

---

**GEOGRAPHY**

**9696/31**

Paper 3 Advanced Human Options

**October/November 2017**

MARK SCHEME

Maximum Mark: 50

---

**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2017 series for most Cambridge IGCSE<sup>®</sup>, Cambridge International A and AS Level components and some Cambridge O Level components.

Question	Answer	Marks
1(a)(i)	<p><b>Fig. 1 shows the average number of calories per person per day from different foods in LEDCs, 1964–66 and 1997–99, and predicted for 2030.</b></p> <p><b>State <u>three</u> changes in food consumption predicted to occur by 2030, giving data from Fig. 1.</b></p> <p>Any changes can be stated and can be from either of the first two dates. The main ones are:</p> <ul style="list-style-type: none"> <li>• an increase in total number of calories to 2800 from either 2000 in 1964–66 or 2600 in 1997–99</li> <li>• a decrease in rice eaten from 1997–99: 700 calories to 600 or close to level of 1964–66: 600</li> <li>• a large increase in vegetable oil consumed to 350 calories from either 100 in 1964–66 or 250 in 1997–99</li> <li>• an increase in meat consumed to 200 calories from either 75 in 1964–66 or 175 in 1997–99</li> <li>• wheat rises to 550 calories from either 300 in 1964–66 or 500 in 1997–99</li> </ul> <p>Credit three changes: each mark needs a stated change and data support. Data can be years, proportions or approximate calorie values.</p>	<b>3</b>
1(a)(ii)	<p><b>Explain how agricultural production can be intensified.</b></p> <p>Agricultural production can be intensified in a number of ways:</p> <ul style="list-style-type: none"> <li>• increasing inputs per unit area, e.g. amount of labour, volume of fertiliser</li> <li>• improving quality of inputs, e.g. trained labour, HYVs</li> <li>• improving agricultural technology, e.g. tractors, modern irrigation, glasshouses</li> <li>• increasing the number of harvests a year</li> <li>• shortening the fallow period</li> <li>• through a government scheme or agricultural extension programme</li> <li>• other</li> </ul> <p>Mark on overall quality, bearing in mind three mark bands, 1–3, 4–5 and 6–7. For a well developed response without examples, maximum 5 marks.</p> <p>For no response or no creditable response, 0.</p>	<b>7</b>

Question	Answer	Marks
1(b)	<p><b>Assess the success of agricultural change in <u>one</u> country you have studied and identify the challenges which remain.</b></p> <p>A question using the case study from 1.2, which is open both about success and remaining challenges to make the question accessible to all. Success may be assessed in any way. Better responses may have explicit success criteria such as food production, food security, productivity or the percentage owning land if land reform is involved. Another indicator of quality could be that success is assessed from the points of view of different groups of people (stakeholders), such as small farmers, major landholders, the government, environmentalists, or in different locations within the country.</p> <p>The challenges which remain could be of any sort, for example:</p> <ul style="list-style-type: none"> <li>• social: malnutrition, hunger, need for training, rural depopulation</li> <li>• economic: farmers' indebtedness, inadequate farm incomes, out-migration, landlessness, marketing problems</li> <li>• environmental: hazards, pests, soil degradation, soil erosion, seasonal drought, inadequate irrigation, mountainous terrain, lack of land into which to extend cultivation</li> <li>• political: short term plans, changes of government, poor governance, corruption, supranational policy (e.g. EU)</li> </ul> <p>If more than one country, mark all and credit the best or better.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> A convincing assessment of the success of agricultural change which impresses by its perspective, detail and strength of approach to the topic. It identifies the remaining challenges perceptively, structuring the response well.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> A response of sound quality overall, which may be good in parts, but which remains limited in detail, overall understanding of agricultural change or the assessment made. Remaining challenges may be embedded or unclear.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response makes one or more simple observations about agricultural change and is more a description than an assessment. It may answer generally or use an example in name only. Remaining challenges are expressed in a basic way or are omitted.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
2(a)(i)	<p><b>Give the meaning of the term <i>industrial inertia</i> and explain how it occurs.</b></p> <p>Industrial inertia means that a firm, business or manufacturer remains located in an area, despite the fact that one or more of the original factors which caused it to be located there no longer apply and it is no longer the optimal location (reserve 2 marks).</p> <p>The explanation should demonstrate what changes there may be in the original factor(s), e.g. the exhaustion of a raw material, a change in transport costs or in technology such as production processes. Furthermore, while the industry remains profitable, the challenges of relocation and the advantages of the current site, such as a local workforce or a prestigious location, combined with the existing investment in fixed capital (buildings and machinery) combine to keep the industry there, even though negatives are experienced, e.g. lack of space, outdated buildings, inefficiencies.</p> <p>Credit may be given for examples which assist the explanation.</p> <p>Mark holistically as the definition of the term may be found in, or enhanced by, the explanation, bearing in mind three bands of marks, 1–2, 3–4 and 5.</p> <p>For no response or no creditable response, 0.</p>	<b>5</b>
2(a)(ii)	<p><b>With the help of an example, describe how government policy influenced the location of manufacturing industry.</b></p> <p>This can be answered at any scale, from an industrial estate or EPZ to regional policy or that of a supranational body such as the European Union (EU). The influence or effect of the policy could be to encourage manufacturing to locate there, for example, through the provision of infrastructure and financial incentives, or to discourage location, for example, forcing closure or the relocation of a nationalised industry, or if the land is required for another purpose.</p> <p>Mark on overall quality, looking for exemplar detail and the influence of government policy being made clear, bearing in mind three bands of marks, 1–2, 3–4 and 5.</p> <p>For no response or no creditable response, 0.</p>	<b>5</b>

Question	Answer	Marks
2(b)	<p><b>Assess the extent to which manufacturing industry can locate away from its raw materials (be footloose).</b></p> <p>Most candidates are likely to respond to an extent that varies with the type of industry and the locational context. Broadly, light industry is more footloose than heavy industry because of its inputs (smaller, lighter, many components, easily transported, use of ubiquitous electricity, etc.). Even heavy industry may not be close to its raw materials today but, as sources are global, instead it may be near to ports or break-of-bulk locations.</p> <p>Candidates may consider the classic weight-losing and weight-gaining industries to further the assessment. Other factors may be relevant such as government policies or the national context in terms of stability, level of development and governance.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response provides an effective assessment of manufacturing industry's ability to be footloose, which differentiates between different examples, integrates other factors and conveys a sense of contemporary reality in industrial location.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response demonstrates reasonable to good knowledge and understanding of manufacturing's ability to be footloose. It offers a partial or limited assessment, maybe focused on one example or context, theoretical or real.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response finds it difficult to make more than descriptive comments about manufacturing location, maybe showing insecure understanding of being footloose. The response is of basic quality which may remain quite general. Notes and fragments remain in this level.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
3(a)	<p><b>Explain why the national demand for energy varies with level of development.</b></p> <p>As countries develop, demand for energy from all sectors of the economy changes. The primary sector, notably agriculture, increases in demand initially as it grows, transitions from subsistence to commercial, and becomes more technologically complex, for example, through mechanisation and the use of modern irrigation systems. Energy demand from other sectors also increases: manufacturing (secondary) and services (tertiary) including transport, which is a large energy user. As countries become more urban and more developed, demand from offices and businesses increases.</p> <p>The domestic sector is also a major source of demand, with lighting, heating/cooling, and the growth in number of appliances from white goods, such as cookers and refrigerators, to computers and recreational devices such as televisions and games players. In MEDCs, the desire for energy-efficiency may reduce demand slightly (e.g. innovation in light bulbs, better domestic insulation) but this needs to be seen in the context of increase even where population numbers and economic growth are relatively stable.</p> <p>Candidates may take a temporal approach as a country develops, or a spatial approach using different countries as examples, e.g. LEDC, NIC, MEDC.</p> <p>Credit the use of examples. As the key verb is 'varies', a single example is unlikely to be effective. For a response without examples, maximum 6 marks.</p> <p>Mark on overall quality, bearing in mind three levels of award and bands of marks, 1–4, 5–7 and 8–10.</p> <p>For no response or no creditable response, 0.</p>	<b>10</b>

Question	Answer	Marks
3(b)	<p><b>Assess the contribution of non-renewable resources in producing electricity in <u>one</u> country you have studied.</b></p> <p>Clearly much depends on the country chosen. If it is the country from 2.2, the case study, as it is only about electricity, no reference is needed to the use of oil (petrol) for transport or coal/gas for domestic heating (but would be valid if another example is used). Nuclear energy may be regarded either as renewable or as non-renewable. The term 'contribution' may cover total amount, pattern or mix, trends over time, types of fuel / role of renewables, plans, research, potential, limitations, and issues such as depletion, emissions and energy security.</p> <p>If more than one country, mark all and credit the best or better.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Whole response is structured as an assessment of the contribution of non-renewable resources in producing electricity in one country, based on detailed, reasonably up-to-date knowledge and robust understanding of non-renewables. It impresses by analysis and perspective.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality which may be good in parts or as far as it goes. It makes a satisfactory assessment which is limited in scope (energy supply/contribution) or in development (detail). It may 'top and tail' an explanatory or narrative account with some assessment.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response struggles to deal with the topic through lack of knowledge or of skills in application, so that the focus is not that of the question. It makes one or more basic points about energy supply, offering little or no assessment of the contribution of non-renewables. Offers notes or fragments.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
4(a)	<p><b>Fig. 2 shows a solid waste management system. Solid waste includes bottles, cans, newspaper, clothing and discarded electrical goods such as refrigerators.</b></p> <p><b>With the help of one or more examples, explain how pollution can be reduced by the effective management of solid waste.</b></p> <p>Fig. 2 shows land pollution, air pollution and water pollution in the throughputs and the outputs.</p> <p>Land pollution may be reduced as less solid waste goes into landfill or is just left on the land surface. Air pollution may be reduced when there is less or more efficient combustion/incineration; and when vehicle emissions are reduced by new technologies and/or by transporting wastes over shorter distances. Water pollution may be reduced when dumping at sea stops, when runoff from landfill is controlled, and when more efficient processes are used to recover and recycle materials.</p> <p>Effective management may include elements of planning, appropriate scale, robust financing, suitably trained personnel, public awareness, good governance, etc.</p> <p>Mark on overall quality, bearing in mind three levels of award and bands of marks, 1–4, 5–7 and 8–10.</p> <p>For a response without the use of an example or examples, maximum 6 marks.</p> <p>For no response or no creditable response, 0.</p>	<b>10</b>



Question	Answer	Marks
4(b)	<p><b>With reference to one or more examples of environments at risk, assess the success of the measures taken to protect the environment(s).</b></p> <p>Candidate responses may include a variety of environments at risk at different scale, from the world’s oceans and the global atmospheric environment to located areas of rainforest, such as the Amazon, or desertification, such as the borders of the Sahel, to small-scale local environments such as a named forest, coral ecosystem or lake.</p> <p>The focus of the response should be on ‘measures’ and their relative success (or failure). Better responses may use specific success criteria and offer evidence in terms of data or examples to support the assessment. Success may be considered in terms of environmental degradation, improvement in environmental quality and the reduction in or removal of risks. Responses which identify different outcomes in different locations, over time, or in relation to different groups of people are especially creditable.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response produces a high quality assessment, well founded in detailed knowledge of the chosen environmental context(s). It impresses by overall perspective and clear identification of the measures and their varying effectiveness.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality which is good in parts, but which remains limited in perspective, detail and/or the assessment offered. At the lower end it may consider success quite broadly.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response makes one or more basic observations about environmental protection or degradation. Response is quite general or descriptive, offering little or no assessment. Fragmentary and note-form responses remain in this level.</p> <p>For no response or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
5(a)	<p><b>Use examples to explain some of the issues for countries receiving aid.</b></p> <p>The syllabus lists relief aid, development aid, tied aid, bilateral or multilateral aid and requires a critical appreciation of aid's impact on receiving countries. The word 'issues' can be interpreted broadly enabling candidates to use the material and the examples they have. Issues may include:</p> <ul style="list-style-type: none"> <li>• dependency</li> <li>• disruption to local economy</li> <li>• ties in tied aid / donor country's agenda</li> <li>• westernisation</li> <li>• what to do when the aid stops</li> <li>• management, governance and corruption</li> <li>• problems of delivery</li> <li>• other</li> </ul> <p>Mark on overall quality, bearing in mind three levels of award and bands of marks, 1–4, 5–7 and 8–10. For a response without the use of an example or examples, maximum 6 marks. For no response or no creditable response, 0.</p>	<b>10</b>
5(b)	<p><b>'Trade is an insecure foundation for economic development.'</b></p> <p><b>How far do you agree with this statement?</b></p> <p>Candidates may consider some of the negative aspects of trade such as dependency on primary products and fluctuating market prices, competition, product innovation and unforeseen events such as climatic hazards and transport disruption. The experience of NICs which benefited from trade could be used. An argument could be developed about the type and size of country, the products traded, and the frameworks there are to assist, such as membership of a trade bloc. Both visible trade (goods and commodities) and invisible trade (services, notably tourism in this option) may be taken. Economic development may be considered as the process by which a nation improves the economic, political, and social well-being of its people.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response produces a high quality assessment demonstrating strong conceptual understanding of trade and of development, comprising elements of agreement and disagreement (without the need for balance). It integrates detailed exemplar content.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality which may be good in parts or as far as it goes. It may consider trade broadly with limited links to development. It makes a satisfactory assessment but one that is limited in scope or depth.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response struggles to deal with the topic through lack of suitable examples or overall perspective. It makes one or more basic points about trade offering little or no assessment. Notes and fragments remain in this level.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
6(a)	<p><b>Table 1 shows the percentage of GDP from tourism for selected countries and one territory in 2014.</b></p> <p><b>Explain some of the issues for countries in which a high percentage of GDP comes from tourism.</b></p> <p>The word ‘issues’ can be interpreted broadly, enabling candidates to use the material and the examples they have studied. Issues may include:</p> <ul style="list-style-type: none"> <li>• dependency/lack of alternatives/reliance</li> <li>• seasonality</li> <li>• trends in tourism, fashion, unforeseen events, e.g. political</li> <li>• impacts on local economy, e.g. employment, currency, prices/leakage</li> <li>• social/cultural impacts, e.g. westernisation, diet, Doxey</li> <li>• sustainability</li> <li>• tourism life cycle issues, e.g. stagnation, decline</li> <li>• management</li> </ul> <p>Mark on overall quality, bearing in mind three levels of award and bands of marks, 1–4, 5–7 and 8–10.</p> <p>A general response may perform well, and as Table 1 contains examples, the usual maximum for a response without them is not used.</p> <p>For no response or no creditable response, 0.</p>	<b>10</b>

Question	Answer	Marks
6(b)	<p><b>To what extent does ecotourism overcome the negative environmental impacts associated with other types of tourism?</b></p> <p>This requires some coverage of the negative environmental impacts from other types of tourism in order to assess what ecotourism achieves. The negative impacts may include: degraded landscapes; impeded views; damage to coral reefs; flora, e.g. removing trees; fauna, e.g. disrupted breeding, reduced fish stocks; water pollution; water stress/scarcity; wastes, e.g. from hotels, litter; and noise. Ecotourism itself may have some negative impacts and may involve ‘greenwashing’ about its effects.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response produces a high quality assessment, well founded in detailed knowledge of the environmental impacts of ecotourism and at least two other types of tourism. Demonstrates strong conceptual understanding and good skills both in structuring the response and analysing outcomes. Impresses by overall perspective and use of material.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality which may be good in parts or as far as it goes. May offer a response which is mainly explanatory of environmental impacts with a satisfactory but limited assessment. At the lower end it may answer broadly, lacking detail of ecotourism initiative or focus on other types of tourism.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response struggles to deal with the topic through lack of a suitable example of ecotourism or overall perspective. Makes one or more basic points about environmental impacts, offering little or no assessment. Notes and fragments remain in this level.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
7(a)	<p><b>With the help of examples, describe and briefly explain the factors which encouraged the growth of transnational corporations (TNCs).</b></p> <p>A number of factors may be covered, including:</p> <ul style="list-style-type: none"> <li>• the emergence of a global economy</li> <li>• transport changes, e.g. containerisation, air freight</li> <li>• ICT changes, e.g. 24/7 operation, electronic banking</li> <li>• factors combining to encourage global production networks (GPN)</li> <li>• a ‘borderless world’ – fewer border restrictions</li> <li>• governments’ policies to attract FDI</li> <li>• cultural change, e.g. global brands, consumer culture, media role</li> <li>• TNCs’ behaviour, e.g. profit maximisation, cost minimisation, market penetration</li> <li>• other</li> </ul> <p>Mark on overall quality, bearing in mind three levels of award and bands of marks, 1–4, 5–7 and 8–10.</p> <p>For a response without the use of examples, maximum 6 marks.</p> <p>For no response or no creditable response, 0.</p>	<b>10</b>

Question	Answer	Marks
7(b)	<p><b>Assess why deindustrialisation occurred in some MEDCs during a period of industrial growth in other countries.</b></p> <p>The syllabus defines the other countries as some LEDCs and NICs. However, the question is simpler and more open. Deindustrialisation is the shift in a country's economic sectors from an economy based on the secondary sector (manufacturing and processing) to one based on the tertiary sector (services), a process sometimes referred to as tertiarisation, and the quaternary sector (research, consultancy and technology). It involves the closure of or major cuts in heavy industry, such as iron and steel, shipbuilding, petrochemicals and motor vehicle manufacture.</p> <p>Deindustrialisation occurred in MEDCs as the spatial margins to profitability shifted as other countries developed and could provide locations for manufacturing industry which were cheaper, more flexible and more profitable. This was combined with policies in some LEDCs and in NICs to attract manufacturing, such as developing EPZs; offering incentives such as infrastructure, tax breaks; and lax environmental restrictions. Furthermore, there was deterioration in conditions in many MEDCs, such as the USA's 'rustbelt', with outdated production technology, inefficient systems, a lack of room for expansion, poor industrial relations, growing militancy of labour, etc.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response offers a convincing assessment of why deindustrialisation occurred, combining conditions in MEDCs and LEDCs/NICs effectively. The analysis impresses by its perspective, detail and strength of approach to the topic.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality overall which may be good in parts but which remains limited in detail, overall understanding of deindustrialisation or the assessment made of why it occurred. May focus on one group of countries (MEDCs or LEDCs/NICs).</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response makes a few more basic observations about industry and is more a description than an assessment. The concept of deindustrialisation may be faulty or simplistic. May answer generally or use examples in name only. Offers notes or fragments.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>

Question	Answer	Marks
8(a)(i)	<p><b>Describe the inflows and outflows which characterise a country's periphery.</b></p> <p>Classically regional development theory expects greater outflows than inflows.</p> <p>The inflows may be in-migration, e.g. retirement, key workers such as teachers or doctors; circulation, e.g. tourism; goods and commodities to sustain life; and capital, for example if business is started or developed there.</p> <p>The outflows (backwash effects) are of people by outmigration, e.g. labour; of goods, commodities and raw materials, e.g. food produced, minerals; and of capital, e.g. investment.</p> <p>Some of the flows may be the effects of regional policy, such as government investment in agriculture, tourism or transport infrastructure.</p> <p>Mark on overall quality, bearing in mind three bands of marks, 1–2, 3–4 and 5–6. For a response without examples, maximum 4 marks.</p> <p>For no response or no creditable response, 0.</p>	<b>6</b>
8(a)(ii)	<p><b>Fig. 3 shows labour specialisation in France, an MEDC in Europe, in 2008.</b></p> <p><b>Identify France's core and periphery giving evidence from Fig. 3.</b></p> <p>Small core area in north or north central France specialised in services (around Paris, the capital city).</p> <p>Areas specialising in agriculture can be identified as peripheral. There are two: a large continuous zone in SW France (6 areas), and one in coastal NW France (Brittany). For each identification, 1 mark.</p>	<b>4</b>

Question	Answer	Marks
8(b)	<p><b>Evaluate attempts to achieve social and economic development in <u>one</u> country you have studied.</b></p> <p>An opportunity to use the case study from 4.4. A full response covers the social dimension, e.g. health, education, women and children, as well as economic development.</p> <p>Indicators of quality may include exemplar detail, located content, data support and a sense of reality in the evaluation offered. This may include unforeseen problems, persistent obstacles and outcomes which differ spatially, such as rural/urban or core/periphery, and between groups of people, such as a privileged elite and the main population.</p> <p>If more than one country, mark all and credit the best or better.</p> <p><b>Level 3</b> <span style="float: right;"><b>12–15</b></span> Response is structured as an evaluation, showing strong conceptual understanding of social and economic development and associated attempts. It argues convincingly and critically, using a detailed case effectively.</p> <p><b>Level 2</b> <span style="float: right;"><b>7–11</b></span> Response is of sound quality which may be good in parts but which remains limited in case detail or overall development. May conclude a narrative about development with some evaluation. For one attempt, or a response about either social development or economic development only, maximum 10.</p> <p><b>Level 1</b> <span style="float: right;"><b>1–6</b></span> Response offers a basic answer which may focus weakly on social and economic development and be insecure about specific attempts. Makes one or more valid points, but little or no meaningful evaluation. Notes and fragments remain in this level.</p> <p>For no response, or no creditable response <span style="float: right;"><b>0</b></span></p>	<b>15</b>