

Qualification at a glance

Paper overview

Paper 1: Physical geography	*Paper code 4GE1/01
<ul style="list-style-type: none">• Externally assessed• Availability: June• First assessment: June 2019• 70 marks	40% of the total International GCSE
Content summary <ul style="list-style-type: none">• River environments• Coastal environments• Hazardous environments including fieldwork from one of these topics	
Assessment <p>Examination of 1 hour and 10 minutes, consisting of two sections. The questions are a mixture of multiple-choice, short-answer, data-response and open-ended questions.</p> Section A <p>Candidates choose two out of three questions on: river environments, coastal environments, hazardous environments.</p> Section B <p>Candidates choose one out of three fieldwork-related questions on: river environments, coastal environments, hazardous environments.</p>	

Paper 2: Human geography	*Paper code 4GE1/02
<ul style="list-style-type: none"> • Externally assessed • Availability: June • First assessment: June 2019 • 105 marks 	60% of the total International GCSE
<p>Content summary</p> <ul style="list-style-type: none"> • Economic activity and energy • Rural environments • Urban environments <p>including fieldwork from one of these topics</p> <ul style="list-style-type: none"> • Global issues (Fragile environments and climate change, Globalisation and migration, Development and human welfare) 	
<p>Assessment</p> <p>Examination of 1 hour and 45 minutes, consisting of three sections. The questions are a mixture of multiple-choice, short-answer, data-response and open-ended questions.</p> <p>Section A</p> <p>Candidates choose two out of three questions on: economic activity and energy, rural environments, urban environments.</p> <p>Section B</p> <p>Candidates choose one out of three fieldwork-related questions on: economic activity and energy, rural environments, urban environments.</p> <p>Section C</p> <p>Candidates choose one out of three questions on: fragile environments and climate change, globalisation and migration, development and human welfare.</p>	

* See *Appendix 1* for a description of this code and all the other codes relevant to this qualification.

Paper 1: Physical geography

Externally assessed

1.1 Description

This paper brings together physical geography and people-environment processes and interactions. The paper is divided into two sections.

Section A – students choose **two** out of three topics from: river environments, coastal environments, hazardous environments.

- Topic 1: River environments – features of the global hydrological cycle (including drainage basins), the physical processes that give rise to distinct river landforms and detailed case studies of river management in a developed **and** a developing **or** emerging country.
- Topic 2: Coastal environments – the processes that give rise to characteristic coastal landforms, threats facing coastal ecosystems and detailed case studies of coastal management in a developed **and** a developing **or** emerging country.
- Topic 3: Hazardous environments – the characteristics and distribution of different types of natural hazard, the measurement and impacts of hazards and detailed case studies of the management of an earthquake in a developed **and** a developing **or** emerging country.

Section B – students are required to undertake a geographical investigation involving fieldwork and research, in **one** natural environment. In this paper, students choose **one** out of three fieldwork-related questions from: river environments, coastal environments, hazardous environments.

1.2 Assessment information

Examination length: 1 hour and 10 minutes.

Examination paper is in two sections.

Section A (50 marks).

Candidates choose **two** out of three questions on: river environments, coastal environments, hazardous environments.

Section B (20 marks).

Candidates choose **one** out of three fieldwork-related questions on: river environments, coastal environments, hazardous environments.

Total for paper: 70 marks.

1.3 Subject content – Section A

Topic 1: River environments

What students need to learn

Key ideas	Detailed content
1.1 The world's water supply is contained in a closed system – the hydrological cycle	<ul style="list-style-type: none"> a) The hydrological cycle: characteristics, stores and transfers. b) Features of a drainage basin: source, watershed, channel network, mouth. c) Factors affecting river regimes: precipitation, including storm hydrographs, temperature, vegetation, land use, water abstraction, dams. (1)
1.2 Physical processes give rise to characteristic river landforms	<ul style="list-style-type: none"> a) Fluvial processes involved in river valley and river channel formation: erosion (vertical and lateral), weathering and mass movement, transportation and deposition, and factors affecting these processes (climate, slope, geology, altitude and aspect). b) How channel shape (width, depth), valley profile (long and cross profiles), gradient, velocity, discharge, and sediment size and shape change along the course of a named river 🌐. (2) c) How river landscapes change over the course of a river, with distinctive upland and lowland landforms, including the formation of valleys, interlocking spurs, waterfalls, meanders, oxbow lakes, flood plains and levees. (3)

Case studies of river management in a developed country **and** a developing country **or** an emerging country.

1.3 River environments are of great importance to people and need to be sustainably managed	<ul style="list-style-type: none"> a) Uses of water, including agriculture, industry, human hygiene and leisure, and the rising demand for and supply of water: areas of water shortage and water surplus. b) Reasons for variations in water quality, including pollution (sewage, industrial waste, agriculture) and the storage and supply of clean water (dams and reservoirs, pipelines, treatment works). (4) c) Causes of river flooding, including rainfall intensity, seasonal variations in discharge due to monsoons or snowmelt, relief, urbanisation, and the prediction and prevention of flooding. (5)
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Integrated skills	
(1)	Draw and interpret storm hydrographs using rainfall and discharge data.
(2)	Use geology maps (paper or online) to link river long profiles to geology.
(3)	Use GIS to map river systems.
(4)	Use different maps (paper or online) to investigate the impact of human intervention.
(5)	Use weather and climate data.

Topic 3: Hazardous environments

What students need to learn

Key ideas	Detailed content
3.1 Some places are more hazardous than others	<ul style="list-style-type: none"> a) Characteristics, distribution and measurement of different types of natural hazards including tropical cyclones, earthquakes and volcanoes. (1) b) Causes of tropical cyclone hazards, including ocean temperature, atmospheric pressure, wind shear and Coriolis force. c) Causes of volcanic and earthquake hazards, including the role of plate boundaries and hotspots. (2)
3.2 Hazards have an impact on people and the environment	<ul style="list-style-type: none"> a) Reasons why people continue to live in areas at risk from hazard events. b) Some countries are more vulnerable (physically, socially and economically) than others to the impacts of natural hazards. c) The shorter-term and longer-term impacts of one earthquake one volcano and one tropical cyclone hazard (3).

Case studies of hazard management for an earthquake in a developed country **and** a developing country **or** an emerging country.

3.3 Earthquakes present a hazard to many people and need to be managed carefully	<ul style="list-style-type: none"> a) Preparation for earthquakes (warning and evacuation, building design, remote sensing and GIS). (4) b) Short-term responses and relief (emergency aid, shelter and supplies). c) Longer-term planning (risk assessment, hazard mapping and rebuilding programmes). (5)
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Integrated skills	
(1)	Use world maps to show the distribution of different hazards.
(2)	Use a range of different maps to show links between tectonic boundary and hazard type.
(3)	Use social media sources, satellite images and socio-economic data to assess varying impacts.
(4)	Use GIS to investigate preparation for earthquake hazards.
(5)	Use online data sources to research the range of shorter and longer-term responses for a particular earthquake event.

1.4 Assessment of fieldwork skills – Section B

Fieldwork is assessed in Section B of Paper 1. Students are required to complete **one** geographical enquiry involving fieldwork relating to **one** topic in Paper 1.

Paper 1: Physical geography

- River environments.
- Coastal environments.
- Hazardous environments.

Centres must ensure that:

- Primary data collection includes quantitative and qualitative techniques.
- Secondary data collection includes the use of at least **two** different secondary data sources for your chosen environment.

Practical skills

As part of – and in addition to – undertaking the geographical enquiry, students should acquire and be able to apply the following skills:

- **graphical skills** – compiling graphs and flow lines, using proportional symbols, annotating maps, diagrams and photographs
- **map skills** (including use of digital maps) – using grid references, understanding scales, recognising symbols, identifying landforms and human features of the landscape
- **photo-interpretation skills** – reading vertical and oblique aerial photographs and satellite images, including GIS
- **sketching skills** – communicating ideas through simple sketch maps and field sketches
- **spatial awareness** – identifying the relative locations and relationships between features.

Cognitive enquiry skills

Students should acquire and be able to apply the following skills:

- **analysis of findings** – reviewing and interpreting quantitative and qualitative information using appropriate media
- **use of statistical skills** – simple descriptive statistics, such as lines of best fit, means, medians, modes, etc.
- **conflict resolution skills** – identifying the views of interested people (stakeholders), recognising that stakeholders may have strongly different attitudes and feelings towards a particular issue
- **evaluation of findings** – appraisal and review of data and information to see if they are accurate and suitable for the purpose, or misleading and unreliable.

Fieldwork questions will include questions set in a familiar and unfamiliar fieldwork context.

Questions set in a familiar fieldwork context will require students to interpret, analyse, evaluate and make judgements about their own fieldwork (AO3). They will also require students to communicate their findings (AO4).

Questions set in an unfamiliar fieldwork context will be set in in the fieldwork environment you have studied and will relate to the fieldwork investigation you have done (as set out in column 4 in the table below), they will however use unfamiliar fieldwork data and students will need to show that they can apply their fieldwork understanding and skills to interpret and analyse this data.

Contexts for fieldwork			
Paper 1: Physical geography			
Section B topic	Geographical enquiry	Suggested methods of primary and secondary data collection for familiar fieldwork contexts	What students need to learn for unfamiliar primary and secondary fieldwork contexts in Paper 1
River environments	Investigation of river processes and form through primary and secondary fieldwork evidence	<p>Primary</p> <p>Quantitative e.g. (1) channel measurements - velocity, width, depth and gradient (2) measurements of sediment - size and shape</p> <p>Qualitative e.g. (1) annotated field sketches of the river channel and its features, (2) photographs to show how the channel changes downstream</p> <p>Secondary (1) A GIS topographic map, e.g. from ArcGIS Online or Google Earth, (2) local secondary data on river flows or regimes</p>	<p>Primary</p> <p>Quantitative</p> <ul style="list-style-type: none"> • River channel characteristics: width, depth and velocity • River gradient <p>Qualitative</p> <ul style="list-style-type: none"> • Annotated field sketches <p>Secondary</p> <ul style="list-style-type: none"> • GIS topographic map
Coastal environments	Investigation of coastal processes and form through primary and secondary fieldwork evidence	<p>Primary</p> <p>Quantitative e.g. (1) sediment size and shape measurements, beach profile survey, (2) measurement of erosional features - a cliff or intertidal zone</p> <p>Qualitative e.g. (1) annotated field sketches of particular coastal features, (2) photographs to show how there are variations along a stretch of the coast.</p>	<p>Primary</p> <p>Quantitative</p> <ul style="list-style-type: none"> • Sediment: size and shape • Beach profile <p>Qualitative</p> <ul style="list-style-type: none"> • Annotated field sketches <p>Secondary</p> <ul style="list-style-type: none"> • Local geology map

Paper 2: Human geography

Externally assessed

2.1 Description

This paper brings together human geography and people-environment processes and interactions. The paper is divided into three sections.

Section A – students choose **two** out of three topics from: economic activity and energy, rural environments and urban environments.

- Topic 4: Economic activity and energy – variations in economic activity over time and spatially, the relationship between population and resources and detailed case studies of energy resource management in a developed **and** a developing **or** emerging country.
- Topic 5: Rural environments – distribution, characteristics and human activities taking place in rural environments, the changes in contrasting rural environments and detailed case studies of rural environments in a developed **and** a developing **or** emerging country.
- Topic 6: Urban environments – trends, characteristics and problems associated with urban environments, the challenges facing contrasting urban environments and detailed case studies of urban environments in a developed **and** a developing **or** emerging country.

Section B – students are required to undertake a geographical investigation, involving fieldwork and research, in **one** human environment. In this paper, students choose **one** out of three fieldwork-related questions from: economic activity and energy, rural environments and urban environments.

Section C – students are required to apply their knowledge and understanding of human and physical geography to investigate broader global issues. Students choose **one** out of three questions from: fragile environments and climate change, globalisation and migration, and development and human welfare.

- Topic 7: Fragile environments and climate change – distribution, characteristics and threats facing the world's fragile environments, the impacts of different processes, including climate change, on fragile environments, and different approaches to managing fragile environments in a more sustainable way.
- Topic 8: Globalisation and migration – the characteristics and growth in globalisation, including the role of global institutions and transnational corporations, and the impacts of increased globalisation, including migration and tourism and different approaches to managing migration and tourism in a more sustainable way.
- Topic 9: Development and human welfare – definitions and ways of measuring development and human welfare, patterns of global development and the consequences of variations in development, and different strategies to address uneven levels of development and human welfare.

2.2 Assessment information

Examination length: 1 hour and 45 minutes.

Examination paper is in three sections.

Section A (50 marks).

Candidates choose two out of three questions on: economic activity and energy, rural environments, and urban environments.

Section B (20 marks).

Candidates choose one out of three fieldwork-related questions on: economic activity and energy, rural environments, and urban environments.

Section C (35 marks).

Candidates choose one out of three questions on: fragile environments and climate change, globalisation and migration, and development and human welfare.

Total for paper: 105 marks.

2.3 Subject content – Section A

Topic 4: Economic activity and energy

What students need to learn

Key ideas	Detailed content
4.1 The relative importance of different economic sectors and the location of economic activity varies spatially, and changes over time	<p>a) Classification of employment by economic sector (primary, secondary, tertiary and quaternary) and the reasons for the differences in the employment structures in countries at different levels of development (Clark Fisher Model). (1)</p> <p>b) Factors affecting the location of economic activity in each economic sector and how these factors can change over time.</p> <p>c) Reasons for the changes in the numbers of people employed in each economic sector, including the availability of raw materials, globalisation, mechanisation, demographic changes and government policies.</p>
4.2 The growth and decline of different economic sectors has resulted in a range of impacts and possible resource issues	<p>a) Positive and negative impacts of economic sector shifts in a named developed 🌐 and a named developing 🌐 or emerging country 🌐. (2)</p> <p>b) Informal employment: causes (economic development, rural-urban migration) and characteristics (advantages and disadvantages) in a named megacity 🌐. (3)</p> <p>c) Different theories (Malthus and Boserup) are used to explain the relationship between population and resources. (4)</p>

Case studies of energy resource management in a developed country **and** a developing country **or** an emerging country.

4.3 Countries increasingly experience an energy gap and therefore seek energy security by developing a balanced energy mix and sustainable energy use	<p>a) Energy demand and production varies globally and is affected by a range of factors: population growth, increased wealth and technological advances.</p> <p>b) Non-renewable, e.g. coal, oil, natural gas, uranium and shale gas/oil, and renewable sources of energy, e.g. solar, wind, hydroelectric power (HEP), geothermal, biomass, have advantages and disadvantages for people and the environment.</p> <p>c) Energy can be managed in a sustainable way through education, efficiency and conservation (within industry, transport and the home). (5)</p>
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Integrated skills	
(1)	Draw and interpret triangular graphs to show the proportion of people employed in the primary, secondary and tertiary/quaternary sector.
(2)	Use numerical economic data to profile the chosen country.
(3)	Interpret photographs and newspaper articles.
(4)	Use and interpret line graphs showing changes in population and resources over time.
(5)	Calculate carbon and ecological footprints.

Topic 6: Urban environments

What students need to learn

Key ideas	Detailed content
6.1 A growing percentage of the world's population lives in urban areas	<p>a) Contrasting trends in urbanisation over the last 50 years in different parts of the world, including the processes of suburbanisation and counter-urbanisation. (1)</p> <p>b) Factors affecting the rate of urbanisation and the emergence of megacities.</p> <p>c) Problems associated with rapid urbanisation: congestion, transport, employment, crime and environmental issues. (2)</p>
6.2 Cities face a range of social and environmental challenges resulting from rapid growth and resource demands	<p>a) Factors affecting urban land use patterns: locational needs, accessibility, land values. (3)</p> <p>b) Urban challenges in a named developed country 🌐: food, energy, transport and waste disposal demands, concentrated resource consumption, segregation. (4)</p> <p>c) Urban challenges in a named developing country 🌐 or emerging country 🌐: squatter settlements, informal economy, urban pollution, and low quality of life.</p>

Case studies of urban environments in a developed country **and** a developing country **or** an emerging country.

6.3 Different strategies can be used to manage social, economic and environmental challenges in a sustainable manner	<p>a) Development of the rural-urban fringe: housing estates, retail, business and science parks, industrial estates, and the greenfield versus brownfield debate.</p> <p>b) The range of possible strategies aimed at making urban living more sustainable and improving the quality of life (waste disposal, transport, education, health, employment and housing) for the chosen urban environment. (5)</p> <p>c) Role of different groups of people (planners, politicians, property developers and industrialists) in managing the social, economic and environmental challenges in the chosen urban area.</p>
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Integrated skills	
(1)	Use world maps to show the trends in urbanisation over the last 50 years.
(2)	Interpret photographs and different maps (paper or online) to investigate the impacts of rapid urbanisation.
(3)	Use satellite images to identify different land uses in the chosen urban environment.
(4)	Use and interpret socio-economic data.
(5)	Use quantitative and qualitative information to judge the scale in variations in environmental quality.

2.4 Assessment of fieldwork skills – Section B

Fieldwork is assessed in Section B of Paper 2. Students are required to complete **one** geographical enquiry involving fieldwork relating to **one** topic in Paper 2.

Paper 2: Human geography

- Economic activity and energy.
- Rural environments.
- Urban environments.

Centres must ensure that:

- Primary data collection includes quantitative and qualitative techniques.
- Secondary data collection includes the use of at least **two** different secondary data sources for your chosen environment.

Practical skills

As part of – and in addition to – undertaking the geographical enquiry, students should acquire and be able to apply the following skills:

- **graphical skills** – compiling graphs and flow lines, using proportional symbols, annotating maps, diagrams and photographs
- **map skills** (including use of digital maps) – using grid references, understanding scales, recognising symbols, identifying landforms and human features of the landscape
- **photo-interpretation skills** – reading vertical and oblique aerial photographs and satellite images, including GIS
- **sketching skills** – communicating ideas through simple sketch maps and field sketches
- **spatial awareness** – identifying the relative locations and relationships between features.

Cognitive enquiry skills

Students should acquire and be able to apply the following skills:

- **analysis of findings** – reviewing and interpreting quantitative and qualitative information using appropriate media
- **use of statistical skills** – simple descriptive statistics, such as lines of best fit, means, medians, modes, etc.
- **conflict resolution skills** – identifying the views of interested people (stakeholders), recognising that stakeholders may have strongly different attitudes and feelings towards a particular issue
- **evaluation of findings** – appraisal and review of data and information to see if these are accurate and suitable for the purpose, or misleading and unreliable.

Fieldwork questions will include questions set in a familiar and unfamiliar fieldwork context.

Questions set in a familiar fieldwork context will require students to interpret, analyse, evaluate and make judgements about their own fieldwork (AO3). They will also require students to communicate their findings (AO4).

Questions set in an unfamiliar fieldwork context will be set in in the fieldwork environment you have studied and will relate to the fieldwork investigation you have done (as set out in column 4 in the table below), they will however use unfamiliar fieldwork data and students will need to show that they can apply their fieldwork understanding and skills to interpret and analyse this data (AO3) and communicate their findings (AO4).

Contexts for fieldwork			
Paper 2: Human geography			
Section B topic	Geographical enquiry	Suggested methods of primary data collection	What students need to know for Paper 2
Economic activity and energy	Investigating changing energy use through primary and secondary evidence	<p>Primary</p> <p>Quantitative e.g. (1) environmental quality survey, and a structured questionnaire, (2) visual assessment of landscape</p> <p>Qualitative e.g. (1) annotated photographs showing evidence of changing energy use, (2) interviews with different stakeholders</p> <p>Secondary (1) A local report (paper or digital) into people's / or the region's energy use, (2) local secondary data on landscape change from an energy development, e.g. historic maps and images.</p>	<p>Primary</p> <p>Quantitative</p> <ul style="list-style-type: none"> • Small scale environmental quality survey (EQS) • Structured questionnaire including closed questions <p>Qualitative</p> <ul style="list-style-type: none"> • Annotated photographs <p>Secondary</p> <ul style="list-style-type: none"> • Local report on energy use

2.5 Subject content – Section C (Global issues)

Topic 7: Fragile environments and climate change

What students need to learn

Key ideas	Detailed content
7.1 Fragile environments are under threat from desertification, deforestation and global climate change	<p>a) Distributions and characteristics of the world’s fragile environments. (1)</p> <p>b) Causes of desertification (drought, population pressure, fuel supply, overgrazing, migration) and deforestation (commercial timber extraction, agriculture, mining, transport; settlement and HEP (hydroelectric power). (2) and (3)</p> <p>c) Causes of natural climate change (Milankovitch cycles, solar variation and volcanism) and how human activities (industry, transport, energy, and farming) can cause the enhanced greenhouse effect. (4)</p>
7.2 There are various impacts of desertification, deforestation and climate change on fragile environments	<p>a) Social, economic and environmental impacts of desertification (reduced agricultural output, malnutrition, famine, migration).</p> <p>b) Social, economic and environmental impacts of deforestation (loss of biodiversity, contribution to climate change, economic development and increased soil erosion).</p> <p>c) Negative effects that climate change is having on fragile environments and people (rising sea levels, more hazards, ecosystem changes, reduced employment opportunities, changing settlement patterns, health and wellbeing challenges, including food supply). (5)</p>
7.3 The responses to desertification, deforestation and climate change vary depending on a country’s level of development	<p>a) How technology can resolve water-resource shortages in fragile environments under threat from desertification.</p> <p>b) Different approaches to the sustainable use and management of a rainforest in a named region 🌐 to limit the extent of deforestation.</p> <p>c) Different responses to global warming and climate change from individuals, organisations and governments in a named developed 🌐 and a named emerging or developing country 🌐.</p>

Integrated skills

(1)	Use world maps to show the location of fragile environments.
(2)	Use and interpret line graphs showing past and predicted global population growth, and population in relation to likely resources.
(3)	Use maps (paper and online) to identify the pattern of deforestation.
(4)	Use and interpret graphs and maps to show human causes of climate change.
(5)	Use and interpret line graphs/bar charts showing climate change and sea level change.

3 Assessment information

Assessment requirements

Paper number and unit title	Assessment information	Number of raw marks allocated in the paper
Paper 1: Physical geography	<p>1 hour and 10 minute examination in two sections and resource booklet.</p> <p>Candidates will be asked to answer two out of three questions in Section A and one out of three questions in Section B.</p> <p>Section A consists of multiple-choice, short-answer, data-response, and open-ended questions.</p> <p>Section B requires candidates to use knowledge and understanding from research and fieldwork that they have carried out. Candidates must not take materials into the examination.</p>	70
Paper 2: Human geography	<p>1 hour and 45 minute examination in three sections and resource booklet.</p> <p>Candidates will be asked to answer two out of three questions in Section A, one out of three questions in Section B and one out of three questions in Section C.</p> <p>Section A consists of multiple-choice, short-answer, data-response, and open-ended questions.</p> <p>Section B requires candidates to use knowledge and understanding from research and fieldwork that they have carried out. Candidates must not take materials into the examination.</p> <p>Section C consists of multiple-choice, short-answer, data-response, and open-ended questions.</p>	105

Sample assessment materials

Sample papers and mark schemes can be found in the *Pearson Edexcel International GCSE in Geography Sample Assessment Materials (SAMs)* document.