GCE MARKING SCHEME

SUMMER 2016

GEOGRAPHY - G3A
1203/01

INTRODUCTION

This marking scheme was used by WJEC for the 2016 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

G3 Assessment Objectives Grid

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
G3 A Themes 1-3	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	**25**
G3 A Themes 4-6	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	**25**
G3B (a) **(b)**	3 6 (geographical concepts)	3 3 (apply understanding and evaluation of techniques)	4 6 (use a range of skills & techniques)	**10** **15**
	35 **46%**	**20** **27%**	**20** **27%**	**75** **(100%)**

SECTION A

CONTEMPORARY THEMES IN GEOGRAPHY

Summary Descriptor	Marks out of 25	Criteria
Level 5 Very good	**21- 25**	• A response that demonstrates a high order of conceptual understanding and an appreciation of the holistic nature of geography within the context of the question. • Critical analysis, synthesis and assessment of the connections between the different elements of the subject. • Wide-ranging, thorough and accurate knowledge. • Detailed and possibly original exemplification. • Well-directed and well-annotated sketch maps/diagrams. • A well-structured, coherent and logical response. • Complex ideas expressed clearly with few, if any, errors in grammar, punctuation and spelling.
Level 4 Good	**16 - 20**	• A confident grasp of relevant concepts and principles. • Sound analysis, synthesis and assessment of some of the connections between the different elements of the subject. • Good factual knowledge and understanding. • Appropriate exemplification. • Appropriate, basically accurate annotated sketch maps/diagrams. • The response is clear, coherent and appropriately structured. • The quality of English is consistently sound. <u>At the lower end</u> • Arguments may not be fully developed. • Some lack of balance. • Minor flaws in logical ordering or linguistic expression. • Diagrams not well-integrated.
Level 3 Average	**11 - 15**	• A reasonable grasp of relevant concepts and principles. • Arguments are partial with points limited in range, depth and development with only limited linkage. • A secure, straightforward base of knowledge and understanding. • Examples are superficial and may be variable. • Limited use of basic diagrams. • There may be some loss in coherence. • Language is correct but simplistic. <u>At the lower end</u> • An unfocused or potentially relevant response. • Weaknesses in structure and expression.
Level 2 Marginal	**6 - 10**	• Some grasp of concepts and principles is evident, but there may be inaccuracies and misconceptions. • Arguments are weakly presented and most points are generalised or of partial relevance to the question with little or no linkage. • Some knowledge and understanding, but it is limited in scope. • There is limited use of examples. • Sketch maps/diagrams contain inaccuracies. • The response lacks fluency. • Expression may be poor and there are basic errors in the spelling of geographical terms. <u>At the lower end</u> • Understanding of the question is weak.
Level 1 Weak	**1 - 5**	• There is minimal understanding of subject material. • Organisation of material is poor and although occasional relevant points are made much is irrelevant. • The response demonstrates poor knowledge and understanding and contains errors. • Little use of examples or if evident they are irrelevant to the question. • The response may be incomplete or difficult to follow. • The answer is poorly written and contains basic errors in the spelling of geographical terms.

GCE GEOGRAPHY

SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

MARK SCHEME SUMMER 2016

INFORMATION FOR EXAMINERS
If candidates answer in a way that is not anticipated by the mark scheme, but provide an acceptable answer to the question set, please use the generic mark scheme on page 2 to determine an appropriate mark. If in doubt, please consult your team leader.

Theme 1 Extreme Environments

Q.1 'Human activity in desert environments cannot be managed effectively.' Discuss [25]

Candidates:

(i) should show knowledge of the characteristics of human activity in desert environments;

(ii) should show understanding of strategies used to manage human activity in desert environments;

(iii) should show the ability to discuss the effectiveness of strategies implemented to manage human activity in desert environments; better candidates should provide a more detailed discussion.

In relation to desert environments, candidates may examine the threats posed by population growth, agriculture, tourism and mineral exploitation. They may refer to the negative impacts on a variety of elements of the desert environment. Comment could be made on the role of agriculture in soil degradation, the pollution of soils and ecosystems by mineral exploitation such as that in Australia or the damage caused by off-roading in Dubai. Do not expect all these for full marks. When discussing the strategies used to manage human activity candidates may present a range from conserving the desert environment, alleviating the impacts of human activity, controlling the use of desert environments and monitoring the impacts of human activity. Candidates should display a grasp of a number of these, but do not expect all to be considered as candidates may choose to use examples that enable only a limited number of management strategies to be discussed in depth; therefore credit either the depth or breadth of coverage. The discussion could take the form of comparisons in place elsewhere to manage human activity in desert environments or on the basis of the extent to which human activity in desert environments can be managed. In order to reach the **very good (Level 5)** band, in addition to sound factual content of the characteristics of human activity and strategies used to manage human activity in desert environments, there needs to be some discussion of the effectiveness of these strategies. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.2 Discuss the costs and benefits of human activity on the tundra environment. **[25]**

Candidates:

(i) should show knowledge and understanding of the costs and benefits of human activity on the tundra environment;

(ii) should show the ability to discuss the costs and benefits positive as well as the negative outcomes of human activity; better candidates should provide a more detailed discussion.

Human activities that may be identified include tourism and mineral exploitation. It is not expected that these are considered in the context of both latitude **and** altitude, but better candidates may examine both. The approach to the question may be regional by investigating two areas such as arctic Canada and the Alps or thematic by looking at human activities individually. (Note that the specification mentions only alpine tundra, but the Teachers Guide refers to both alpine and arctic tundra therefore any reference to arctic tundra, although not required, should be credited). Candidates are likely to make reference to the negative ecological and environmental outcomes of human activity, due to the fragile and special qualities of the tundra with explanation and illustration of this fragility, as well as negative social outcomes and argue that there are also economic (employment), social (education) and environmental (conservation) benefits of human activity. Reference may also be made to the effects of global warming on the tundra environment. To reach the **very good (Level 5)** category of assessment, candidates need to discuss the costs and benefits and are likely to discuss the imbalance between the two. Expect examples to be well integrated in the answer. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Theme 2 Landforms and their Management

Glacial Environments

Q.3 Examine processes of glacial deposition and the resultant landforms. [25]

Candidates:

(i) should show a knowledge and understanding of processes of glacial deposition;

(ii) should show an understanding of the link between depositional processes and the development of landforms of glacial deposition;

(iii) should show the ability to examine the processes and landforms of glacial deposition; better candidates should provide a more detailed examination.

Candidates are expected to examine the production of at least two depositional landforms that are the result of predominantly glacial or fluvioglacial processes. Candidates could examine the production of landforms that are the result of predominantly glacial processes (lodgement till, drumlins, erratics, moraines) or landforms that may be the result of fluvioglacial deposition (eskers, kames, kame terraces, outwash plains) or glaciolacustrine deposition. There may be a distinction between landforms of deposition created by active glaciers (subglacial till deformation creating drumlins and flutes) and landforms of deposition created by stagnating and/or retreating ice (ablation till laid down from the body or surface of the glacier by melting or lodgement till sheared off or melted from the base of the glacier, kettles, kames, eskers). Credit either the depth or breadth of coverage. In order to reach the **very good (Level 5)** band, in addition to sound factual content of the processes and landforms of glacial and/or fluvioglacial deposition, there needs to be some examination of these. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.4 Discuss how human activities affect glacial environments. [25]

Candidates:

(i) should show a knowledge and understanding of the ways in which human activities affect glacial environments;

(ii) should show the ability to discuss ways in which human activities affect glacial environments; better candidates should provide a more detailed discussion.

The impacts of human activities on glacial (or formerly glaciated) environments include winter-sports activities, including associated infrastructure such as buildings, ski lifts and road access; logging activities leading to the removal of vegetation cover, which accelerates weathering and mass movement processes; damming of glacial lakes for use as reservoirs for hydro-electric power schemes; pollution and permafrost degradation through settlement and heat and waste disposal; anthropogenic climate change, leading to the net ablation of glaciers worldwide. Human activities also include the management of glacial environments. In order to reach the **very good (Level 5)** band, in addition to sound factual content of how human activities affect glacial environments, there needs to be some discussion of these. The discussion could take the form of comparisons of positive and negative influences in different glacial environments or on the basis of the extent (degree, nature and spatial / temporal variations) to which human activities affect glacial environments. Credit either the depth or breadth of coverage. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Coastal Environments

Q.5 Examine processes of coastal deposition and the resultant landforms. [25]

Candidates:

(i) should show a knowledge and understanding of processes of coastal deposition;

(ii) should show an understanding of the link between depositional processes and the development of landforms of coastal deposition;

(iii) should examine the processes and landforms of coastal deposition; better candidates should provide a more detailed examination.

Candidates are expected to examine coastal depositional mechanisms (reduced energy levels associated with wave refraction and coastline configuration, constructive wave processes, aeolian deposits and flocculation) and link these effectively to the creation of a range of depositional landforms (beaches, tombolos, spits, sand dunes, salt marshes and estuary deposits). An examination may include reference to the role of other factors and agents, such as sea-level change, geological controls and seasonal changes. Credit either the depth or breadth of coverage. In order to reach the **very good (Level 5)** band, in addition to sound factual content of the processes and landforms of coastal deposition, there needs to be some examination of these. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.6 Discuss how human activities affect coastal environments. [25]

Candidates:

(i) should show a knowledge and understanding of the ways in which human activities affect coastal environments;

(ii) should show the ability to discuss ways in which human activities affect coastal environments; better candidates should provide a more detailed discussion.

Candidates may refer to intensive and extensive building and infrastructure close to a coastal edge where coastal erosion is rapid, removal of coastal deposits through activities such as dredging, and inappropriate leisure activities such as dune trampling and cliff scaling that adversely affects coastal processes or damage coastal forms. Human actions that lead to the destruction of dune grasses and the disturbance of coastal landforms promote increased erosion and movement of beach materials. Off-road vehicles and foot traffic on sand dunes compact sand, destroying plant roots and animal burrows. Other wildlife habitats, such as nesting and feeding areas for shorebirds, are disturbed by human activity; young birds are especially vulnerable to these disruptions. Sand dunes help absorb the energy of high waves and reduce flooding during storms; bulldozing dunes for construction or to improve views of the sea destroys this natural protection. Dredging navigation channels and tidal inlets removes sediment from the coastal system and interferes with longshore transport. Large scale industrial installations reshape the coastline to serve the industry; jetties, seas walls and docks will be created which will alter local tidal currents and influence local erosion and deposition. Visual pollution may be perceived for large factory installations often emitting large quantities of waste gases into the atmosphere. Sellafield nuclear waste reprocessing plant in Cumbria may have contaminated the sea with waste radioactive material. Human activities can cause local and possibly global changes in sea level. Pumping of ground water, salt brines, and petroleum resources from coastal environments has led to significant subsidence in many regions. The increasing release of greenhouse gases, such as carbon dioxide and methane from automobile and industrial exhaust, promotes global warming, the melting of massive ice sheets in Greenland and Antarctica, and consequently the raising of sea level worldwide. Human activities include coastal management strategies implemented and their consequences.

Credit either the depth or breadth of coverage. In order to reach the **very good (Level 5)** band, in addition to sound factual content of how human activities affect coastal environments, there needs to be some discussion of these. The discussion could take the form of comparisons of positive and negative influences in different coastal environments or on the basis of the extent (degree, nature and spatial/ temporal variations) to which human activities influence coastal environments. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Theme 3 Climatic Hazards

Q.7 Examine the distinctive characteristics of *one or more* climatic types. [25]

Candidates:

(i) should show knowledge and understanding of the distinctive characteristics of one or more climatic types: better candidates may offer some supporting statistics or qualified descriptive statements;

(ii) should show knowledge and understanding of the factors responsible for these characteristics: better candidates should mention a wider range of factors.

Candidates should clearly describe distinctive climatic characteristics of their chosen climatic type(s) in terms of temperature, precipitation (type, amount and distribution), prevailing winds and pressure, together with important diurnal and seasonal variations.

In examining the above candidates should cover the basic factors influencing the formation and location of the distinctive climatic type chosen and its seasonality in terms of:

(i) global atmospheric circulation;
(ii) the seasonal movement of the ITCZ and pressure and wind belts associated with the apparent movement of the sun's overhead position through the year;
(iii) the effects of warm and cool ocean currents, orographic influences and temperature differences between continental land masses and ocean waters.

Credit either the depth or breadth of coverage. To reach the **very good (Level 5)** category, reference needs to be made to explanations that are specific to the particular climatic type(s) chosen including orographic influences, variations in the path of upper jet streams and the interaction of different air masses. To reach this category, candidates should also demonstrate a **detailed** knowledge of the climatic characteristics of their chosen climatic type(s). A range of factors need to be addressed in a good and balanced way for candidates to reach the **good (Level 4)** category and where only one factor is mentioned, the answer is unbalanced and unlikely to reach beyond the **average category (Level 3).**

Q.8 Examine the impacts of hazards associated with high-pressure systems on human activity. [25]

Candidates:

(i) should show knowledge and understanding of the hazards associated with high-pressure systems;

(ii) should show the ability to examine the impacts of hazards on human activity; better candidates should provide a more detailed examination.

The environmental impacts of hazards associated with high pressure systems in tropical climatic regions may include the effect on the water table, soil water movement, land degradation and vegetation. The impacts on population might include migration, food supply problems, famine and health. The environmental impacts of hazards associated with high pressure systems in temperate climatic regions may include impacts on water-resource systems when rivers may be used for water supply, reservoirs emptied and HEP production reduced. The impacts on population may include water rationing. Although for temperate regions the emphasis is likely to be on a drought spell, some candidates may refer to the hazards associated with winter anticyclones such as frost and fog plus pollution leading to impacts such as difficult driving conditions and dangers for airlines and shipping. A detailed knowledge and understanding of the hazards associated with high-pressure systems and their impacts on human activity, together with an examination element, are required for candidates to reach the **very good (Level 5)** category. Expect examples to be well integrated in the answer. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Theme 4 Development

Q.9 Outline and evaluate indicators used to measure development.

[25]

Candidates:

(i) should show a knowledge and understanding of different indicators used to measure development;

(ii) should show the ability to evaluate the indicators; better candidates should provide a more detailed evaluation.

Candidates should have little difficulty in outlining the range of indicators used to measure development. It is expected that candidate will make reference to simple and composite quantitative measures and recent progress made towards the use of qualitative measures that go beyond covering material conditions towards a consideration of aspects such as freedom, security, the plight of indigenous groups and sustainability. There may be reference to new indicators such as the Ibrahim Index of African Governance (IIAG), the Environmental Performance Indicator (EPI) and Marine Trophic Index (MTI). Evaluation of these indicators may include the partial picture each one gives of world development patterns, the reliability of the statistics used and how comprehensive the measures are in identifying the level of development at a country level. Other points that may enter into the evaluation include the fact that measures quoted on a national scale hide serious regional inequalities as well as variations in material well-being across society, the difficulty of quantifying some measures, the dated nature of some statistics and the non-availability of accurate statistics for some countries.

To reach **very good (Level 5)** a well-balanced answer, which demonstrates thorough knowledge and understanding of a range of indicators together with evaluative comment is needed. Expect examples to be well integrated in the answer. **Good (Level 4)** responses should contain good factual knowledge and understanding, whilst **average (Level 3)** responses will be characterised by secure, but generalised, content.

Q.10 'The most important factor preventing the closure of the development gap is Third World Debt.' Discuss. [25]

Candidates:

(i) should show some knowledge and understanding of the way in which Third World Debt prevents the closure of the development gap, better candidates will show a more detailed knowledge and understanding;

(ii) discuss the extent to which other factors such as trade blocs, social constraints and cultural barriers are responsible; better candidates will present a more detailed discussion.

Candidates are expected to agree broadly with the viewpoint that the greatest obstacle to development for an individual country is indebtedness. Countries that were at a low level of development in the past were loaned money through the World Bank and International Monetary Fund. Money that was generated had firstly to be spent on paying interest on the loan before repaying the debt, and reinvestment in the economy was impossible. Such countries became caught in a poverty trap. They became the Heavily Indebted Poor Countries (HIPC). Special arrangements to relieve this debt have been developed by richer nations, such as the Multilateral Debt Relief Initiative (MDRI) but many believe this is still not enough to allow real development to take place. Candidates should however argue that factors other than indebtedness prevent the closure of the development gap such as trading blocs, which greatly benefit each member of the bloc but work to the detriment of countries outside the bloc as they face quotas or tariffs that make it difficult to sell the commodities they have to offer, undermining their economic development. Social constraints and cultural factors also act as a barrier to development. However a more critical viewpoint may be that other social and political factors operate to reduce the development gap such as debt agreements, aid and fairer trade for a variety of motives including alleviating international tension, hunger reduction and a sense of fairness. Expect examples to be well integrated in the answer. To reach **very good (Level 5)** a well-balanced answer with a discussion is needed. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Theme 5 Globalisation

Q.11 Examine impacts of outsourcing and offshoring. [25]

Candidates:

(i) should describe and briefly explain the costs and benefits of outsourcing and offshoring;

(ii) should examine the costs and benefits of outsourcing and offshoring; better candidates will provide a more detailed examination.

The distinction between outsourcing and offshoring is not always clear and does not need to be stated by candidates, but generally offshoring occurs when TNCs transfer manufacturing production to LEDCs or NICs whereas outsourcing refers to an organisation contracting work out as seen with the global shift of services from MEDCs to NICs, RICs, LEDCs and other MEDCs (including re-shoring). Outsourcing and offshoring bring huge benefits for countries such as India in terms of job creation, higher salaries, greater disposable incomes and a reduction in gender apartheid. However there are also disadvantages including westernisation and loss of cultural identity, unsocial hours and increasing social divisions. The impact of outsourcing and offshoring for MEDCs is simply more profitable returns for the companies that participate in these activities so that they can maintain employment in the quaternary jobs in the home country and in the manufacturing/service jobs in the production countries. These advantages must be set against significant job losses in the service sector in MEDCs, particularly female jobs in vulnerable deindustrialised areas. Some candidates may make reference to recent signs that due to rising wages in Asia the opposite is happening as some businesses re-locate production to the UK, in a process some are calling "re-shoring". The examination may be based on an analysis of benefits: costs or in terms of different impacts within chosen LEDCs/MEDCs or differences between LEDCs/MEDCs. For **'very good' (Level 5)** a well-balanced, well-located answer with some depth of examination is needed. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.12 'Globalisation creates more opportunities than threats.' Discuss. [25]

Candidates:

(i) should show knowledge and understanding of the opportunities resulting from economic, social, political and environmental globalisation;

(ii) should show knowledge and understanding of the threats resulting from economic, social, political and environmental globalisation;

(iii) should show the ability to discuss the overall impact of globalisation: better candidates will provide a more detailed discussion.

Candidates are most likely to refer to the globalisation of economic activity in their responses, but credit any reference to the effects of social, political and environmental globalisation. Expect reference to be made to the fact that globalising TNCs have the opportunity to choose locations for their operations that they perceive to be most advantageous. Costs are a prime consideration. Some locations are less favoured both in MEDCs and LEDCs (particularly sub-Saharan African countries). Such regions are threatened by globalisation. The process of globalisation also has negative social and environmental effects on MEDCs, LEDCs and NICs. There are also opportunities resulting from globalisation. A global shift of manufacturing and, more recently services, to NICs and RICs has brought opportunities for employment and economic development to many parts of the world, especially India, China and south and south-east Asia as well as benefits to investing countries and companies. Expect examples of the operations of named TNCs/MNEs and their positive and negative impacts on economic activity, society and the environment to be well integrated into the answer. For **'very good' (Level 5)** a well-balanced, well-located answer with detailed knowledge and understanding of the opportunities and threats resulting from globalisation, together with some depth of discussion, is needed. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Theme 6 Emerging Asia

CHINA

Q.13 Examine challenges for urban communities in China. [25]

Candidates:

(i) should show knowledge and understanding of some of the economic and social challenges for urban communities in China;

(ii) should examine the challenges for urban communities; better candidates will provide a more detailed examination.

Candidates are expected to identify that there are a number of challenges, many of which are created by rapid urban growth in China, associated with the physical expansion of urban areas, the availability of and pressure on resources and energy provision, the amount and quality of water supply, the provision of housing due to privatisation of industries and privatisation of house building; social and urban/rural inequalities and the sustainability of cities and SEZs (Special Economic Zones). Some of these are familiar to all cities but others reflect China's recent history. The scale of the problems is another unique characteristic. Economic challenges associated with China's urbanisation include the growth of the informal sector, problems of service provision and exploitation of the labour force. Social challenges include deprivation and poverty, segregation, problems associated with housing, health and crime. The Chinese government argues that it has helped lift more than 200 million people out of poverty. Millions of people have migrated from rural to urban areas to fill the jobs generated by the economic explosion. However, anti-poverty campaigners argue that many workers receive low wages and live in poor conditions. An estimated 200,000 people each year move to slums on the southern outskirts of the capital, Beijing. The examination may look at the relative worth of each variable or may take the form of an assessment of urban challenges as compared with rural. A combination of both approaches is also valid. The term 'challenges' may be interpreted by candidates as simply the difficulties presented by urban growth, rather than in the wider sense of demands that require a response. Answers that interpret the question in this way are acceptable, but an examination of these difficulties is needed for the response to reach the **very good (Level 5)** category of assessment. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding of the challenges for urban communities in China; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.14 'Finding solutions to the environmental challenges facing China is difficult.' Discuss. [25]

Candidates:

(i) should show some knowledge and understanding of the environmental challenges facing China;

(ii) should show the ability to discuss the extent to which solutions can be found to tackle these environmental challenges; better candidates will provide a more detailed discussion.

Candidates are expected to identify the causes and consequences of deforestation, soil erosion, industrial pollution and pressures on water and energy supplies. As China develops it uses more energy and mineral resources to support manufacturing. Increased numbers of offices and houses and more transport all use natural resources. Most human activity, domestic and industrial, produces waste which has to be disposed of and in turn affects air quality. The optimistic view suggests that the range of demands on the environment can be managed in order to ensure a sustainable future. As a country becomes more developed it can develop the technology to use resources more sustainably and efficiently. Theoretically, the more wealthy a country the more it can afford environmental protection and it could limit its environmental and ecological footprint. There is a growing environmental awareness among grassroots organisations and communities in China, but serious concern for environmental sustainability within the Politburo is still overridden by the desire for economic growth. Despite that, the Government response to Rio, Kyoto and Copenhagen suggested some recognition of the need for sustainability and the Chinese signed the Kyoto Protocol in 1998, less than a year after it was set up. This was also intended to establish China as a leader of developing nations. Under the Copenhagen Accord China has promised to increase the share of non-fossil fuels in primary energy consumption to around 15% by 2020, and increase forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic metres by 2020 from the 2005 levels. Environmental concerns are therefore being taken seriously, but bureaucratic problems and some corruption inhibit national policies being put into practice in local communities although recent progress has been made by Chinese manufacturers to develop solar, wind and clean coal technology. This recent trend contradicts the conventional picture of China's poor environmental image. China's premier, Xi Jinping, has vowed to tackle pollution and has pledged that his government will show more resolve. For **very good (Level 5)** responses expect a detailed and balanced discussion of the environmental challenges facing China and associated solutions, with examples well integrated. **Good (Level 4)** responses will be characterised by good factual knowledge and understanding; **average (Level 3)** responses will be characterised by secure, but generalised, content.

INDIA

Q.15 Examine challenges for urban communities in India. [25]

Candidates:

(i) should show knowledge and understanding of some of the economic, and social challenges for urban communities in India;

(ii) should examine the challenges for urban communities; better candidates will provide a more detailed examination.

Candidates are expected to identify that there are a number of challenges, many of which are created by rapid urban growth in India, associated with the physical expansion of urban areas, the availability of and pressure on resources and energy provision, the amount and quality of water supply, the provision of housing, social and urban/rural inequalities and the sustainability of cities. Economic challenges associated with India's urbanisation include the growth of the informal sector, problems of service provision and exploitation of the labour force. Social challenges include deprivation and poverty, segregation, problems associated with housing, health and crime. The urban population of India has rapidly increased in recent years. In 1961 about 79 million persons lived in urban areas of the country, by 2001, their number had gone up to over 285 million, an increase of over 350 percent in the last four decades, which will increase to over 533 million by the year 2021. In 1991 there were 23 metropolitan cities, which had increased to 35 in 2001 and 46 by 2013. As a result, most urban settlements are characterized by shortfalls in housing, inadequate sewerage, poverty and social unrest making urban governance a difficult task. The examination may look at the relative worth of each variable or may take the form of an assessment of urban challenges as compared with rural. A combination of both approaches is also valid. The term ‘challenges’ may be interpreted by candidates as simply the difficulties presented by urban growth, rather than in the wider sense of demands that require a response. Answers that interpret the question in this way are acceptable, but an examination of these difficulties is needed for the response to reach the **very good (Level 5)** category of assessment. **Good (Level 4)** responses should be characterised by good factual knowledge and understanding of the challenges for urban communities in India; **average (Level 3)** responses should be characterised by secure, but generalised, content.

Q.16 'Finding solutions to the environmental challenges facing India is difficult.' Discuss. [25]

Candidates:

(i) should show some knowledge and understanding of the environmental challenges facing India;

(ii) should show the ability to discuss the extent to which solutions can be found to tackle these environmental challenges; better candidates will provide a more detailed discussion.

Candidates are expected to identify the causes and consequences of deforestation, soil erosion, industrial pollution and pressures on water and energy supplies. As India develops it uses more energy and mineral resources to support manufacturing. Increased numbers of offices and houses and more transport all use natural resources. Most human activity, domestic and industrial, produces waste which has to be disposed of and in turn affects air quality. The optimistic view suggests that the range of demands on the environment can be managed in order to ensure a sustainable future. As a country becomes more developed it can develop the technology to use resources more sustainably and efficiently. Theoretically, the more wealthy a country the more it can afford environmental protection and it could limit its environmental and ecological footprint. Environmental issues have been creeping up the political agenda in India, but the challenges of addressing poverty as well as managing the environment sustainably are huge. After the UN Conference on the Human Environment 1972, environmental issues were included in the national 5-year Plans. In the 1980s a Ministry of Environment and Forests was created and now there are numerous autonomous agencies, offices, institutions set up by national and state governments. There is a will to have environmental improvement, but often this conflicts with other demands and, in common with most other countries, often puts government departments at odds with each other. India faces many of the same environmental issues as developing countries. It is challenged by the need to meet the demands of industrialisation for development while understanding the necessity for environmental sustainability. The rates of urban and rural change make it hard to ensure that the best environmental decisions are taken. India's democracy can hinder progress. The sheer scale of the environmental challenges is daunting, yet progress is being made at national and grassroots levels. India has joined 107 countries that have signed up to the Copenhagen accord, which calls for limiting the rise in global temperatures to no more than 2 degrees Celsius beyond pre-industrial levels. For **very good (Level 5)** responses expect a detailed and balanced discussion of the environmental challenges facing India and associated solutions, with examples well integrated. **Good (Level 4)** responses will be characterised by good factual knowledge and understanding; **average (Level 3)** responses will be characterised by secure, but generalised, content.