GEOGRAPHY

> **Paper 0976/12**
> **Paper 12**

Key messages:

Candidates need to be able to do the following to perform well on this paper:

- Ensure that the rubric of the examination is followed correctly by answering one question from each of **Sections A**, **B** and **C**.
- Read all the questions and study the resources before choosing their three questions with care.
- Pay special attention to the command words and words which indicate the context of the question.
- Bring the correct equipment to the examination, including a ruler and a calculator.
- Answer all parts of the three chosen questions, ensuring that all sub-sections, including completion of maps and graphs, are not omitted.
- Know how to respond to command words used in questions – for example, 'describe'; 'suggest reasons'; 'explain', 'compare'.
- Identify the correct focus specified in the question stem – for example, causes or impacts; problems or strategies; local, national or global; natural environment or people.
- Learn the meanings of geographical words and phrases to be able to define and accurately use geographical terminology. When defining words or phrases, candidates should not simply repeat a word or words as part of their definition.
- Use the mark allocations and answer space provided in the examination booklet as a guide to the length of answer required and the number of clear points that need to be made.
- Write as clearly and precisely as possible avoiding vague, general statements.
- Write in full wherever possible, especially in the final two parts of each question, ensuring that ideas are developed or linked.
- Perform basic skills using population pyramids, graphs, data tables, graphs, text, diagrams and maps of various types, referring to them in an appropriate way to support ideas rather than directly lifting material from them without any interpretation. Ensure that evidence is given where required to support an answer and that best use is made of the information provided, such as the compass, scale and key on maps.
- Practise the skill of describing the features or characteristics from a photograph.
- Base their answer only on the information in a graph, diagram or map if the question includes the phrase '**Using Fig. X only**……'. Answers that do not relate to that resource should not be included as they do not gain credit.
- Learn a range of case studies so that appropriate ones can be chosen for the topics tested.
- Ensure that each case study used is at the correct scale as indicated by the wording of the question.
- Avoid writing a long introduction to any question to provide locational and background information, at the expense of answering the question set in detail.
- Develop points and link ideas wherever possible in case studies and include relevant place detail.
- Ensure that comparative language and phrases are used where a question requires a candidate to compare or identify differences.
- Explain physical processes using key terms and ideas in the correct sequence.
- Use the extra pages at the back of the question and answer booklet when there is not enough room to complete an answer. Indicate that the answer is continued and clearly show the number of the question on the extra page. Candidates should continue answers on the specified continuation pages rather than on other pages of the answer booklet or on extra sheets of paper.

General comments

The examination was considered appropriate for the age and ability range of candidates and it differentiated effectively between candidates of all ability levels. The most able and well-prepared candidates performed

well across the paper and a number of excellent scripts were seen with top quality answers throughout. Indeed most candidates were able to make an attempt at their chosen questions, apart from a minority who found it difficult to interpret questions and write relevant answers.

Candidates seemed to have sufficient time to complete the paper, however some did not complete all parts of the questions, particularly the final parts. This seemed to be due to a lack of knowledge rather than a lack of time.

Most candidates followed the rubric by selecting a question from each section as required although occasional rubric errors were seen. These consisted of candidates either answering three questions but choosing two from one section, or answering all six questions. Where candidates answer every question, this reduces the time they can spend on each question and disadvantages them. Similarly candidates are disadvantaged if they answer both questions from one section as they only gain the mark for one of them.

Questions 1, **3** and **5** were the most popular questions. There were good answers seen to all questions, including those requiring extended writing. Excellent answers were seen to all the case study questions, though of course all discriminated well and produced a range of responses. As always high quality case study answers contained developed or linked ideas, with some clear and relevant place specific detail. Weaker responses tended to be generic ideas consisting of simple, brief statements with no place detail to support them. In some cases a significant amount of detail included by candidates was not relevant to the question being asked, with long introductions and irrelevant background information occupying much of the answer space.

The following comments on individual questions will focus upon candidates' strengths and weaknesses and are intended to help centres better prepare their candidates for future examinations.

Comments on specific questions

Question 1

This was a very popular question and was the preferred choice for a large number of candidates, with a significant number scoring high marks and showing excellent geographical knowledge and understanding.

(a) (i) The question was asking what population density meant and not how it is calculated. This was generally answered well with many candidates knowing that it was the number of people in a square kilometre/in a certain area. The most common errors were either to write the formula by which it is calculated or to write 'number of people in an area' with no reference to the size of the area.

(ii) Many candidates identified the lack of rainfall as a reason for the low population density. Fewer referred to the temperature being too high to survive in. Whilst many stated that it is hot, this was insufficient as hot temperatures alone are insufficient to prevent settlement. 'Hot' needed to be qualified with a word like 'very', extremely' or 'unbearably'. Another common error was reference to soils or the inability to farm rather than climatic factors as required.

(iii) The question discriminated well. The most common answers from well prepared candidates focused on steep relief, poor access and dense vegetation. There were many misconceptions about the river flooding and a lack of understanding shown by weaker candidates who suggested a lack of service provision.

(iv) Many candidates wrote answers which repeated 'natural resources' many times but did not specify particular natural resources and/or explain how each would attract people as shown in the following extract from the mark scheme:

Water/river is available for drinking/washing/fishing/water crops/HEP/for factories;
Fertile land/good soil for food production/agriculture (farming);
wood/stone/trees/forests for building;
wood/coal for burning/cooking/heating;
mining/quarrying/minerals provide employment/jobs/industry/wealth

It was rare to see an answer which mentioned water, minerals or wood for example. The most common correct responses referred to mining which created jobs and fertile soil which enabled

food to be produced, but it was rare to see more ideas therefore there were few answers with full marks.

(b) (i) Many candidates used the resource well and scored three marks. They usually referenced Lake Victoria, the Indian Ocean and Nairobi. Less referred to direction in their answer though some candidates did describe the contrast between the high concentration of people in the south and low concentration in the north.

(ii) There was a great deal of information contained within this resource but generally candidates handled this well, effectively cross-referencing Fig. 1.4 with the distribution map and showing good understanding. Most candidates scored well and many gained high marks with references to significant features such as water availability, the port, the railway, Lake Victoria and the important towns. Many included several different ideas, whilst others gained credit for developing a smaller number of ideas. Both approaches were acceptable.

(c) There was a variety of case studies, with Bangladesh and Nigeria being the most popular choices. Many candidates knew what overpopulation was but did not give developed answers about the impacts. Better candidates developed ideas about pressure on services, housing, water, food supplies, health care and education, along with a lack of employment. Weaker candidates produced lists of simple ideas, though some developed part of their answers for example by linking unemployment with issues such as crime, poverty and the development of squatter settlements. Some wrongly wrote about causes of overpopulation and solutions to it, such as the China one-child policy. Some candidates spent too long writing about the background of the country before attempting the question. The answer would certainly have been place specific but the problem was that there was then not always enough opportunity to write sufficient developed statements as too much time had been spent setting the scene. To achieve full marks a fine balance has to be reached between including place detail, and allowing time to write and develop the actual answer.

Question 2

Only a very small number of candidates answered this question and it was far less popular than **Question 1**. In many cases it was answered by weak candidates as part of a rubric error, thus many responses were relatively poor.

(a) (i) Few candidates gave a credit worthy definition which referred to 'countryside' or an area which is 'not built up'. Many responses were vague e.g. 'not many people live there' and many candidates incorrectly referred to villages, the edges of a city or areas which were 'poor' or 'less developed', which is not true of rural areas in many parts of the World.

(ii) Whilst some candidates correctly identified both settlements more were successful with Kenema than Gofor, as some used the scale and/or compass directions incorrectly.

(iii) Many candidates identified the general store but there were also a significant number of incorrect choices, especially hospital and jewellers. Few candidates who identified the general store went on to give valid reasons. Little understanding was shown of low order services, threshold population or convenience goods and many candidates simply gave examples of goods sold or stated that these goods were cheap.

(iv) The question discriminated well. Good answers identified several ideas from the mark scheme such as distance, crossing the river, accessibility, and more generic ideas such as needing children to work, the inability to pay for education or transport, and traditional views on girls attending school.

(b) (i) Answers varied in accuracy with more candidates identifying linear than either of the other patterns. The most common errors were the use of incorrect words such as 'scattered' and 'nuclear'.

(ii) More perceptive candidates linked factors with a specific settlement pattern, such as the idea of linear settlements developing along a road or river, or dispersed settlements developing where there is farmland. However many candidates were unable to think generally in terms of factors underlying settlement development and did not refer to specific settlement patterns. Such answers typically referred in general terms to the growth of settlements in rural areas.

(c)   This was a relatively straightforward case study however many candidates made poor choices, including their local village, town or city but rarely focused on the CBD as the question required. Even those who referred to the CBD of London, New York, Johannesburg or similar large cities typically briefly listed high rise buildings, heavy traffic, offices and specific services, without any attempt to develop their ideas and/or add explanation. It was rare to see any reference to demand, cost and availability of land or access.

Question 3

This was a far more popular question than **Question 4**.

(a) (i)   Most candidates correctly identified zone C, though zone B was a common incorrect response.

(ii)   The question differentiated well. Most candidates referred to the Equator but the range of latitude was sometimes incorrect. Weaker candidates just listed countries where there was an Equatorial climate, whilst others did not understood 'distribution' and described the characteristics of the equatorial climate.

(iii)   The question also gave good differentiation. Many candidates referred to the Equator and the overhead sun, whilst others suggested the concentration of sun's rays or maximum insolation. Many weaker candidates suggested that rainfall, humidity, global warming or other factors affected temperatures. Others were on the right track but gave vague responses such as 'most sun',' lots of sunshine' and 'near the sun'.

(iv)   Whilst many candidates showed little detailed knowledge and understanding, there was a small but significant number of excellent responses which included ideas about wind direction, the existence of a rain shadow and the impact of descending air from a high pressure system. Weaker candidates typically tended to only score marks by referring to one or two simple ideas such as the lack of water sources, lack of evaporation/transpiration or the absence of clouds. Cold ocean currents were occasionally mentioned but few candidates showed any understanding of why they resulted in a lack of rain.

(b) (i)   A significant number of candidates scored high marks, though some candidates did not score marks for data as their statistics were not within the mark scheme tolerance. An error made by some weaker candidates was to read the percentages as incremental rather than discrete e.g. they stated that commercial agriculture in Africa was responsible for 75 per cent of deforestation. Others lost marks by not giving comparative answers and using words like 'more' or 'less'.

(ii)   Most candidates identified a variety of reasons, some gaining high marks for several simple ideas whilst others developed the points they made. Some candidates restricted their answer to the various uses of timber rather than referring to other reasons for deforestation such as mining, road building, settlement expansion etc. Errors made included vague answers about 'building' and 'infrastructure', answers about agricultural developments and others about the use of trees in medicines.

(c)   Amazonia was the most common example, with many other candidates naming Borneo. There was a complete range of quality in answers. More perceptive candidates wrote in detail about habitat loss, impacts on the food chain and biodiversity and/or referred to soil erosion and flooding. Many candidates did not develop or link their ideas to gain higher marks and those who did not read the question carefully wrote about effects on people and global impacts.

Question 4

This question was not a popular choice and, as in **Question 2**, was answered by some candidates as part of a rubric error. There were some excellent responses from some of the candidates who correctly chose to answer it.

(a) (i)   Whilst there were a significant number of clear and accurate definitions many candidates did not score the mark as they either repeated the word 'erosion' and/or did not mention the sea or waves.

(ii)   Most candidates correctly identified the two photographs from the descriptions.

(iii)   This discriminated well, many candidates were able to show their knowledge of one or more of the processes whilst others mixed up the processes or did not define the terms with reference to the sea, some specifically focussing on river processes.

(iv)   Answers referring to fishing, the port and the tourist industry were common but not all candidates linked these to why people want to live in the area e.g. employment or wealth created by the port or the tourist industry. A significant minority simply focused on leisure opportunities offered by the area, thus explaining why it is attractive to tourists, rather than why it is attractive as a place to live.

(b)(i)   Answers varied in quality and relevance. Most candidates correctly described how the spit had grown longer whilst the most observant also referenced its growth to the north, and the fact that it became curved at the end and/or joined the mainland. Weak responses tended to use words like 'bigger' which were not sufficiently precise.

(ii)   There were few accurate and detailed answers. Whilst some candidates explained that longshore drift would have caused the changes, only a relatively small number were able to describe its precise sequence with clarity, by referring to the impacts of swash and backwash. There were many incorrect references to erosional processes and references to the processes named in (a) (iii).

(c)   Named examples were rare, many of the better answers being the Holderness coast, where good candidates explained in detail how the various measures were effective. Some excellent answers were seen which considered a range of coastal management strategies. For some candidates, however, the explanation of each method was limited, often just simply explained as 'reducing erosion' rather than how this is actually achieved. Some candidates wrote generally about hard and soft engineering, but did not fully consider the actual techniques used to reduce erosion.

Question 5

This question was answered by a large number of candidates.

(a)(i)   Most candidates gained a mark by including reference to 'selling' or 'profit'.

(ii)   Most candidates correctly identified the two natural inputs. Irrigation sprays and chemical fertilizers were the most common incorrect answers. A small number of candidates circled more than two inputs.

(iii)   The question discriminated well. Better candidates referred to the market, cheaper transport, and the opportunity to purchase farm equipment or supplies. Weaker candidates suggested 'easy transport' or referred to inappropriate ideas such as water supply or electricity.

(iv)   Most candidates stated two correct climatic factors, typically temperature and rainfall, but few linked each one to a specific land use, therefore most scored two marks. Many candidates made vague references to 'crops would not grow' if it is too cold or too wet, or that 'irrigation might be required' if it is hot and dry. The question asked how the factors influenced **land use** and only the more perceptive made the link between temperatures and specific crops such as wheat and maize, and/or between high rainfall and rice farming for example. Very weak responses included references to factors other than climate (e.g. soil, relief) or vaguely wrote about 'suitable weather'.

(b)(i)   Most candidates correctly identified the three processes.

(ii)   This was a good discriminator. Well prepared candidates gave a variety of reasons which focused on risk management, all year-round jobs and income, and the benefits of animal manure and crop waste, some of which were developed and/or exemplified. Weaker answers just referred to inappropriate ideas, such as more profit from more sales and farmers producing more types of food.

(c)   The most common case studies were South Sudan, Somalia and Zimbabwe. Candidates generally identified physical factors, such as drought or flooding, and human factors such as war and corruption, successful candidates explained why each factor had different effects on crop and animal farming. Many answers also focused on political issues, for example in Zimbabwe, and their effects on both food production and distribution. Many candidates achieved Level 2 as they

developed at least one point, however full mark answers were not common as there was little place detail included.

Question 6

This question was not chosen by many candidates.

(a) (i)   A significant number of candidates gave a correct definition by linking the ideas of raw materials and finished product. Others struggled, many repeating the word 'processes' or 'processing'.

(ii)   Most candidates correctly identified two outputs, usually aluminium and waste. Incorrect answers were usually 'alumina', which is produced as Stage 1 of the process rather than as an output of the industry.

(iii)   Many candidates realised that large amounts of bauxite were needed and some candidates developed this idea by linking it to reduced transport costs. Other mark scheme ideas were rarely suggested and weak responses referred vaguely to 'easy transport' or 'near raw materials'.

(iv)   This discriminated well with many candidates identifying the need for large amounts of cheap electricity. They also realised the importance of a reliable, inexhaustible supply. Weaker candidates focused too much on the non-polluting aspects of HEP and the physical requirements to build HEP stations.

(b) (i)   Generally well answered, although for roads and railways some did not refer to what was being transported.

(ii)   This question differentiated well. Some candidates understood this well and explained clearly why a change of location would be needed suggesting ideas relating to available space, less competition, access to markets and raw materials, and cheaper or more available labour, though relatively few developed any of them for further marks. Weaker responses however usually referred to different factors, but did not clearly state how it was a change in these factors which would necessitate a relocation e.g. the importance of market would be mentioned, but not that they would relocate nearer a new market, or a bigger market.

(c)   Whilst there were some high level responses most were fairly brief as they typically gave simple ideas about water supply and did not relate them to industrial use. Many candidates did not develop or link their ideas about methods of supply e.g. reservoir and pipeline. A significant number of candidates wrote about the use of electricity for HEP, thus valid ideas tended to be limited. Common examples included South Africa, dams such as the Kariba and rivers such as the Yangtse but place specific detail was rare.

GEOGRAPHY

> **Paper 0976/22**
> **Paper 22**

Key messages

- Page 21 of the syllabus states that 'Candidates should be able to interpret, construct or complete a cross-section'. Many candidates were not proficient at this skill.
- Questions frequently refer to natural/physical features and human/economic features. Candidates should be aware of the meaning of these terms.
- Questions often require candidates to describe distributions, for example of population. They might do this by referring to compass directions or by relating the distribution to other geographical features such as relief, rivers, transport routes or boundaries.
- **Questions 1(f)** and **3(a)** gave instructions about what candidates should **not** include in their answers. These instructions were frequently ignored, perhaps indicating a lack of attention to the questions.

General comments

Generally candidates performed equally well across all six questions on the paper. Occasionally candidates gave weak answers to the physical geography **Questions 4** and **5**, although other candidates gave strong answers to these questions.

Question 1

(a)   Candidates were able to score high marks on this section, showing good skills of finding features on the map and identifying them using the key. Feature **A** was a *railway*, the type of road at **B** was *regional* (Examiners also allowed *main* as the colours in the key were very similar), the height above sea level of the spot height at **C** was *25 m*, **D** was a *hospital* and the land use at **E** was *moor*.

(b)   The response to the six-figure grid reference was very mixed with the correct response being *004802*.

(c)   Most candidates were able to identify two services provided for tourists within 1 km of Ste-Anne-d'Auray from *tourist information centre, campsite, place of interest, hiking route* and *notable monument.* The riding centre was clearly more than 1 km away.

(d)   Although there were many correct answers, some candidates found the distance measurement difficult, the correct response being *2650 m*. Candidates generally gave the correct compass bearing (*south east*) but found it more difficult to give the corresponding bearing of approximately *127 – 130°*.

(e)   The cross-section question proved difficult for many candidates, with significant numbers omitting the question. Others seemed to have failed to locate the line of section correctly on the map. The feature at **X** was a *road*, the feature at **Y** was a *river* and when completing the cross-section the land should have been shown rising to the west to between *25 and 40 m*.

(f)   There were many, very good answers with candidates often referring to the flows to the south, variable width, meanders, tributaries, tidal mud flats, the sections of the valley with steep sides, flood plain and V shaped profile. Despite the instruction in the question not to refer to land use, many candidates did just this and discussed the settlement, vegetation and roads.

Cambridge Assessment
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Question 2

(a)   Most candidates were able to correctly identify the type of graph most suitable to show the information in Table 2.1. Answers were equally split between *bar graph* and *pie graph*. Examiners did not accept 'cake graph'.

(b)   Candidates were also successful in identifying the province with most people arriving and leaving as *Gauteng* and calculating the net migration of Northern Cape province as *5670*.

(c)   When describing the distribution of provinces with a GDP per capita between US$ 0 and 6 000, many candidates were able to score full marks by noting the concentration *on the coast* and *borders* and the concentration in the *north east* and *south east*. Others failed to interpret the word 'distribution' correctly and wrote irrelevant answers

(d)   This was generally well answered with candidates noting that the provinces with high GDPs tended to have positive net migration and those with low GDPs had negative net migration. This was expressed in a variety of ways, all of which were given credit. Candidates also illustrated their answers by quoting relevant provinces. Some candidates quoted lists of figures from Table 2.2 and Fig. 2.1 but offered little interpretation.

Question 3

(a)   When describing the changes in urban population shown on Fig. 3.1 many candidates were able to score full marks by noting the increase in all three categories of country, the large increases in both low and middle income countries and the small increase in high income countries. Others ignored the word 'changes' in the question and described the differences between the countries. Others attempted to describe changes in income, not changes in urban population, and failed to gain any credit.

(b)   Candidates were required to give evidence from Figs. 3.2 and 3.3 which showed that urban sprawl was taking place. A variety of different evidence was quoted. From Fig. 3.2 candidates noted the *construction site, unused areas for development, main road, sports ground, golf course, residential areas* and *low rise developments*. From Fig. 3.3 they noted the *informal settlement* (using a variety of terms), the *dirt roads* and the *newer development on the right*.

Question 4

(a)   Most candidates were able to correctly locate the earthquake epicentre within the intensity 8 area and to draw a line separating the intensity 3 areas from the intensity 4 areas. When describing the effects of the earthquake in Sydney, most candidates quoted the three intensity 6 effects from Table 4.1. Others quoted lower intensity effects which were relevant. However, others spoiled their answers by quoting intensity 7 or 8 effects.

(b)   Most candidates were able to note that the position of the Newcastle earthquake was unusual in that it was not on a plate boundary.

(c)   Some candidates produced clear explanations as to why earthquakes occur at destructive boundaries by describing a sequence of events involving *compression, subduction of oceanic plate, friction, build up of energy* and *faulting.* Others appeared to have little idea of these processes while others wrote about volcanoes.

Question 5

(a)   Most candidates were able to name the Stevenson screen.

(b)   Explanations of the features of the Stevenson screen were generally very good, including noting the avoidance of heat radiation from the ground in **part (iii)**.

(c)   Labelling of the alcohol and mercury on the Six's thermometer was variable. Large numbers of candidates scored both marks but others reversed the labels, while others drew ambiguous arrows which pointed to the alcohol-mercury boundaries.

(d)   Many candidates found it difficult to read the Six's thermometer. They frequently read from the wrong ends of the indices and it was also common for the units (°C) to be omitted.

Question 6

(a)   This question required candidates to analyse Figs. 6.2, 6.3 and 6.4 and give evidence that the north of Italy was, or was not, more developed than the south. Candidates found it easy to give evidence about GDP per capita from Fig. 6.2. They noted the greater wealth production in the north and illustrated this with relevant GDP figures. From Fig. 3.3, most were able to note the greater concentration of industrial centres in the north. Many quoted figures, although these were not always correct, perhaps because they did not note the definitions of north and south shown on Fig. 6.1. Life expectance from Fig. 6.4 was the least well answered part of the question. Many candidates attempted to give evidence that life expectancy was greater in either the north or the south but relatively few noted that there was little difference between north and south. Some candidates who had a knowledge of Italy attempted to give reasons for the differences between north and south but this was not required by the question.

(b)   Examiners accepted a very wide range of reasons for differences in development between the regions of the country. These included: physical reasons such as *relief, natural disasters, natural resources, climate, soil* and *accessibility*; and human and economic reasons such as *medical facilities, wealth and investment, level of education and skills, war and conflict, government focus* and *migration*. The response from candidates was variable. Some candidates attempted to answer with reference to Italy which was not required.

GEOGRAPHY

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Paper 0976/42
Alternative to Coursework

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Key messages

A few tips to pass on to candidates:

- When answering hypothesis questions that ask whether you agree or not, always give your opinion first before any supporting evidence. This will usually be *Yes, No* or *Partially/To some extent*. Make your decision after weighing up the evidence then state it at the start of your answer. Some candidates provide the correct evidence but seem to forget to write down a decision. If you agree with the hypothesis, do not just repeat the wording of the hypothesis; you need to make a decision about it and state it too. There is no credit for just repeating the hypothesis word for word as an answer.
- When giving figures in an answer always give the units if they are not stated for you e.g. million days, mg/litre.
- Take care when adding plots to graphs and use the key provided. Any numerical answers should be clear e.g. a 4 often looks like a 9; a 2 like a 5, a 0 like a 6, a 1 like a 7.
- Read questions carefully and identify the command word e.g. *Describe, Explain...*and also the key words, for example if asked for *data* then statistics are required whereas being asked for *evidence* could involve description as well as statistics. It might be helpful if candidates underlined the key command words in a question.
- When asked to compare, make judgements e.g. *higher, lower*, rather than just list comparative statistics. If comparing statistics it is important to use paired data rather than one set on its own. It is also important to indicate which statistics relate to which sites if appropriate e.g. in **Question 2(b)(iii)** It was not enough to say it was 9.1 mg/l in 2015 and 9.8 mg/l in 2018 – it was important to say this was at Site 1.
- Check that you are using the resources that a question refers you to for evidence or data e.g. Fig 1.4 and Table 1.1 (Insert). Remember some resources will be in the Insert and not on the examination paper. If you are referred to a map or graph and a table, use statistics from the table rather than try and judge them from the map or graph which can cause inaccuracy.
- Attempt all completion tasks on graphs, tables or diagrams – not all the answers are on lines and in writing. Many candidates are missing out on relatively easy marks this way; in this session this was particularly the case with **Questions 1(d)(i)**, **1(e)(i)**, **1(f)(i)**, **2(b)(ii)** and **2(d)(ii)**. Note that, where there is a completion task, the instructions are now **emboldened** to try and avoid you missing them out. It is better to use a bold pencil when completing graphs or diagrams so that errors can be erased and corrected; candidates who need to correct answers in ink often create a mess that is difficult to credit.
- Use a ruler and a sharp pencil to improve accuracy and presentation where required. This was particularly the case with the bar graphs, pie graphs, choropleth map and graphs that required a cross to be plotted.
- Take into account the marks awarded. Examiners do not expect candidates to be writing outside the lines provided so do not write a paragraph when only two lines are given – this wastes time.
- As all scripts are now scanned for marking, it would be preferable for candidates to write in black, using a sharp pencil, and make sure any plotting and shading of graphs stands out clearly.
- If you have to write more than the lines allowed, there are additional lined pages at the back of the examination paper to use. Indicate this with a phrase such as (*continued on page 17*). This is very helpful to the Examiner in finding the rest of your answers. Also make sure you have indicated the correct question number on extra pages; in this session a few candidates gave an incorrect question reference which made it difficult to match to the correct answer earlier in the booklet. There is no need for you to request additional booklets.
- Bear in mind that if an Examiner cannot read your writing, a mark cannot be awarded. Make sure all your work is legible.

SECTION 3

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do and both **Question 1** and **Question 2** proved to be equally demanding, equally accessible and equally successful in the answers produced. The overall range of marks was from 1 to 59/60 with weaker candidates scoring on the practical questions, such as drawing graphs, and those of higher ability scoring well on the more challenging sections requiring explanation, comparison and judgement especially regarding hypotheses and particularly with **Question 1(e)(ii)**.

There is less general advice to be given for areas for improvement with this paper than with others. As there are no choices to make, it is difficult to miss sections out – though many candidates still do – and on this paper there were a few sections that indicated disappointingly high percentages of *No Response*. These were especially noticeable where graph or table completions were required i.e. on **Question 1(e)(i)**, **Question 1(f)(ii) Question 2(d)(ii)**) – especially as completing graphs or a choropleth map proved to be a relatively easy task for candidates that attempted them. If there is a graph or map on the examination paper, candidates should expect to have to do complete one; it would be very unusual if a graph or map on the exam paper – unlike in the Insert – was already completed. All the instructions for completing graphs and diagrams are **emboldened** so candidates should not miss these.

There may have been a few time issues given a few *No Response* answers at the end of **Question 2** but the booklet format does not allow or encourage over-writing of sub-sections and not many candidates needed to write more than the lines allowed for. Most points for teachers to consider, when preparing candidates for future questions, relate to misunderstanding or ignoring command words. Here plenty of practice using past papers to ensure they read the instructions carefully and complete graphs and other practical activities within the time allowed would improve performance. Particular questions where candidates do not score well often relate to them not taking time to thoroughly read and understand the resources referred to. Such failings mean that some candidates do not obtain a mark in line with their geographical ability.

Centres need also to realise that, although this is an *Alternative to Coursework* examination, candidates will still be expected to show that they know how fieldwork equipment can be used and how fieldwork methodology, demonstrated in the *Route to Geographical Enquiry* in the syllabus, is implemented even if they have only limited opportunities to carry it out in and around the centre. The lack of knowledge of what a pilot study is and the methodology used to carry out a river study in **Question 2(e)** indicates that fieldwork methods are only being studied in some centres.

Candidates found **Question 1** and **Question 2** equally accessible and there was a pleasing rise in the mean to 34.9 from 28.8 in 2019 and 29.5 in 2020.

SECTION 4

Comments on specific questions

Question 1

(a) (i)   Almost all candidates correctly chose 2015 as the year with 250 000 visitors. A few picked 2016 or 2017 and others chose 2018; presumably the latter choice was due to candidates reading '…*the highest number*…' but not noting it needed to be 250 000 visitors.

(ii)   Apart from a couple of exceptions, candidates chose the correct decision that the number of tourists increased.

(b) (i)   The key phrase in this question was '…*during the year*…' and most candidates did give an overall view noting the rise from February to August then the decline to December. A few just described the change in the first few months which was not the overall description as required. There was a mark for the use of comparative statistics which required the data to include the unit *'million days'* and not just the number; quite a few missed out on the unit mark by writing 2.7 days instead of 2.7 million days. The unit was essential for the mark here as visiting for 2.7 days made no sense.

(ii)   Very few candidates scored marks here. Having studied the Malta graph in the previous sub-section, they were expected to suggest reasons that related to the visitor pattern in Malta and not

provide a generic list of reasons that could affect holiday visits anywhere. Consequently answers such as '*most visitors in the summer/August as it is warmer*' or '*most visitors are in August because that's when most holidays are*' were credited but answers unrelated to the graph trends were too common and too vague e.g. *different holiday patterns, more visitors in better* or *favourable* or *suitable weather.* A few thought low travel costs created the peak period for visitors but in fact as demand rises prices tend to go up too.

(c) One of the three main methods of sampling in the syllabus – Systematic, Random or Stratified – were expected as an answer here with a brief description of the method. The most common one used was Systematic (sometimes misspelt as Systemic though) with Random a close second and Stratified a rare choice. Those that chose Systematic scored well referring to regular interval or pattern and the 5th/nth person, Random less well – especially if they then interviewed random people – and Stratified answers tended just to mention groups but no criteria. It was disappointing to see that so many candidates appeared not to know one of these sampling methods and resorted to vague, irrelevant ideas such as *interview, face- to-face, survey, questionnaire* or *ask people.*

(d) (i) The choropleth mapping of Germany and Poland was well done by the vast majority who gained both marks. However over 10 per cent of candidates did not even attempt this question despite the instruction being emboldened as **Plot the data...** Maybe these candidates thought the map looked complete but in this paper it is almost always the case that if there is a map or graph it will require completion to demonstrate the candidates' skill beyond written answers.

(ii) There was a pleasing responses to this hypothesis question with most candidates judging it to be true and then providing evidence from the table noting 51/200 (not 51 per cent) of visitors were from the UK and from the graph noting that it was the **only** country with over 40 visitors. Some candidates just stated that '*the UK had over 40 visitors*' which is not worthy of credit as they needed to spot that the UK was the **only** country with over 40 visitors to support the hypothesis.

(e) (i) It should have been clear to candidates that the pie graph needed completion to match the three other ones which were completed yet a significant minority chose to miss it out losing three marks in the process. Most that attempted it did it well although it was a surprise to see how many did not follow the clockwise order of plotting and shading illustrated by the completed graphs and also in the key. A few spoilt their shading by drawing the horizontal lines at an angle or drawing the cross-hatching in the wrong direction.

(ii) This question required candidates to look at the data and think very carefully before making their decision on the hypothesis; in that event it proved to be an excellent discriminator. The data in the table and the four pie graphs showed that very similar percentages visited Malta for the same reasons i.e. between 41 – 45 per cent visited Malta for sunny weather consequently the hypothesis that *Tourists from different countries visited Malta for different reasons* was not true. Looking carefully at the table showing 6 different reasons and 4 countries, it should have been clearly identified that all the countries visited for the same 6 reasons and to support that, the percentage differences for each reason was deliberately in a very small range e.g. 1 – 2 per cent for water sports. Those candidates that judged it correctly usually scored 3 or 4 marks.

(f) (i) Two straightforward horizontal bars to complete here; most did it well but a few misjudged the 5 per cent plot putting it line with 4 per cent or 6 per cent or even on the 10 per cent line. Occasionally the 30 per cent plot was plotted at 50 per cent.

(ii) Most candidates made suggestions that included *more/increasing* an existing method e.g. more holiday brochures or *improving/making better* a current method e.g. improving the tourist guide. A few weak answers suggested having more web sites or making the website better; acceptable answers here would be to invest more in the website or to keep it up-to-date; something different and specific than the ideas of *more/increase* or *improve/better* for which a mark had already been allowed.

(g) This was attempted well by most candidates who clearly identified two benefits and two disadvantages of tourism for the local people of Malta. Common benefits included an increased market for selling goods and services and more income alongside jobs plus quite a few cultural benefits. Disadvantages included loss of property or land for new tourist resorts plus seasonal employment and noise pollution alongside traffic congestion. Cultural dilution or lack of respect were mentioned too. The best candidates gave examples to illustrate their ideas e.g. instead of vaguely stating *better infrastructure* as a benefit they suggested improved roads or hospitals that

the locals could access or they gave examples of jobs such as a tour guide. With disadvantages instead of just saying *overuse of resources*, they suggested overuse of water or electricity. Some candidates seemed to think that tourism brings very negative influences such as drugs, more crime, food shortages and tourists taking local jobs – none of which rings true.

Question 2

(a) Most candidates came up with sensible suggestions of precautions to take while doing tests in the water. These included not to drink the water, wash afterwards, wear gloves and wear long-sleeved jumpers plus wellingtons or gumboots if there were sharp stones to avoid. There were some rather bizarre ideas though e.g. *to take first-aid kits to stop infections, to only do the tests when the animals were sleeping or to wear a helmet to avoid sharp stones on the river bed*. The frequent use of appropriate clothes or suitable footwear as answers were too vague. Staying away from the river was not an option although some candidates thought it a good idea.

(b)(i) This was quite well done; most candidates suggested taking the measurements a second or third time or checking with other candidates. Some advised that the candidates should make sure they were using the instrument correctly e.g. resetting it to zero or making sure it was fully immersed. What was not credited was ideas related to choosing more sites, using a different instrument, doing it again on different days or even in different rivers – none of these would make the measurements more reliable.

(ii) This was well plotted by almost all but too many did not attempt it. Errors included plots at 9.2 or 9.4 or on the wrong vertical line. A few did not use a cross but a dot which was not credited.

(iii) Most made the correct hypothesis decision and supported it with reference to a site where the oxygen level had increased e.g. Site 1 from 9.1 in 2015 to 9.8 in 2018. The best candidates also spotted that the increase was present at each/every/all sites. It is also more logical if years are being compared as here to use the earlier year first e.g. *in 2015 it was… but in 2018 it increased to…* Comparing years in reverse, as quite a few did, was illogical and did not match the hypothesis order.

(c)(i) It was disappointing to see that a significant minority did not attempt this question; what a pilot study is and its purpose is an important part of preparing for the real investigation. Most could define it as being a trial, test or small-scale study and its purpose was to check the instruments or check that the site was appropriate. Some did not notice that the pilot study was on the Trade River where the real study would be carried out so they referred to checking out questionnaires and interviews in their answers. There was a lot of emphasis on safety although that is not the prime objective of a pilot study. As always a few linked the word 'pilot' to overhead surveys of the site including, in this session, the use of drones.

(ii) Most did this well and understood that the purpose of the kick sampling was to get the insects hiding blew the rocks to come out of their shelter so that they could be caught in the net for analysis. A small number thought the object was just to dislodge the stones which would be pretty pointless.

(iii) Not quite as many as in **(ii)** understood why it was important to identify the species with regard to matching them to the level of pollution in the river; the best candidates read Fig 2.3 and could quote or rewrite the sentence that the *location of the species tells you about the quality of the water* which was credited. Some just thought the purpose was to identify the species but that was only half the story.

(d)(i) Most correctly chose 4.

(ii) While by far the vast majority put the correct answer 4 in the empty box, a significant minority just missed it out despite the instruction **Complete this recording sheet…**. Some candidates miscounted the circled animals in Fig 2.5 and incorrectly totalled 3 or 5 thereby jeopardising their equation in **(iii)**.

(iii) It was impressive to see how many candidates worked their way through the maths to end up with 12/12/2/1 for the separate equations and then divided the total 27 by 9 to get the correct Biotic Index Score of 3. A few did not get some parts of the equations correct thereby making their final

BIS wrong. A few accidentally produced 3 as their final answer by using incorrect figures – however the correct answer being achieved by luck could not be credited.

(iv) Apart from a small number, who used data to plot graphs that had already been plotted for neighbouring graphs, almost all the other candidates plotted and shaded the two bars correctly.

(v) It was very encouraging to see so many candidates make the correct hypothesis decision and then back it up with data showing that in some cases the Biotic Index increased and in others it either stayed the same or decreased. This was well done.

(vi) In a similar way to **Question 1(b)(ii)**, too many candidates just gave generic answers here when something more specific was required. Just stating '*the flow of the river affects pollution levels'* or '*more litter is added in some places'* does not provide reasons for the pollution varying. What was needed was a reference to the source and its effects or how the flow of the river can affect the distribution of pollution e.g. '*if there are farms along the river there could be fertilizers entering the river in some places and not others'* or '*where there are towns and cities people may drop litter and waste in the river'* or *'a fast-flowing river would move pollution downstream away from its source.'*

(e) While there was no evidence of there being a time issue in finishing this paper, a significant minority made no attempt to answer this question which was disappointing. What was encouraging though was that those who had prepared for a question on rivers did have a hypothesis to use and also knew how to investigate it. The most popular hypothesis was to propose '*The velocity of a river increases downstream'* or '*Does river velocity increase downstream*?' Hypotheses are either statements to investigate or questions to answer; a few just listed a topic e.g. *River velocity*, which did not get the hypothesis mark though could gain all the method marks. A few were over-ambitious and attempted to measure the discharge as well as the width and depth; in these cases credit was awarded for methods that would work for one of the parameters. There were some good responses related to pebble size and roundness changing downstream too.

Those without any knowledge of how to investigate a river hypothesis struggled to think of a hypothesis and gave bizarre ideas e.g. '*does the water in the river always go downhill*?' Others gave hypotheses related to water pollution – despite the instruction **Do not refer to water pollution.** Others wanted to compare parameters between 2015 and 2018 despite having no data for 2015; and some just invented hypotheses that were not river-related or just could not be investigated e.g. '*there are more insects upstream than downstream',* or '*there are more animals in the river in 2018 than 2015'* or *'longshore drift occurs more upstream than downstream.'*