

# GEOGRAPHY

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Paper 0460/01

Paper 1 (Core)

## General comments

The mark distribution for this paper showed a wide range in the performance of candidates. On the whole candidates had been correctly entered for this paper, with relatively few at the upper end of the mark distribution indicating that they might have profited by being entered for the Extended Level (Paper 2).

Candidates on the whole appeared to understand and interpret questions correctly although some candidates did not always heed the command words used in questions with descriptions frequently substituting for explanations and vice versa. Examples of this confusion were evident in **Question 2 (a)(iv)** for example. Some of the geographical terms used were not always understood – ‘commuter village’ in **Question 2 (a)(iii)** and ‘scree’ in **Question 3 (b)(iv)** being examples of terms which were commonly misinterpreted. The latter was the more surprising as it was defined in the question.

Attention to the sub marks could be improved. Some candidates do not allow these sub marks to give guidance as to the detail and length of responses required. In part questions where a sub mark of 4 or more marks is offered, clearly more than a simple statement is expected. This was noted for example in **Question 2 (c)(ii)** when the sub mark should have encouraged candidates to give more than one sentence when describing ‘attempts’. In **Question 6 (b)(i)** many candidates commented only on the decline in food supply without further elaboration. Again more was expected for the three sub marks. More notice is, however, being paid to both the general paper rubric and internal rubric requirements. Very few candidates offered more than the required three questions. Usually when a choice was offered within a part question, candidates responded to the instruction accurately.

Encouraging use was generally made of the variety of resources offered within questions although a number of candidates were often reluctant to use such data to maximum advantage. They were often content to repeat the annotations provided rather than make use of these to release further details from case study information. This was particularly evident in the use made of Fig. 7 in **Question 5** and Fig. 8 in **Question 6**.

The importance of case studies has been stressed in previous reports on this examination. The syllabus and accompanying Notes For Guidance also emphasise the valuable role that they may play in preparing for and responding to certain questions on the paper. Unfortunately many candidates do not provide specific information from such studies, relying instead upon general statements which gain little reward. Details will be contained later in the report when individual question responses are considered, especially concerning **Questions 5** and **6**.

**Question 1** was the most popular question on the paper. The two questions on the ‘Physical Environment’ (**Questions 3** and **4**) proved to be more popular this time when compared with some of the former examinations for this paper.

## Comments on specific questions

### **Question 1**

The most popular question on the paper. This question was well answered in all parts. Clear annotation and interpretation of the graph (Fig. 1) in **(a)** was often backed up by sound knowledge and understanding of various facets of population study in **(b)**. Characteristics of urbanisation in the developing world were generally well appreciated in **(c)**. In **(a)(i)** a significant number of candidates scored both of the marks available for completing the graph (Fig. 1) correctly. Whilst candidates often made a correct relationship in **(a)(ii)**, such as the higher the population density the higher the proportion of small farms, others merely stated that the graph showed population density and farm size. There

were relatively few accurate definitions in **(a)(iii)** as to how population density is calculated. A minority referred to a relationship between birth rate and death rate. Definitions in **(b)(i)** were generally accurate and some candidates made good use of the information in Tables 1 and 2 in responding to **(b)(ii)** and **(iii)**. Others merely repeated the data contained in Table 2 without relating these details to 'overpopulation' in **(b)(ii)**. Reasons for the rapid growth of major cities in the developing world and associated problems were generally well dealt with in **(c)** and **(d)(i)**. A number of candidates in **(c)** over-emphasised the problems related to high birth rate often at the expense of dealing with the implications of rural - urban migration. Many, however, found **(d)(ii)** difficult.

### Question 2

This question was another popular option. Parts **(a)(i)** and **(ii)** were well answered although in **(ii)** many could have been more specific with their locations by referring to compass directions to identify areas on the map provided ((Fig. 2). A large number of candidates experienced difficulty in interpreting the term 'commuter village'. Some responses commented on the function of these settlements in providing accommodation in the countryside but did not give details about the daily movements of commuters to and from their places of work. In **(a)(iv)** there was sometimes a confusion between description and reasoning with irrelevant details on the former in many answers. Where candidates confined their attention to reasoning, some good answers were produced. In **(b)(i)** most candidates concentrated upon the speed of the rail route and the convenience and advantages of using rail transport to reach their workplace in the city, but fewer made mention of the use that could be made of the railway for shopping, entertainment and other services. In **(b)(ii)** there were some confusing responses with extreme statements such as 'there would be no workers left in the town', and 'that people from London would take all of the jobs in the town'. The main features of the CBD were very well made on a large number of scripts in **(c)(i)**. Part **(c)(ii)** required one problem to be stated. In effect many referred to several. Traffic congestion was the most popular choice when candidates confined their attention to one problem and some useful comments were sometimes given as to attempts made to reduce its impact on the CBD. This part question illustrated the lack of attention paid to sub marks printed on the examination paper. Four marks were available for both stating the problem and describing attempts made to deal with it. A specific problem was rarely considered in sufficient detail for candidates to realise the four marks available.

### Question 3

In **(a)(i)** most inferred the correct size of particle from the graph but a significant number of candidates did not identify the type of particle moved by the river. In **(a)(ii)** also candidates were more adept at stating the relationship between river flow and size of particles moved in A than in noting the relationship between river flow and type of load in B. In **(a)(iii)** a number of candidates were unsure as to the processes of river transport. There was frequent confusion with methods of river erosion. Part **(b)** was concerned with glaciation and generally candidates were less sure about this topic than river study in **(a)**. Fig. 4 provided an outline of part of a glaciated highland and candidates were required to add letters to identify glacial features in **(b)(i)**. Features (A) and (C) were mostly correctly located on the diagram, (H) proved more difficult and relatively few could locate (T). In **(b)(ii)** most candidates were aware of the steep sides of a corrie, some noted the usual presence of a lake, fewer still mentioned the steep back wall, the hollow floor, the armchair shape or the possible occurrence of moraine and scree. Disappointing accounts were given in **(b)(iii)** as to how the valley floor lake (N) was formed. Many paid too much attention to the role played by a river rather than a valley glacier. For those candidates familiar with the term scree, some very useful accounts of freeze-thaw action were provided in **(b)(iv)**. Some confused scree with glacial deposits. Very few seemed to understand the term 'terminal moraine' in answering **(b)(v)** and **(vi)**.

### Question 4

Relatively few candidates correctly named all three weather instruments in **(a)(i)**. Often X and Y were given the wrong way round. For W the term 'thermometer' was often given instead of 'maximum-minimum thermometer'. The three readings from the graphs (Fig. 5) in **(a)(ii)** were better attempted than naming the weather instruments in **(a)(i)**. Values for B and C were more successful than A. Part **(a)(iii)** was well attempted when candidates realised that graph X displayed humidity values. In **(b)(i)** candidates were required to describe the main features of a rain gauge. There was a good deal of confusion here and inaccuracies characterised many of the answers. In **(b)(ii)** a number omitted the role played by the measuring cylinder. Others seemed to think that measurements were taken after each period of rainfall, rather than on a regular basis such as 24 hours. Siting factors were well understood in **(b)(iii)** and many earned high marks for this part question. In **(c)(i)** weaker candidates merely repeated the climatic data provided without any interpretation. Temperature details were less well dealt with than rainfall features. Often in **(c)(ii)** unrelated factors were given. Little understanding of the influences on the characteristics of a Mediterranean climate was displayed. In **(d)** a significant number of candidates described tropical rain forest rather than the natural vegetation associated with a Mediterranean climate.

## Question 5

In **(a)** many candidates were able to define each term. In **(b)** candidates rarely provided real detail from a case study made of a motor vehicle assembly plant. In **(b)(i)** it was rare for candidates to correctly locate an important centre for the industry. There was a varied response in **(b)(ii)**. In **(b)(iii)** a considerable number showed an unfamiliarity with the types of components used in vehicle assembly. Often answers here either repeated words from the left hand side of Fig. 7 or reference was made to basic raw materials used in the manufacture of components. The 'cost' factor was often given in answers to **(b)(iv)** but little mention was made of ease of access. In **(b)(v)** often only one reason was given to account for the large area of land occupied by a motor vehicle assembly plant. Statements provided by candidates in **(b)(vi)** were often very general and did not usually include reference to the transport of large numbers of components to the factory, the movement of finished products to the markets and the transport of workers. Capital was better understood than labour requirements in **(b)(vii)**. Part **(c)** was often well answered with names usually correct in **(c)(i)**. Part **(c)(ii)** was well attempted with some useful references being made to the problems associated with acid rain and global warming. Part **(c)(iii)** was occasionally satisfactory but statements too often lacked accurate knowledge.

## Question 6

Definitions of subsistence farming in **(a)(i)** were generally satisfactory and processes associated with the type of subsistence farming illustrated on Fig. 8 were clearly identified in **(a)(ii)**. In **(a)(iii)** the naming of food crops presented little trouble to candidates but the other output from the farming system was more difficult for candidates with many straying towards forest outputs. There was a good understanding as to reasons why farmers abandon the gardens after growing crops for two or three years in **(a)(iv)**. In **(b)(i)** responses were very varied. Some simply stated that food supply would decline, ignoring the fact that three marks were available for this part question. There was some confusion in **(b)(ii)** with a number of candidates implying that forest clearance would enhance the uses that villagers could make of the rivers rather than provide difficulties such as loss of water supply, rivers becoming unclean with silting, loss of transport and possible loss of fish. It was in **(c)** that many candidates experienced difficulties through not focussing upon a case study made. This has already been referred to in the introduction to this report. The question highlighted the type of farming system that needed to be selected but all too often farming in general was considered in very vague terms when answers were given to the four parts of this question.

Paper 0460/02

Paper 2 (Extended)

## General comments

A full range of marks was produced by candidates on this paper. The upper end of the mark distribution contained scripts of excellent quality where candidates displayed a very sound understanding and knowledge of concepts assessed, combining this with good skills in using the resource materials presented on the question paper. At the other end of the mark distribution some candidates produced scripts which revealed limitations in interpreting and responding to the questions selected. Some of these candidates produced limited responses with little of the extended writing anticipated by the nature of the questions on this paper. It cannot be overemphasised that it is important for candidates to be entered for the paper most suited to their abilities both in interpreting and responding to the different styles of question set on each.

A major characteristic of a number of the scripts submitted was for candidates to produce one very thorough response, usually in answering **Question 1** on population, followed by two indifferent answers. It has been noted in comparable reports for this examination in earlier years that candidates often respond very thoroughly to questions concerned with various aspects of population studies. This examination was not an exemption with most candidates attempting **Question 1** producing very effective responses to all parts of the question. Some excellent use was made of the stimulus data provided with candidates combining good interpretation with their theoretical knowledge on this concept. It was unfortunate that many candidates did not repeat this successful approach when dealing with other question options.

Whilst questions on the Physical Environment (**Questions 3 and 4**), remain relatively unpopular, the standard of answers to them continues to improve. The two questions on Theme 3 of the Syllabus – Economic Development and the Use of Resources – were popular but in part were poorly attempted. There is still a marked reluctance for many candidates to respond to these questions with *real detail from case studies*. These are a prerequisite for successful responses to part questions such as **Question 5 (a)** and **Question 6 (b)**. Until such time as candidates respond with specific references to questions such as these, marks earned will be depressed. When candidates presented detailed illustrative material from case studies in answering these two part questions, high marks were awarded. On many scripts, candidates failed to substantiate information by such specific details, offering instead vague generalisations. Marks were inevitably lost when the latter approach was made. Reference has been made in earlier reports on this examination to the importance of case study material. The introduction to Curriculum Content in the Syllabus also reiterates the value of the case study approach to learning, understanding and responding to questions such as these. Detailed reference is also made to the role of case studies on page 7 of the Notes For Guidance, produced as a complementary guide to the subject syllabus.

The layout of responses and the standard of English was generally satisfactory to very good. Better candidates demonstrated effective elaboration of ideas in part questions where this was encouraged both by the nature of the question and the sub mark on offer. Improvements were also noted in the general use made of the sub marks printed on the question paper and in the interpretation of command words used within questions. Even so a number of candidates confused description and reasoning especially in questions such as **Question 2 (a)(i)** and **(ii)** and **Question 3 (c)(i)**. A number of candidates still persist in responding to questions by using note-form. Often this form of presentation does not constitute the most successful approach, with candidates denying themselves opportunities of offering fuller details associated with extended writing.

Very effective use was often made of resource materials included within the paper. Further comments on this aspect are contained within the second part of this report when individual questions are considered in detail. Rubric errors were less frequent than in former years, with very few candidates attempting more than the requisite three answers. The majority produced three well balanced answers and there appeared to be little problem in providing a full complement of responses in the time available. Occasionally there were signs of incomplete third answers possibly because the candidates concerned had overspent time in answering their first question. This was especially the case when some candidates overspent time on making responses to the demands of **Question 1**.

### **Comments on specific questions**

#### **Question 1**

The most popular and often the most successful answer on many scripts. Excellent use was made of the resources provided and it was commonplace for candidates to achieve full marks for the completion of the graph (Fig. 1) in **(a)(i)**. Most could successfully identify the relationship shown by the completed graph in **(a)(ii)**. Candidates allowed themselves to be guided by the data presented in Tables 1 and 2 in framing very satisfactory answers in both parts of **(b)**. Many candidates achieved high marks in **(b)(i)** with apt references to population density, overpopulation, food supply problems and the high concentration of population on the Inner Islands. In **(b)(ii)** most referred to encouragement of family planning, establishment of infrastructure and encouragement of agricultural improvements. It was obvious that most candidates were well versed with the problems of rapid urbanisation and presented useful contributions in **(c)(i)**. Difficulties in coping with these problems were usually well understood in **(c)(ii)** with most reference being made to the difficulties of raising capital for projects and the continuing increase in the population of the large city. Part **(d)** of this question discriminated very well between those candidates who had a thorough understanding of the worldwide feature of the decline of rural areas and those with a more superficial knowledge of this concept. A few misunderstood this part question, concentrating on reasons why some people are attracted to rural areas.

#### **Question 2**

Candidates often found this question difficult to handle. Part of the reason in **(a)** was the lack of precision in adhering to the command words used in both parts of this sub question. Reasoning was often included in **(a)(i)** and irrelevant descriptive details in **(a)(ii)**. Most candidates did, however, confine their attention to the questions set and used the outline map of the town (Fig. 3) to very good effect in marshalling their thoughts on urban morphology. The term 'pattern' was not always understood in **(a)(ii)**. Other candidates confined their attention to reasons why industry might be located in the outskirts of towns without referring to the

general pattern of land use shown in the defined area of the map provided. In **(a)(iii)** candidates were often too concerned with the advantages of the fast rail link shown to the detriment of comments on why some people were less enthusiastic about it. Candidates did not generally concern themselves with the problems for the town such as the growth of the town as a commuter settlement with its attendant problems including competition for, and increased prices of houses, traffic congestion, loss of 'community spirit', etc. In this part of **(a)(iii)** most were too concerned with noise and visual pollution associated with the railway and the loss of land for railway construction. Those candidates who allowed the annotations in Fig. 4 to stimulate their ideas about developments which take place in and around towns and cities produced very succinct and relevant accounts in **(b)**. All too often accounts were descriptive with little elaboration on the information provided in the diagram. In this case candidates did not observe the instruction 'give your views about'.

### Question 3

Responses in general to this question on physical landscapes and associated processes was more successfully attempted than in some former examinations. In **(a)(i)** candidates understood the graph (Fig. 5) and could identify the relationship between river speed and size of particles forming the river's load. The relationship between river speed and type of material was not always seen. Many could successfully describe the river processes concerned with the transport of different sized particles in the river's load. In **(b)** candidates coped well in identifying factors influencing variations in river flow in different parts of its course and different parts of its channel. A weakness in responses to this part question was that candidates did not always have a clear idea about variations in the flow within a river meander and reasons for these differences. A significant number found difficulty in explaining the formation of a valley glacier in **(c)(i)**, frequently resorting to description of a valley glacier. Some did however provide useful details about the accumulation and compaction of ice. By contrast part **(c)(ii)** was very well answered. Some did not confine their attention to work of the valley glacier, namely plucking and abrasion but included irrelevant details on freeze-thaw weathering. The majority offered useful descriptions in **(c)(iii)** although here again there was a certain amount of confusion in differentiating between weathering (the action of freeze-thaw) and erosional processes producing lateral moraine.

### Question 4

Interpretations of the three graphs required in **(a)(i)** were generally accurate, although candidates frequently found difficulty in ascertaining how the values shown on Graph X were obtained in **(a)(ii)**. In **(a)(iii)** too many were concerned with either describing a rain gauge or giving a full description of siting factors as to where this weather instrument should be located at a weather station. Irrelevance therefore characterised many responses here. The theme of the question was an explanation as to how the rain gauge **is used** to measure rainfall. In **(b)** many candidates used the climatic data for Place M very successfully in describing the main features of a Mediterranean climate in **(b)(i)**. Factors accounting for this were, however, not generally well stated in **(b)(ii)**. Many merely stated influencing factors without relating them to the specific climate in question. Understanding of the natural vegetation associated with a Mediterranean climate was well displayed in most answers to **(c)**. A good balance was achieved between description and explanation here.

### Question 5

Reference has already been made in the Introduction about the reticence of many candidates to provide specific details from case studies. Too often, general statements formed the substance of responses in **(a)(i)**. Where candidates did offer details from case studies some excellent answers were seen with references made to a variety of vehicle assembly plants throughout the world. Part **(a)(ii)** was generally not understood. Candidates had little understanding as to what influenced a market area. Reference might have been made to such influences as competition with other countries/firms, level of production, the ability to produce models for market demand, multinational influence and political factors. What most did was to reiterate in general terms some of the siting factors already commented on in **(a)(i)**. Candidates responded well in both parts of **(b)** in defining the differences between consumer goods and those industrial outputs which form the inputs of other manufacturing industries. Examples were often well selected to illustrate. Both parts of **(c)** were well attempted. Some good accounts were provided on acid rain and global warming. Measures to reduce the problems referred to in **(c)(i)** were often satisfactorily stated in **(c)(ii)**.

## Question 6

Some very good use was generally made of Fig. 8 in answering **(a)** with descriptions of the small-scale subsistence farming shown varying from satisfactory to very good. Part **(a)(ii)** was also well attempted with candidates showing a good awareness of the consequences of forest exploitation on both the physical environment around the village and the effects on the people and their lifestyle. Answers to **(b)** varied greatly; as with **Question 5 (a)** much depended upon the effective use of details from a case study. The question emphasised that reference should only have been made to small-scale **cash crop** farming. Some candidates, however, did resort to describing small-scale subsistence farming and even large-scale farming systems. Even when an appropriate example was referred to some candidates found difficulties in distinguishing between inputs and processes in **(b)(ii)** and **(iii)**.

Paper 0460/03

Paper 3

## General comments

The response to the June 2002 examination resulted in a wide range of marks. Many candidates had been well prepared for this examination and, consequently, they found the paper very accessible. Indeed, some 150 of the entry displayed excellent geographical skills in answering the practical exercises presented in the paper. On the other hand, a significant proportion of the entry, some 11%, showed a lack of ability, understanding and precision in their responses which resulted in inaccurate measurements and reading of diagrams and graphs. The paper discriminated well between candidates of different abilities and marks ranged from less than 10 to over 50 out of 60. One extremely pleasing feature of the scripts presented was the increase in the general standard of the answers to the survey map interpretation question which carries one third of the marks available on the paper. However, there are still some Centres whose candidates lacked familiarity with such mapwork skills and they are reminded that a poor performance in this question has a serious effect on the overall performance in the examination. It is essential that candidates are well prepared for this test of their geographical ability and Centres are advised that candidates would benefit from greater practice in this type of question. It is still evident that many candidates fail to take adequate notice of the number of marks available for a question or part question. Simple one word or one sentence answers are presented when 3 or 4 marks are available and, sometimes, longer involved responses are presented when only 1 mark reward is allocated.

The standard of English expression was good, overall, and most candidates completed all seven questions on the paper. Those who were unable to complete the paper were either those who struggled with language difficulties or those who spent too much time including irrelevant detail in earlier answers

## Comments on specific questions

### Question 1

In **(a)** there were very few correct answers to parts **(i)** and **(iii)**. In **(i)** the third and sixth figures were, usually, given as 6 rather than 5 and in **(iii)**, too many used mathematical calculations, converting ruler measured distances, rather than using the scale line at the base of the map sheet. Some gave the answer in kilometres rather than metres as the question demanded. The response to part **(ii)** was, usually, correct and many candidates achieved maximum marks in their answers to part **(iv)**. Some weaker candidates did not understand the question and concentrated on roads, railways and buildings. Part **(b)** was answered well as candidates quoted nearness to the beach, the roads and the airport as reasons for the location of the hotel and flat land, sea approach and proximity to a major urban area as the advantages of the site of the airport. Some, more able candidates, gave added reasons such as large space and reclaimed land. The major physical features of the coastline were included in the responses to **(c)**. These included marsh, mangrove, island, bay, headland coral and river mouth. Weaker candidates spoiled their answers by writing about either inland features or human features. In **(d)**, the 'either' option was chosen more frequently and responses usually gained full marks. The 'or' option was less well done but answers often included references to the yacht club, hotels, the golf course and games fields/playgrounds.

## Question 2

Many candidates were unable to name the types of power station in **(a)(i)**. The answers required were thermal (coal/oil/fossil fuel) and nuclear. Reading of the diagram was inaccurate in **(a)(ii)** as usually, candidates failed to notice that the water turned to steam before turning the turbine and electricity was finally produced by the generator. The response to part **(b)** was also disappointing. Only a minority of candidates were able to calculate the height of the head of water and to define its meaning. The head of water was described as the height above sea level. The names required in **(b)(ii)** were not known except in a few Centres. The answers required were: W - reservoir, X - dam wall, Y - penstock, and Z - electricity grid or power line.

## Question 3

The response to this question was very varied. Candidates from some Centres gained the full six marks but, equally, there were those who failed to score any marks at all. In **(i)** either lateral erosion or deposition was quoted in the lower course but few named vertical erosion in the upper course. Apart from those who were content with V-shape versus U-shape, there were many good descriptions of narrow, deep, steep sided valleys in the upper course and wide, flat, gentle sides in the lower stage. Better candidates named a variety of features in the upper stage such as waterfalls, rapids and gorges and meanders, ox-bow lakes and deltas were presented as examples of landforms in the lower stage. Less able candidates concentrated on glacial features rather than river features and named only one landform in each of the stages rather than two.

## Question 4

In **(a)** the figure 2140 was given correctly but many candidates either omitted the type of unit or gave it as metres as they failed to use the key to the map accurately. **(b)(ii)** was answered more successfully than part **(i)**. In **(b)(i)** many were content with a simple answer referring to the location of the huts along the main track. Some more able candidates noticed the concentration where rivers cross the main track, the increased density in the south and the location of the huts on flatter land at the foot of the steep slope. Forest, papyrus swamp, seasonal swamp and steeper, higher land were reasons given for the lack of settlement in some areas of the map. The three marks awarded for this section of the question were gained quickly.

## Question 5

This question elicited a very mixed response. In **(a)** many candidates quoted the range as 14°C to 2°C and failed to calculate the difference. Part **(b)** resulted in many excellent answers which scored full marks. Less able candidates did not understand the term 'daily range of temperature' and, often, described the three features of the weather but failed to relate them to rainfall. Some answers spent too much time trying to explain the link instead of concentrating on description whilst others, in **(iii)** related the precipitation to high and low temperatures rather than the daily range of temperature.

## Question 6

Part **(a)** was answered well and the majority of candidates gave the correct answer. Both 41% and 42% were accepted by the Examiners. Some imprecise answers resulted in 40% and some weaker answers quoted the figure for primary industry as a result of misreading the graph. As in previous examinations, plotting on the triangular graph was very well done and most candidates were able to distinguish developed and developing countries and to describe the differences between them. Some candidates, however, compared the percentages in each type of industry within a country rather than contrasting the percentages between the different types of country. Less able candidates thought that developing countries had a greater percentage of workers in secondary industries than developed countries.

## Question 7

In **(a)(i)** most candidates correctly answered Gambia and gave the death rate as 24 per 1000. The most common incorrect responses were Kenya for Gambia and the death rate given as 24 000. A significant number of candidates failed to point out that the answer was 10 per 1000 and not just 10 in part **(a)(ii)**. The response to **(iii)** was often disappointing and, surprisingly, many candidates found this plot more difficult than the triangular graph in **Question 6 (b)**. In part **(b)** full marks were rare. Many candidates failed to answer the question and wrote long, irrelevant accounts about the death rate and population growth related to the demographic transition model, often with social explanations of these phenomena. Those who interpreted the question correctly were often inaccurate in identifying the correct dates when the changes in the birth rate trends occurred. In answering this type of question candidates should:

- note carefully which line has to be studied;
- mark on the line where changes in direction take place;
- decide whether the trend in the gradient of the line is a slow or rapid change.

<p><b>Paper 0460/05</b></p> <p><b>Alternative to Coursework</b></p>
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### General comments

Many Centres have prepared their candidates well for this paper and candidates were able to apply their geographical understanding to the two investigations. Candidates generally showed a greater familiarity and confidence with the devising and using hypotheses than in previous years. The analysis of the data and the conclusions stated demonstrated a sound grasp of both investigations, although the use of the actual figures as evidence should be encouraged more strongly. Candidates should heed the command words of describe and explain more carefully and restrict their answers to focus on the required information.

### Comments on specific question

#### Question 1

- (a) The quadrat or measuring frame was clearly known to many Centres but its use in a systematic method was less obvious. Random and systematic sampling can be applied to many different coursework assignments yet candidates understanding of their use and benefits was limited and only the most able identified the advantage of sampling a larger area or the problem of collecting appropriate data to investigate the hypothesis.
- (b)(i)(ii) The completion of the proportional bars was generally good. As with coursework, the accuracy of drawing is important, and the better responses used pencils and rulers to complete the bars.
- (c) The majority of candidates recognised the lack of consistency in the size and proportion of beach material as distance from the low water mark increased. Often the responses contained detailed reasons but the most able candidates used the data as evidence to secure maximum marks.
- (d)(i) The link between the angle of slope increasing and the greater percentage of pebbles was usually identified with the better answers progressing to include the change in percentage of sand corresponding to the lower angle of slopes. Again the supporting evidence was required which should include the specific angle of slope in addition to the proportion of material. Candidates failed to gain the full marks if these figures were not stated. Some candidates attempted to explain the relationship although this was not required and no credit was awarded for these comments.
- (ii) Many well worded statements were devised to show the relationship between the slope angle and the pebbles/sand. It was good to see that these were general statements and did not include specific site locations.
- (e)(i) The candidates expressed their geographical knowledge here and many broadened the investigation topic to include pebbles from a variety of locations. The processes of attrition, abrasion and corrosion were common explanations but also rock resistance/composition was outlined. It was important that the comments contained descriptions of the changing shape and size of pebbles (e.g. angular, large, round and small) to gain access to the full marks.
- (ii) Many candidates devised a recording sheet which contained all the required components. The layout presentation was variable but commonly the pebble frequency, often 1 - 20, and the variable being measured were aligned into rows or columns. Disappointingly the section of necessary information for future reference was often omitted and hence the marks for the date, name of recorder or location information could not be awarded. This essential component of every recording sheet, whatever the assignment, should be familiar to the candidates in preparation for this alternative to coursework paper.



## Question 2

- (a) At each site the average score was required. Many candidates completed the task correctly and the decreasing average environmental quality from A through to D was graphically presented.
- (b)(i) The key words for this task were to 'describe' the pattern of change and 'use the data'. Some candidates spent time attempting to explain the trends but the best responses consistently referred to the distance away from the town centre and the changing scores of each variable to gain the highest marks.
- (ii) The range of reasons for the high noise level at site D was interesting but the most popular were main roads, factories or an airport although school children and entertainment centres or shopping malls also featured.
- (iii) The use of average scores was well understood although candidates should be discouraged from limiting their explanations to 'accurate' or 'not accurate' as this does not give sufficient detail for the marks to be awarded.
- (iv) The majority of candidates outlined a conclusion to the investigation which identified the improvement in the environmental quality as the distance from the town centre increased. The more able candidates also recognised the exception of the noise level which does not follow this trend.
- (v) Many valid suggestions were given for extensions to the scoring system. The most common variable was the number of trees/greenery although air pollution was also popular. The important point should be that it had to be realistic as a variable on a subjective scoring system.
- (c) The candidates were asked to suggest reasons for the changes identified in (b). Many candidates referred to their geographical knowledge of urban structures and land use so often the link between people and environmental quality dominated the responses. The better answers commented on spatial differences from the centre to the edge of the town to gain the full marks.
- (d)(i) In coursework candidates are required to make decisions about the scale and layout when constructing a graph. Although graph paper was not required, a degree of accuracy was important in this task in addition to correct labelling and the inclusion of an appropriate title. Some candidates chose unusual vertical scales which hampered their accuracy when drawing the bars. However the majority of candidates demonstrated confidence in their bar graph construction with many gaining maximum marks.
- (ii) The analysis of the traffic data by comparing sites B and D produced a good response. Many candidates used the data to appropriately identify the changing traffic levels during the day between the two sites.
- (iii) The concluding comments generally linked the increasing distance from the town centre with the decrease in traffic levels. The mark was also awarded for identifying the exception of the high level of traffic at site C. An example of a high level response is 'there is a decrease in traffic with distance from the town centre thus contributing to changes in the environmental quality'.
- (e) The most able candidates referred to their geographical understanding of the centre of towns in response to this question. The characteristics of the CBD featured in their answers but more commonly candidates appropriately recognised the town centre as the location of work and services encouraging people to travel there hence causing high traffic levels. Some candidates became distracted by 'throughout a weekday' and concentrated on the times of traffic rather than the spatial distribution of traffic but generally this final question showed a sound understanding of the topic.