods and services for the survival and well-being of humans including medicines, gene pools and resilience to hazards• Distribution of the major global biomes• Relationship between temperature / precipitation and the distribution of biomes including forests, grasslands and deserts
3.2.3 Biodiversity under threat	<ul style="list-style-type: none">• Measures of biodiversity• Threats to biodiversity from direct action and indirect action operating at a range of scales from local to global• Ecosystems at greatest risk including tropical rainforests, coral reefs and wetlands
3.2.7 Sustainable use of the Arctic tundra biome	<ul style="list-style-type: none">• Threats to the Arctic tundra, including climate change, mineral exploitation and tourism• Conflicts with indigenous populations• Strategies used to manage the Arctic tundra biome

3.3: Economic Growth and Challenge: either India or China or Development in an African Context

India or China

Focus	Geographical content: India	Geographical content: China
3.3.4 The economic and political background of India or China	<ul style="list-style-type: none"> • Distribution of economic activity • Influence of political systems of democracy in India on economic change • Role of government in the location and development of economic activity 	<ul style="list-style-type: none"> • Distribution of economic activity • Influence of political systems of modified communism in China on economic change • Role of government in the location and development of economic activity
3.3.5 The global importance of India or China	<ul style="list-style-type: none"> • Recent changes in the size and structure of India's economy • The global shift, outsourcing and offshoring including the role of India as the global outsourcing capital • Influence of India's use of political (soft) power in the wider world including its participation in global organisations, governance, conventions and treaties 	<ul style="list-style-type: none"> • Recent changes in the size and structure of China's economy • The global shift, outsourcing and offshoring including the role of China as the workshop of the world • Influence of China's use of political (soft) power in the wider world including its participation in global organisations, governance, conventions and treaties
3.3.6 Threats to India's or China's environment associated with economic growth	<ul style="list-style-type: none"> • Environmental pressures associated with economic growth including fossil fuel use, industrial pollution, soil erosion, deforestation and desertification • Environmental issues of water security, food security and energy security • Environmental pressures associated with rapid urbanisation 	<ul style="list-style-type: none"> • Environmental pressures associated with economic growth including fossil fuel use, industrial pollution, soil erosion, deforestation and desertification • Environmental issues of water security, food security and energy security • Environmental pressures associated with rapid urbanisation

Or: Development in an African Context

Focus	Geographical content
3.3.10 The influence of economic factors on the development two or more countries	<ul style="list-style-type: none">• Influence of free trade and trade blocs in promoting and hindering development including subsidies and tariffs, quotas and protectionism• The resource curse and conflict, including the issue of conflict minerals• Influence of MNCs, including foreign direct investment, out-sourcing and offshoring• Influence of tourism and fair trade
3.3.11 The influence of political, social and cultural factors on the development two or more countries	<ul style="list-style-type: none">• Influence of political factors including governance, colonialism and neo-colonialism, global organisations and corruption.• Influence of social factors including education, health and welfare, social and cultural constraints including the role of women and ethnic divisions
3.3.12 The impact of development on the environment of two or more countries	<ul style="list-style-type: none">• Effects of economic development on consumerism and the environmental impact of the exploitation of natural resources• Environmental impacts of agro-industrialisation• Impact of manufacturing and extractive industries on the environment

3.4: Energy Challenges and Dilemmas

Focus	Geographical content
3.4.2 Physical factors determining the supply of energy	<ul style="list-style-type: none">• Geological factors including physical reserves of fossil fuels and active areas for geothermal energy• Climatic factors including insolation rates and wind strength and reliability• Relief factors including suitable locations for dam construction and hydropower• Locations with favourable conditions for sustainable energy generation from waves, tides and biofuels
3.4.3 The changing demand for energy	<ul style="list-style-type: none">• Changing global patterns of energy demand• Economic factors influencing the demand for energy• Demographic and social factors influencing the demand for energy• Technological factors influencing the demand for energy
3.4.7 The need for sustainable solutions to meet the demand for energy	<ul style="list-style-type: none">• Policies for demand reduction and increased energy efficiency at the global, national and local scale• Clean technologies for fossil fuels including carbon capture, carbon sequestration and gasification and transport technologies• Sustainability of alternative energy sources

3.5: Weather and Climate

Focus	Geographical content
3.5.4 Extreme weather events	<ul style="list-style-type: none"> • Causes and consequences of recent and cyclic climate change including extreme weather events • Changing vulnerability of populations to weather and climatic hazards including exposure to climatic variability, sensitivity to stress and adaptive capacity
3.5.6 Impacts of human activities on the atmosphere at local and regional scales	<ul style="list-style-type: none"> • Impacts of urban areas on temperature, wind, precipitation and humidity • Impacts of urban areas on air quality including particulate pollution, photochemical smog and acid rain • Strategies to reduce the impact of human activity on urban climates and air quality
3.5.7 People, climate and the future	<ul style="list-style-type: none"> • Global impact of anthropogenic climate change on shifting climate belts • Consequences of reaching atmospheric tipping point including environmental and economic impacts • Strategies to mitigate and adapt to climate change at a variety of scales

Component 2: Section C - 21st Century Challenges

Topic Area	Specification Reference/Focus
Changing Places	1.3.4
Global Systems	2.1.9
Global Governance: Change and Challenges	2.2.1, 2.2.3, 2.2.4

Geographical skills

Quantitative skills to collect data through numerical measurements		Ref. No.
2.	Number and statistical calculations: <ul style="list-style-type: none"> • percentages • fractions, proportions and ratios • data sets (small to large) including crowd-sourced and big data (characterised by volume, velocity and variety) 	2.3 2.4 2.5
3.	Cartographic and graphical material: <ul style="list-style-type: none"> • choropleth maps • graphs, including scatter, line, bar, triangular, logarithmic, bipolar 	3.2 3.6
Qualitative skills to collect data through non-numerical techniques		Ref. No.
8.	Textual and visual sources: <ul style="list-style-type: none"> • images • factual text • discursive / creative material 	8.2 8.3 8.4

End of advance information