Paper 2217/12 Paper 12

## **Key Messages:**

In order for candidates to perform well on this paper they needed to be able to:

- Use and interpret a variety of resources such as maps, graphs or diagrams in order to extract information, and analyse the data to show patterns or trends.
- Use photographs to generate ideas or to describe features such as part of an urban area, a tropical desert or a coastal landform.
- Provide full and accurate definitions of key geographical terminology e.g. birth rate, employment structure.
- Show understanding of key geographical terminology, processes and features by providing full descriptions and/or explanations of geographical themes, events or issues.
- Refer to a range of case studies with place specific detail, statistics or other data, and apply this
  information to the question being asked e.g. describe the impact of human activity on a tropical
  rainforest ecosystem. This requires information relating to impact only. Any details on the reasons
  for deforestation or on impacts globally or on people are not required for this question despite the
  fact that the candidate would know this information.
- Write in depth and detail in a succinct manner and avoid repetition.

Examiners were impressed by the quality of the work which they saw from many candidates. There were relatively few rubric errors. Case studies were well learned and there was good place specific reference for some questions. Candidates generally coped well with the 5 mark questions and many made genuine attempts to develop their answers. Nevertheless centres would benefit from attention to:

- precision in defining key terms and using them in the correct context e.g. the use of per 1000 of the
  population for birth rate. Key word glossaries would help. Key terms need to be used more fully
  when explaining e.g. use of words such as infiltration and interception when explaining the link
  between deforestation and soil erosion.
- knowing how to compare or describe change either by the use of comparative words or by writing two statements that can be linked.
- developing answers for the 5 mark question and the case studies sometimes this is done very well but in some cases no development is attempted.
- including place specific reference in the case studies without spending a disproportionate amount of time and space on this at the expense of focusing on the question.
- avoiding the use of vague terms e.g. 'higher crime rate' rather than giving the specifics of what
  the crimes or problems are or 'pollution' rather than giving specific types or examples.
- reading the question carefully e.g. only writing about one problem if asked to and not several, or
  focusing on cause rather than effect or vice versa. Advising candidates to underline command
  words in the question and also the words/terms that give them the content and the context would
  help.

• identifying the stages in a process and describing or explain each term sequentially and with precision – e.g. relief rainfall.

### **General Comments:**

The combined question and answer booklet is now a familiar and well established format and most candidates made effective use of the space provided. It was unusual to see many answers continued on the additional page and very few candidates went beyond that and had to use extra paper. Whilst it is possible to continue beyond the space provided candidates should be aware that the space allocated should usually be sufficient if an answer is reasonably concise and relevant. Those candidates who go well beyond the space allocated often do so as they include irrelevant materials. Candidates should be made aware that they:

- write only on the lines provided, not underneath the final line or elsewhere on the page (e.g. in any area of unused space at the bottom of a page).
- continue any answers which they do not have space for on the lined page(s) at the back of the booklet. If they do this they must indicate that they have done so (e.g. by writing 'continued on Page XX') and write the number of the question at the beginning of the extra part of their answer. They should only use loose sheets of paper if this extra space has been used up.

The examination was considered wholly appropriate for the ability and age range of candidates. The examination paper gave a wide spread of marks allowing for positive achievement for all but also allowed for sufficient challenge for the most able. The majority of candidates were able to answer in full and even weaker candidates attempted most sections of their chosen questions.

Many candidates produced geography of a very high standard. There were only a few candidates who did not understand what was required in the questions or respond in an appropriate way and, in general good use was made of the resources provided.

A few candidates attempted all the questions instead of following the rubric. This is not an advantage to them as it does not give them the opportunity to answer in the detail required or devote sufficient thought to each answer.

Whilst many excellent case studies were seen some candidates are learning case studies from previous mark schemes and trying to use them whatever question is set on that topic. This is not good practice as it is not conducive to the candidates' understanding of the geography involved. It particularly stands out to Examiners when an answer does not 'fit' with the question being asked. Generally candidates who use local case studies tend to write convincing answers. It enables them to write in detail with place specific information, as opposed to learning about distant case studies that have very little relevance to candidate's everyday lives. It is recognised that this is not always possible and that teacher judgment is required as to which case studies are most suitable, local ones or ones which are well documented in text books and other media.

It is also worth noting that the case study questions were answered by some candidates by the use of bullets or key points as would be used in a revision programme. These simple answers mainly kept the candidate at Level 1. Also a lot of candidates have clearly been trained to put place knowledge in the answer to gain Level 3, but some candidates spend much time detailed place knowledge (locational and background information for example) at the expense of answering the question fully.

The following items of general advice, which have been provided previously in this report, need to be given to future candidates who should:

- 1. make the choice of questions with care, ensuring that for each question they choose they have a named case study about which they can write in detail and with confidence.
- 2. answer the three chosen questions in order, starting with the one with which they are the most confident, and finishing with the one with which they are least confident (in case they run out of time).
- 3. read the entire question first before answering any part, in order to decide which section requires which information to avoid repetition of answers.

- 4. highlight the command words and possibly other key words so that answers are always relevant to the question.
- 5. use the mark allocations in brackets as a guide to the amount of detail or number of responses required, not devoting too much time to those questions worth few marks, but ensuring that those worth more marks are answered in sufficient detail.
- 6. consider carefully their answers to the case studies and ensure that the focus of each response is correct, rather than including all facts about the chosen topic or area, developing each point fully rather than writing extensive lists of simple, basic points. It is better to fully develop three ideas rather than write extensive lists consisting of numerous simple points. Candidates need to try to consider several issues and develop each one, rather than just focusing on one issue.
- 7. study the resources such as maps, photographs, graphs, diagrams and extracts carefully, using appropriate facts and statistics derived from resources to back up an answer and interpreting them by making appropriate comments, rather than just copying parts of them.

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 attempted by the vast majority of candidates.

- (a) (i) A large number of candidates answered this successfully. Where some did not earn credit it was because they did not include the term 'per 1000 of the population'.
  - (ii) This was generally answered well. If answers were wrong it was usually Angola and the Philippines that were reversed.
  - (iii) This was well answered by many candidates. Most answers referred to aspects of contraception, work and tradition. If candidates refer to 'education', 'contraception' or 'tradition' it is wise to develop these ideas.
  - (iv) Again this was well answered with a wide variety of ideas, most candidates gaining 3 or 4 marks.
- (b) (i) Whilst some candidates answered this very well many others lost marks because they did not compare. Also, there were answers referring to birth rate, death rate and life expectancy rather than focusing upon the pyramid.
  - (ii) This question differentiated really well. Many candidates included several ideas and developed each one well, though others looked at few issues and/or answered briefly.
- (c) Many candidates included lots of information as background to the migration. However, this meant that they had spent a lot of time (and space) on this before writing something that answered the question. Whilst it is good to see place specific information it needs to be in balance with answering the question. Weak candidates wrote lists of simple push and pull factors here and therefore gained 3 marks maximum within Level 1 for example they moved for 'jobs and better pay and better education'. However, there were some very good examples of full mark answers where candidates had gone on to develop several ideas and given very full and accurate place specific references.

### **Question 2**

In general candidates seemed less confident with the urban question than the population question, both in terms of the quality of responses and the amount of candidates that chose it.

(a) (i) The majority of candidates answered this correctly



- (ii) Most candidates only achieved one mark here usually for mentioning parks or sports grounds. Some candidates misunderstood the question and gave answers about how open space was used once developed e.g. for shopping malls or industrial estates.
- (iii) Generally this was not answered well as many candidates did not compare and others focused on the area rather than the housing or made value judgments about quality and cost of the housing in such areas which could not be substantiated.
- (iv) This question was answered well with most candidates writing something of relevance and many gaining either 3 marks or full credit.
- (b) (i) The photograph was well used and many candidates were able to identify acceptable features of the CBD of Hong Kong shown in it.
- (b) (ii) Whilst there were many good answers, with appropriate precision and development of ideas there were other candidates who could have developed answers more fully, especially those who referred to 'pollution', 'traffic', 'crowds' and 'crime'.
- (c) Highly achieving candidates had clearly learned their case studies well and gave some very well developed place specific details, with a great variety of examples being seen from MEDCs and LEDCs. There were some well documented text book examples and many which were obviously local to the candidates. Others did not develop ideas or wrote briefly about solutions to more than one problem rather than focusing properly on one.

### **Question 3**

This was not a popular choice of question.

- (a) (i) The definition was correctly identified by most candidates.
  - (ii) Not many candidates got both words correct the common mistake was to write 'evaporation' instead of 'condensation'.
  - (iii) Few candidates gained all three marks as they were not proficient in explaining the stages in the formation of relief rainfall and thus the significance of the rain shadow.
  - (iv) Very few candidates gained all four marks and a significant number did not present answers that gained any credit. There was much confusion for the reasons for desert climate in relation to descending air.
- (b) (i) Generally this was well answered with features from the photograph being described well.
  - (ii) This was really well answered by many candidates who had clearly learned the vegetation adaptations and were able to develop this to explain how these adaptations helped them to survive. It was not uncommon for a candidate to gain full credit here even if they had scored less well on other parts of this question.
- (c) Whilst there were some notable high quality exceptions, on the whole this was not a well answered question. Lots of answers poorly focused answers dealt with the causes of tropical rainforest destruction with lots of information about logging, cattle ranching etc. Some did not concentrate on the ecosystem and wrote about impacts on people or global impacts.

### **Question 4**

This was not a popular choice of question.

- (a) (i) This was generally answered well. The most common mistake was to give the answer natural arch.
  - (ii) This was not well answered as many obvious features were overlooked at the expense of vague ideas.

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- (iii) This was generally well answered showing that most candidates had a good knowledge of processes. The most common mistake was the confusion of corrosion with corrasion.
- (iv) Some candidates answered this very well and there were some very clear explanations. The common error was to explain how stacks, stumps and arches are formed on a headland which is not relevant. 'Differential erosion' was rarely used as a term although the concept was often well understood.
- (b) (i) The distribution was a fairly simple one to describe as there were very clear patterns shown on Fig. 5 and there were a number of good answers. However describing a distribution from a map is not a skill which many candidates find easy and some do not seem familiar with the command.
  - (ii) Many candidates answered this well. They had clearly been taught the conditions needed for the growth of coral and wrote about this in a convincing way. Many developed their answers with temperature figures or specific depths and most scored high marks.
- Whilst some inappropriate examples were chosen here there were also some very good ones, typically referring to areas in Southern Asia, such as Bangladesh, or the Southern United States. Many of those candidates who had good knowledge of the case study earned high marks by developing ideas or using appropriate statistics, however, some candidates clearly did not have this knowledge and did not develop ideas, so gave simplistic ideas which could only be credited at Level 1, such as 'lives lost, injuries' etc.

### **Question 5**

This was a popular question.

- (a) (i) This was generally well answered though some candidates lost the mark by not including the idea of distribution or percentage.
  - (ii) Clearly some candidates were familiar with triangular graphs and they scored both marks, others seemed to simply guess or did not attempt the task.
  - (iii) Many candidates seemed to have an understanding of the reasons behind the employment structure in Ghana but did not present this in the form of a comparison with Spain as the question was asking for.
- **(b)(i)** This was well answered few candidates had problems recognizing primary, secondary and tertiary industries.
  - (ii) A Most candidates at least recognized that jobs would be created by their chosen industry and some went well beyond that by writing about the multiplier effect, infrastructural development and the enhancement of service provision in the area.
  - (ii) B This was well answered with some very good development of ideas seen. There was some clear knowledge and understanding of a variety of environmental impacts, though some candidates included irrelevant references to people or vaguely wrote about 'pollution'.
- Whilst not all candidates understood what was required here, there were some very good responses seen with good development of reasons for changes in employment structure. However, these were not always clearly linked to the specific change and sometimes as a result the answers lacked structure and clarity.

### **Question 6**

This was a popular question

- (a) (i) Most candidates correctly identified one of the two cities.
  - (ii) This was well answered with most candidates writing about air pollution caused by cars and factories.



- (iii) Most candidates identified a problem such as breathing difficulties or another health issue, and some described other problems caused by air pollution in urban areas, such as the impact of acid rain on buildings and the impact of smog on visibility. Candidates who lost marks tended to do so as they either focused on one idea only, typically a health issue, or they wrote simple points (e.g. acid rain) which did not specifically describe the problems that caused for the people.
- (b) (i) This was very well answered and most candidates correctly identified and described changes to gain full marks.
  - (ii) Some outstanding answers were seen which showed a very clear understanding and used appropriate terminology, however these were in the minority as many candidates do not seem to know the links between deforestation and flooding, and there was little precision in the use of key terms like interception, infiltration and overland flow.
- **(b) (iii)** This was well answered by many candidates who developed their ideas well and wrote with confidence about a variety of appropriate environmental impacts.
- Significant numbers of candidates focused on the effects of the pollution of their chosen sea, lake or river, and developed this rather than the causes, which they tended to write about much more superficially. Nevertheless most were able to score some marks and there were a few very well developed answers using well documented textbook examples or more recent ones which have been in the news. Some candidates used local examples, which was encouraging to see, and it is always good to see up to date examples being used rather than those from the textbooks, which inevitably, though acceptable, are somewhat dated.

Paper 2217/13
Paper 13

## **Key Messages:**

In order for Candidates to perform well on this paper they needed to be able to:

- Use and interpret a variety of resources such as maps, graphs or diagrams in order to extract information, and analyse the data to show patterns or trends.
- Use photographs to generate ideas or to describe features such as a mountain environment, a factory or a power station.
- Provide full and accurate definitions of key geographical terminology e.g. low population density or tectonic activity.
- Show understanding of key geographical terminology, processes and features by providing full descriptions and/or explanations of geographical themes, events or issues.
- Refer to a range of case studies with place specific detail, statistics or other data, and apply this
  information to the question being asked e.g. explain the causes of an earthquake which occurred in
  a named area which you have studied. This requires information relating to causes only. Any
  details on the impacts of the earthquake are not required for this question despite the fact that the
  candidate would know this information.
- Write in depth and detail in a succinct manner and avoid repetition.

Examiners were impressed by the quality of the work which they saw from many candidates. There were relatively few rubric errors. Case studies were well learned and there was good place specific reference for some questions. Candidates generally coped well with the 5 mark questions and many made genuine attempts to develop their answers. Nevertheless centres would benefit from attention to:

- precision in defining key terms and using them in the correct context. Key word glossaries would help. Key terms need to be used more fully when explaining – e.g. use of words such as convergent, compression and uplift when explaining how the Himalayas were formed.
- knowing how to compare or describe change either by the use of comparative words or by writing two statements that can be linked.
- developing answers for the 5 mark question and the case studies sometimes this is done very well but in some cases no development is attempted.
- including place specific reference in the case studies without spending a disproportionate amount of time and space on this at the expense of focusing on the question.
- avoiding the use of vague terms e.g. 'higher crime rate' rather than giving the specifics of what the crimes or problems are or 'pollution' rather than giving specific types or examples.
- reading the question carefully e.g. only writing about one problem if asked to and not several, or
  focusing on cause rather than effect or vice versa. Advising candidates to underline command
  words in the question and also the words/terms that give them the content and the context would
  help.
- identifying the stages in a process and describing or explaining each term sequentially and with precision – e.g. longshore drift.

### **General Comments:**

The combined question and answer booklet is now a familiar and well established format and most candidates made effective use of the space provided. It was unusual to see many answers continued on the additional page and very few candidates went beyond that and used extra paper. Whilst it is possible to continue beyond the space provided candidates should be aware that the space allocated should usually be sufficient if an answer is reasonably concise and relevant. Those candidates who go well beyond the space allocated often do so as they include irrelevant materials. Candidates should be made aware that they:

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A few candidates attempted all the questions instead of following the rubric. This is not an advantage to them as it does not give them the opportunity to answer in the detail required or devote sufficient thought to each answer.

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It is also worth noting that the case study questions were answered by some candidates by the use of bullets or key points as would be used in a revision programme. These simple answers mainly kept the candidate at Level 1. Also a lot of candidates have clearly been trained to put place knowledge in the answer to gain Level 3, but some candidates spend too much time detailing place knowledge (locational and background information for example) at the expense of answering the question fully.

The following items of general advice, which have been provided previously in this report, need to be given to future candidates who should:

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- 2. answer the three chosen questions in order, starting with the one with which they are the most confident, and finishing with the one with which they are least confident (in case they run out of time).
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- 4. highlight the command words and possibly other key words so that answers are always relevant to the question.
- 5. use the mark allocations in brackets as a guide to the amount of detail or number of responses required, not devoting too much time to those questions worth few marks, but ensuring that those worth more marks are answered in sufficient detail.

- 6. consider carefully their answers to the case studies and ensure that the focus of each response is correct, rather than including all facts about the chosen topic or area, developing each point fully rather than writing extensive lists of simple, basic points. It is better to fully develop three ideas rather than write extensive lists consisting of numerous simple points. Candidates need to try to consider several issues and develop each one, rather than just focusing on one issue.
- 7. study the resources such as maps, photographs, graphs, diagrams and extracts carefully, using appropriate facts and statistics derived from resources to back up an answer and interpreting them by making appropriate comments, rather than just copying parts of them.

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:

A popular choice made by the majority of candidates.

### **Question 1**

- (a) (i) The majority of candidates could define 'low population density' but the main reason for some candidates not gaining credit was the failure to refer in some way to a 'given area' as 'when not many people live in a place' or similar' does not quite get the idea across. Some good use was made of the word 'sparsely' in some candidates' definitions.
  - (ii) Generally well answered by most although significant numbers of candidates lost credit through imprecise answers (e.g. Africa) or basic lack of knowledge or understanding e.g. of where the northern hemisphere was or where arid areas are located. Candidates should be careful when naming a country (or continent) in these types of questions, and check that the whole of the country fits into the required category.
  - (iii) This question was generally not well answered with few candidates scoring full credit. Many candidates made reference to the MEDC status rather than those factors that had made Europe more densely populated. Other candidates made reference to factors more applicable to LEDC's for reasons for high birth rates such as lack of contraception. There were however a significant minority who explained the temperate climate and access very clearly and made a valid reference to jobs and/or resources. Too many candidates took the opportunity to wrongly write about migration, referring to pull factors which are not all valid to explain a high population density (e.g. education and health care).
  - (iv) There were lots of ideas to choose from here and most candidates scored well. However, some answers did not develop sufficiently ideas such as pollution, overcrowding or crime and did not score the mark.
- (b) (i) Again, generally well answered as candidates seemed to interpret the photograph well, with many good references to relief, access and climate for example. The most common errors referred to flooding or no water available.
  - (ii) This question differentiated well with some very well explained answers gaining credit, with several ideas, some of them developed. Weaker responses tended to focus on a limited issue, which was not always a valid one, as there were many references to cheap land/housing and not being able to move, which do not really apply to such a rural area with a low density of population.
- (c) Most candidates did seem to understand what was required in answering this question and to some extent described the distribution in their chosen country, supplementing it with a map. It was rare for a candidate not to include a map, and most of them were recognisable and contained sufficient information to show the distribution of population in some way. Where many candidates did misinterpret what was required was the inclusion of explanation, which was not required at all and therefore much of the answer from many candidates was irrelevant. Nevertheless Level 2 at least was achieved by many as they made points about the distribution and showed this on the map (or named significant places). The higher scoring answers (top end of level 3) had some really excellent descriptions using China as the example with some well-drawn and annotated maps.



### Question 2

Another popular choice made by candidates.

- (i) Many candidates missed this question out but those who answered it tended to get it right.
- (ii) Generally well answered and both were usually correct.
- (iii) Very mixed responses were seen here. Some candidates very clearly expressed their answers with the statistics to support them and made reference to the anomaly. Others had no idea what they were doing and did little other than quote statistics with some even saying there was no relationship.
- (iv) Another question that produced very mixed responses. There were many high quality answers focusing on key issues such as employment, discrimination, culture and language whilst others overlooked the reference to people not born in the USA and wrote generally about problems of urban areas, with many weak and undeveloped ideas.
- (b) (i) This question was generally well answered with many valid ideas, however there was a tendency to focus on health issues only rather than looking at 'different' problems as the question asks. Some candidates described the causes of air pollution rather than the problems it caused.
  - (ii) Again, generally well answered and many scored well by writing about transport, industry and fossil fuels, developing some of these ideas well. Whilst weaker responses generally did not develop ideas or mention enough different ideas to score high marks, but most scored marks for simple valid ideas such as traffic or factories.
- (c) This was not generally well answered. However, some good responses were seen at level 3 with several relevant developed ideas and place specific information, with reference to their chosen urban zone. Those answers were in the minority though as many candidates were confused by the terminology. Some interpreted inner city as CBD and others interpreted rural urban fringe as the rural area. Outer suburbs responses were mostly better but few candidates chose it. Many candidates made simple lists of features, without any real attempt to develop their description. Better answers related to squatter settlements in the inner city or fringe but few good ones were seen relating to MEDC cities such as London. Few candidates took advantage of using information from their own cities and of those that did responses were generally weak.

### **Question 3**

This was not a popular choice made by candidates.

- (a) (i) This was correctly answered by most candidates.
  - (ii) The majority of candidates gained full credit by suggesting two valid examples. A few candidates named the instruments themselves.
  - (iii) Mixed responses were seen here with some perfect answers which very easily scored the full marks but many candidates had no idea of how the relative humidity value was obtained.
  - (iv) This question was generally well answered with many excellent responses. Most candidates showed an excellent understanding of the Stevenson screen.
- (b) (i) Again, well answered. Most candidates could observe that it was hot/wet/constant temperature or use some relevant statistics to illustrate the ideas. There were very few attempts to give a month by month description which was encouraging. The vast majority of candidates gained full marks.
  - (ii) Generally this was well answered, and most candidates showed understanding of the processes resulting in a hot, wet climate. The question differentiated well as some candidates were able to develop fully the different ideas and link them together rather than just listing one or two brief ideas. Some candidates wrote about Tropical Rainforest vegetation but this was only relevant in relation to large amounts of transpiration.

(c) Some excellent case studies were seen scoring high level 3 marks. Candidates either generally used Amazonia or a South East Asian example like Kalimantan. The focus was on why deforestation is taking place, not on the impacts, and too many candidates who had not read the question properly wasted time by writing in detail about impacts, locally and/or globally and the natural environment and/or people which were all irrelevant.

### **Question 4**

This was a popular question.

- (a) (i) Mostly well answered and correct although some poor use of 'plate boundary' with reference to the boundary moving.
  - (ii) Most candidates answered correctly although a few named one plate only.
  - (iii) Most candidates gained credit for knowing that zones were mostly on plate boundaries. Many candidates then went on to name plates rather than locations. Some higher scoring answers went beyond this and referred to lines/bands and/or named relevant areas like the Pacific Ring of Fire or Mid-Atlantic Ridge. Many referred to edges of specific named plates which did not gain marks or referred to large and imprecise areas e.g. Africa/Asia/Europe without the required precision.
  - (iv) Some well-informed responses were seen with many candidates able to explain why the risk of volcanoes is high in some parts of the world. Marks were scored for reference to processes at either the destructive or constructive margin. Inexplicably large numbers chose instead to write about why people live in many of the areas which are at risk and scored zero.
- (b) (i) Virtually all candidates scored full marks here as they were able to identify three impacts from the diagram.
  - (ii) This question differentiated well a few very good answers with several ideas were seen and were sometimes developed. Weaker responses listed simple ideas with many focusing on just two reasons at the most rather than looking at a variety of reasons.
- (c) Some mixed responses were seen here and the question differentiated well. Kobe and Haiti were very prominent amongst answers as was the recent Japanese tsunami, which proved to be more difficult to locate. The focus of the question was on 'causes' which many candidates did respond to but there was a lot of irrelevant material written about 'effects'. This was to the detriment of candidates, many of whom developed ideas about effects and wrote one simple statement about the cause, or even wrote nothing about the cause. High quality answers which gained level three were excellent, as many instantly added place specific by reference to plate names, date or intensity.

## **Question 5**

A popular choice made by candidates.

- (a) (i) The vast majority of candidates got this right, although a few put 'sugar' which did not gain the mark.
  - (ii) Well answered by almost all, choosing two out of the three. A very small number chose inputs rather than outputs.
  - (iii) Generally well answered with most candidates answering correctly. Knowledge of primary, secondary and tertiary industry appears to be sound.
  - (iv) The majority of answers at least showed some understanding of the reasons for a raw material location and some expressed several valid ideas scoring full marks. The reduction of transport costs was the main correct point mentioned and some very good answers referred to the raw materials being heavier than the finished products and/or weight lost in processing. Weaker responses showed misunderstanding by attributing the locational choice to factors such as the need to avoid various types of pollution close to housing rather than more significant ones which have a real impact on location. Not many responses recognised that the market for sugar is dispersed.

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- (b) (i) Whilst some candidates scored well on this performance was varied overall. Candidates referred to other features (rather than the buildings) such as pollution and open space. The fact that the buildings were large was mentioned by many for credit, however many made simple observations which are not accurate (e.g. they are old, low etc).
  - (ii) In contrast this was well answered with good references to atmospheric pollution, water pollution and the impacts of the loss of natural vegetation typically being the points gaining credit. Some candidates strayed into global issues and impacts on people despite the clear instruction in the question for the 'local, natural environment'. Some candidates also focused on just one problem rather than a range of problems.
- (c) Most candidates chose an appropriate high technology industry, with many South East Asian examples as well as the Silicon Valley and M4 corridor. There were some very good answers, some with place specific detail gaining full marks, although many candidates found the hurdle was in developing their ideas sufficiently for level 2 marks. Also many generic ideas were credited for level 1 max. as candidates selected a manufacturing industry rather than a high technology industry and many candidates feel that nice scenery is a key location factor.

### **Question 6**

A fairly popular choice made by candidates but less so than **Question 5**.

- (a) (i) The vast majority of candidates identified one of the two possibilities to gain credit.
  - (ii) Generally accurate with the vast majority ranking the continents in order. However, a few got them mixed up, as they were presumably looking at the wrong bars.
  - (iii) Some impressive responses were seen here with some of the ideas from the more perceptive candidates who were obviously prepared to think this through. References to cost and wanting to avoid being dependent were popular, also to the need to develop their own supplies of new renewable energy for the future.
  - (iv) Many good answers were seen which credit with most candidates being able to add some description to each type of renewable energy to which they referred rather than simply listing which was done by a very small minority of candidates which limited them to just one mark. Fortunately there were not many references to nuclear power which was considered not to be an example of renewable energy.
- **(b) (i)** Generally well answered most candidates wrote correctly about greenhouse gases (and/or gave examples) along with the problems of acid rain and enhanced global warming. Local impacts were not credited here.
  - (ii) This question differentiated well some candidates who were very well prepared had learned about the factors influencing the location of coal fired power stations and explained a range of them competently and in detail such as the need for a large flat site close to the raw material. However, weaker responses gave vague answers which could have related to any economic activity (e.g. cheap land) or factors which were wrong (e.g. safety-away from people). Whilst some candidates scored one or two marks for the general correct ideas such answers were not high scoring.
- Another question that differentiated well. Some excellent answers were seen with a good local people/natural environment balance. Many named areas/countries were acceptable although little place specific information was seen. Weaker answers within level 1 listed simple ideas, although some were able to develop one of them (typically either a health issue or a habitat/extinction issue) which enabled them to enter Level 2.

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Paper 2217/22

Investigation and Skills

## **Key Messages**

- Practical skills questions need to be completed precisely.
- Given data should be interpreted to show understanding
- In **Section B**, careful analysis should be backed up with evidence

### **General comments**

This paper was comparable with those of previous sessions. In **Section A**, **Question 3(a)**, **Question 5(a)** and much of **Question 2** proved to be fairly easy, while **Question 1(d)** and **Question 4(b)(ii)** were more challenging. In **Section B**, **Question 7** was the more popular choice, by nearly 2 : 1, and also produced slightly better achievement than responses to **Question 8**.

### Comments on specific questions

### Section A

### Question 1

On Fig. 1, the features could be identified as follows: A – hut, B – dip tank, C – gravel /earth road, D – buildings, E – reservoir. Many candidates had most of these correct. In **part (i)** and **part (iv)**, some candidates listed the whole line from the key, which spoilt their answer. In **part (iii)**, many had opted for a narrow, tarred road. However, careful comparison with the other roads on the map should have eliminated this possibility, since both narrow tarred and wide tarred roads could be seen to the west. In **part (v)**, small pan was also an acceptable alternative.

**Part (vi)** required the addition of the 1160m contour onto Fig. 1. For two marks this needed to be correct on both sides of the river. Most candidates who attempted this, scored at least one mark, but the omission rate was quite high for this task.

(b) King Peak was at 1356.2 metres above sea level. It was necessary to include the units on the answer and although most candidates had the correct figure, the unit of metres was not always given.

From King Peak to Mavura was between 3800m and 4000m on a bearing of between 100° and 105°. Most candidates had one of these correct but not always both.

- (c) On Fig. 2, candidates had to label the quarry, which was between 37mm and 41mm from the left side, and the power line, at 25mm to 28mm from the left. The dam was already shown on Fig. 2, in order to illustrate the method of labelling the other features. Most candidates attempted this and many were sufficiently accurate, though there were some who tried to draw the key symbol at the appropriate location.
- (d) Fig. 3 highlighted another area of the map extract. Most candidates had a reasonably good attempt at describing the relief and drainage in this area. They noted the highland with steep slopes and the sinkholes. Some also commented on the orientation of the ridge and its adjacent valley and a few spotted the depression in 9785.

Many noted the land use, for **part (ii)**, but didn't describe the pattern. The cultivation was in the flatter, lower, river valleys, while the dense bush was on the higher and steeper land.

(e) The six figure grid reference for the trigonometrical station on Zhanda hill was 018854 or 019854. Candidates usually had the correct square but made errors with the third and sixth figures.

### Question 2

- (a) Yoxall's population was 1300 and Barton and Bromley had the largest number of services. Most candidates had all of this correct.
  - Many also correctly noted that a place of worship was found in all of the villages, but fewer realised that the secondary School was the highest order service represented.
- (b) Newborough had fewer services than would be expected for the size of the population. Suggestions, as to why a village may have fewer services, were varied but many chose to focus on ideas of wealth. Some commented that where the inhabitants of a village were poor, services wouldn't get enough trade. This argument was fine, provided the candidate wasn't referring to an LEDC country as a whole, in which case the villages would still have services, appropriate to the population, relative to each other.

### Question 3

- (a) Candidates who attempted **part** (i), generally completed it successfully but again the omission rate was quite high on this question.
  - The Tambora eruption caused the most deaths, while the Nevado del Ruiz eruption was the most recent. Some put Mont Pelee for **part (iii)**, perhaps due to omitting the completion of Fig. 4.
- (b) A variety of volcanic hazards can cause death, including poisonous gases, volcanic bombs and ash, which were the most popular correct answers.
- (c) Many candidates suggested that death from starvation was caused by destruction of crops and livestock, as well as deposits on the land preventing future cropping. Some commented on the island location, but didn't always appreciate the reduced speed of transport in 1783. Other valid points, mentioned occasionally, were the reduction in sunlight affecting crop growth and temperature changes and deposits resulting in the death of freshwater fish.

### **Question 4**

- To complete Table 2A, "cultivated slopes" needed to be matched with 90 tonnes/hectare/year and "bare slopes" with 138 tonnes/hectare/year. However, comparing with Table 2B, it could be seen that all of the landscapes in Cote d'Ivoire had lower rates of erosion than the overall average in Madagascar. Many candidates had correct answers here.
  - In **part (iii)**, ticks needed to be placed against "heavy rain storms" and "irregular rainfall". Candidates often had one of these correct but not always both.
- (b) Fig. 5 showed some of the effects of soil erosion. Most candidates were able to pick out those that related to the coast: decline of coral, heavy siltation damaging mangroves and reduced fish stocks.
  - In **part (ii)**, it was necessary to go beyond simply lifting information from Fig. 5. Deposition on the river bed increased the flood risk by reducing the channel capacity, slowing the river flow and partly blocking the channel. Another approach was to consider the effect of erosion on water moving to the river, with reduced vegetation meaning reduced interception and also less soil resulting in less infiltration. Most candidates scored one mark but relatively few developed their answers sufficiently.

## **Question 5**

- (a) On Photograph A, the Central Business District was at D, with high land at C, the harbour at B and inland water at F. Most had these correct.
- (b) Although the photograph was of a city Cape Town plenty of vegetation was visible. Patches of grassland were scattered throughout the housing areas. Trees were also visible within the housing

areas and aligned along the roads. The highland area at C appeared to be forested. Candidates usually identified two of these but didn't always describe the distribution effectively. A common error was to make assumptions about direction and refer to the compass points instead of describing in relation to what could be seen of the parts of the city.

### **Question 6**

- (a) The closure of Oldport would result in reduced income through reduced shop and hotel trade, and loss of jobs, with the need to commute for the new jobs at Newport. However an advantage would be less traffic and congestion in Oldport and also less air, noise, water or visual pollution. Most candidates scored some marks in **part (a)** but few achieved all three marks, since they often wrote about general advantages and disadvantages rather than relating specifically to Oldport.
- (b) The advantages of Newport included closer proximity to the capital city and also to the open sea, resulting in a shorter and thus quicker ferry trip. Road access was also better, being on the main road, without the need to go through the built up area. Many wrote about the closer position in relation to the capital, though some simply put "nearer the sea" for their second point, which was too vague.
  - A resident of Oldport would have to commute 15km for a job in Newport. Most had answered correctly.
- (c) "South-west" and "leisure facilities" needed to be selected to correctly complete the paragraph. Most had the latter correct but some had reversed the wind direction.

Section B - Section B is taken from 0460/42.

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**Investigation and Skills** 

## **Key Messages**

- Practical skills questions need to be completed precisely.
- Given data should be interpreted to show understanding.
- In **Section B**, careful analysis should be backed up with evidence.

### **General comments**

This paper was comparable with previous sessions. Question 2(c)(i), Question 3(a), Question 5(a)(i) and Question 6(c) were relatively easy, while Question 1(d), Question 3(b), Question 3(c) and much of Question 4 were more difficult. Additionally, there was poor understanding of the term "relief" in Question 1(a)(vii) and Question 4(a).

In **Section B**, **Question 7** was more popular than **Question 8** by about 2 : 1. More able candidates appeared to respond well to **Question 8**.

## Comments on specific questions

### Section A

### **Question 1**

(a) Most candidates correctly identified feature A as a dam and feature B as a dip tank. Most had correctly located the point for the spot height C, but some did not give the units on their answer, which should have been 1111 metres. Land use at D was cultivation, while the road type at E was "other". Many successfully positioned the river on Fig.1

In **part (vii)**, candidates had to study the same section of the map and describe the relief. This was an area of steep highland, more accurately described as a ridge, running SW to NE, with a separate hill in the SE, and a valley between. Contours ranged from 1040m to 1360m. It was clear that quite a number of candidates didn't understand the term "relief", often simply repeating information from **part (i)** to **part (vi)**.

- (b) The bearing of the reservoir at 505714 from the reservoir at 509707 was 330°. The choice of answers eliminated the need for a precise measurement, but still tested the understanding of how a bearing should be measured. The reservoirs were 1km apart, to the nearest kilometre, but many candidates insisted on a precise measurement, which was not required.
- (c) The derelict building was found at 528746.
- (d) The main river on the map extract flows from SW to NE. This could be deduced from the direction of the dam wall, the angle of intersection of the tributaries or careful scrutiny of the contour lines. Some candidates got this the wrong way round, while a few had the direction right but were unable to give a valid reason for their deduction.

Other features of the river included meanders, tributaries, braiding, a variable width, rapids and dams. Candidates generally scored at least some of the marks available here.

### Question 2

- (a) Poland had the largest population growth rate and this was in the year 1960. Both country and year had to be correct to score the mark. The year was easy to read, being on the axis of the graph. Many candidates had a correct response.
- (b) To accurately describe the changes in population growth rate in Poland between 1970 and 1990, it was necessary to appreciate the scale on the x axis. Many candidates tried to just relate to the years that were labelled, and consequently their descriptions were somewhat inaccurate. A few began correctly but then swapped to describing Germany's line instead.
- (c) Poland experienced a decrease in total population in 1970 and from 1999 to 2007. Almost all candidates correctly selected one of these years. Population may have decreased due to birth rate being lower than death rate, or due to outward migration. The graph and question implied that some migration may have been to Germany, and a mark was available for pointing this out. Candidates often wrote about migration and scored the marks. However, some wrote about reasons for an increase in death rate.

### **Question 3**

- (a) On Fig. 3, B was swash and C was backwash, resulting in A, longshore drift.
- (b) People in the area would want to protect the beach from erosion for a number of reasons, including prevention of erosion and / or flooding of the settlement and the campsite. The hotels suggest a tourist industry which would also warrant the protection of the beach. Candidates seemed to find it difficult to express their ideas here.
- (c) Very few candidates made use of the opportunity to annotate Fig. 3 as part of their answer to **part** (c). A few were able to do a good written answer anyway. Many assumed the river would be blocked rather than diverted. Some thought that X would be eroded away in the future but this would not be the result of longshore drift.

### **Question 4**

- (a) Again candidates were often not clear about the meaning of "relief", and wrote about vegetation and climate as well as general comments about the landscape. Some mentioned the background hills but few noted the flat plain in the foreground.
- (b) Most candidates were able to describe the vegetation: grassland with scattered trees and also bushes/scrub. Some also pointed out the bare patch in the foreground.

Vegetation has been used to construct huts as well as the more obvious goal posts in the foreground. The bare patch and the shorter grass round it also indicate the effect of human activity. Some candidates wrote about the human activity, in the photograph, without reference to the vegetation.

# **Question 5**

- (a) All candidates had the correct symbol against October and most also plotted the temperature correctly, though a few had misinterpreted the scale.
  - Most agreed that Jeddah was in the northern hemisphere, but struggled to explain how this could be deduced from the graph. They simply had to point out that the highest temperature was in July / the middle of the year, or conversely that the lowest was in January.
- (b) Most candidates correctly completed Fig. 5 to show types of demand for water in Saudi Arabia. Most also correctly noted a figure of 9000 million cubic metres per year of recycled water.
  - In **part (iii)**, many candidates simply said that the groundwater supply was not renewable. A further idea was required for a second mark, such as the low rainfall at this desert location or high evaporation rates due to high temperatures, both of which were evident from Fig. 4.

### **Question 6**

- (a) Many candidates realised that Fig. 6 was a scattergraph, though some thought that the line signified a line graph.
  - In **part (ii)**, the line suggested a negative relationship, however some candidates opted for no relationship as this was what they thought it should be, rather than what the line represented. This was apparent from answers to **part (iii)**, where they stated that there was no relationship, rather than explaining that the line was wrong as most points fell below it. Either approach was acceptable for the mark.
- **(b)** Most candidates correctly completed Fig. 6.
- June is a popular month for holidays in northern Spain, as it has the highest sunshine hours, the lowest rainfall total, high temperatures (though not too hot) and rain on only 12 days. Applying the opposite ideas, holiday renting is likely to be cheapest in November. Many candidates scored well on this section.

Section B is taken from 0460/43.