

UNIVERSITY OF SWAZILAND

FACULTY OF EDUCATION

DEPARTMENT OF CURRICULUM AND TEACHING

SEMESTER I EXAMINATIONS NOVEMBER/DECEMBER 2010

**TITLE OF PAPER** : CURRICULUM STUDIES IN GEOGRAPHY

**COURSE CODE** : EDC 277

**STUDENTS** : B.ED II, PGCE (F/T) AND PGCE (IDE)

**TIME ALLOWED** : THREE (3) HOURS

- INSTRUCTIONS** :
1. ANSWER ANY (4) QUESTIONS.
  2. EACH QUESTION CARRIES A TOTAL OF 25 MARKS.
  3. YOU ARE ADVISED NOT TO SPEND MORE THAN 45 MINUTES ON ANY ONE QUESTION.

**SPECIAL REQUIREMENTS:** Swaziland General Certificate of Secondary Education 2011/2012 Geography Syllabus.

**THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION IS GIVEN BY THE INVIGILATOR.**

**QUESTION 1**

- (a) Discuss the role of assignments in the teaching and learning of Geography. (15 marks)
- (b) How can you ensure that the use of assignments contributes towards the effective teaching and learning of Geography. (10 marks)

{TOTAL = 25 MARKS}

**QUESTION 2**

- a) Compare and contrast the theories of possibilism and environmental determinism. (15 marks)
- b) What contributions have these two theses made to the teaching and learning of Geography. (10 marks)

{TOTAL = 25 MARKS}

**QUESTION 3**

Discussion is one of the most important teaching strategies used in the teaching and learning of Geography. Using a theme of your choice and illustrative examples, explain how you can use the discussion strategy in the effective teaching and learning of Geography. {TOTAL = 25 MARKS}

**QUESTION 4**

Using the 2010/2011 Geography syllabus attached, and referring to Theme 2.3 – River Processes:

- (a) Describe how you can introduce the lesson on river processes. (6)
- (b) Explain the activities you would engage the learners in, to ensure that quality ← teaching and learning of the Theme takes place. (5)
- (c) List four teaching-learning resources you can use to teach the theme. (4)
- (d) Describe how and when you can introduce the resources during the lesson. (4)
- (e) List three evaluation activities, one in the cognitive domain, one in the affective domain and one in the psychomotor domain. (6) {TOTAL = {25 MARKS}}

**QUESTION 5**

'One of Geographers' most characteristic tools is a map' (Bergman and Renwick, 2009). With reference to this citation describe how each of the following characteristics of a map can be taught to learners, the problems you are likely to face and how you can solve such problems. {TOTAL = 25 MARKS}

- (a) Scale
- (b) Bearings
- (c) Contour lines
- (d) Key
- (e) Gradient

### **QUESTION 6**

The following is extracted from Times of Swaziland, 5<sup>th</sup> October 2010. Using the extract and ideas of your own, make lesson notes on 'Maize Production in Swaziland.' Your notes should cover the following: ←

- (a) Suitable conditions for the growing of maize. (5 marks)
- (b) Marketing of maize. (7 marks)
- (c) Problems faced by maize farmers. (7 Marks)
- (d) Government's assistance to maize farmers. (6 marks) {TOTAL = 25 MARKS}

#### ***Informal maize trade reduces demand***

*Mbabane – The demand for maize by customers of the National Maize Corporation (NMC) was at its lowest during the quarter ending March 31, 2010.*

*These customers include millers, as well as the general public.*

*According to the Public Enterprises Unit (PEU) Quarterly Report for March, this was a result of an increase in informal maize trade.*

*“The demand for maize by NMC customers, including millers, as well as walk-in customers was at its lowest because of informal maize trade, while on the other hand, the NMC was expected to purchase all the maize delivered by local farmers and pay cash on delivery, as per dictates of the NMC”, reads the report in part.*

*It says maize sales amounted to E24.3 million.*

*“This represents a 12 per cent decrease in turnover when compared to the fourth quarter in the previous year, which stood at E27.7 million. Part of this decrease is attributed to the cash flow problems faced by the NMC”, it reads in part.*

*The NMC selling price was adjusted twice this year.*

*“Between January and February, the price of maize was increased from E2 000 per metric tonne to E2 340 per metric tonne as a result of high prices for imported maize. However, following a slight improvement in the price of maize imported from South Africa, the maize price was reduced to E2 000 per metric tonne from February 2010” it reads in part.*

*The report also notes that the public enterprise did not perform well during the period under review. It says the poor performance was attributed to the financial problems experienced by the enterprise throughout the 2009/2010 financial year.*

Swaziland General Certificate of Secondary Education  
Geography

**2011–2012 Syllabus**



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## **SWAZILAND GENERAL CERTIFICATE OF SECONDARY EDUCATION**

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### **Broad Guidelines**

The Ministry of Education is committed, in accordance with the National Policy Statement on Education, to provide a Curriculum and Assessment System (Form 4 and Form 5) so that at the completion of secondary education, learners will

- be equipped to meet the changing needs of the Nation, and
- have attained internationally acceptable standards.

### **Swaziland's National Education Policy Directives**

SGCSE syllabuses for studies in Form 4 and Form 5 will individually, and collectively, enable learners to develop **essential skills** and provide a broad **learning experience** which

- inculcates values and attitudes as well as knowledge and understanding,
- encourages respect for human rights and freedom of speech,
- respects the values and beliefs of others, relating to issues of gender, culture and religion,
- develops desirable attitudes and behaviour towards the environment,
- provides insight and understanding of global issues which affect quality of life in Swaziland and elsewhere, e.g., the AIDS pandemic; global warming; maldistribution of wealth; and technological advances.

### **The National Curriculum for Form 4 and Form 5**

Learners will be given opportunities to develop **essential skills** which will overlap across the entire range of subjects studied. These skills are listed below.

- Communication and language skills
- Numeracy skills: mathematical ideas, techniques and applications
- Problem-solving skills
- Technological awareness and applications
- Critical thinking skills
- Work and study skills
- Independent learning
- Working with others

To develop these skills, learners must offer **four compulsory subjects** and at least **three elective subjects** chosen from one or more Field of Study.

### **Compulsory Subjects**

- SiSwati – either First Language or Second Language
- English Language
- Mathematics
- Science

### **Fields of Study**

- Agriculture Field of Study
- Business Studies Field of Study
- Home Economics Field of Study
- Social Sciences and Humanities Field of Study
- Technical Field of Study

## **INTRODUCTION**

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The Swaziland General Certificate of Secondary Education (SGCSE) syllabuses are designed as two-year courses for examination in Form 5. The Geography syllabus is designed to assess positive achievement at all levels of ability. Assessment will require candidates to show knowledge, understanding, analysis, application and investigation skills. Performance in tasks will differentiate candidates rather than differentiation through tiered papers.

SGCSE syllabuses follow a general pattern. The main sections are:

Aims  
Assessment Objectives  
Assessment  
Curriculum Content

Geography is an Elective Subject and falls into the following Field of Study Groups: Social Sciences and Humanities, and Technical.

## **AIMS**

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The aims of the syllabus are the same for all learners. These aims are set out below and describe the educational purposes of a course in Geography for the SGCSE Examination. They are not listed in order of priority.

The aims are to enable learners to:

1. develop a sense of place and an understanding of geographical and relative location on a local, regional and global scale;
2. acquire knowledge and understanding of the language, concepts, and systems fundamental to the study physical and human Geography;
3. develop an awareness of the spatial distribution of phenomena on the earth's surface and the relationships among the dynamic nature of such distributions;
4. develop an understanding of the relationships and interactions of people and their environment in response to physical and human processes;
5. develop an understanding of social, economic, environmental and cultural issues in Swaziland;
6. develop an understanding of the importance of positive human attitude and values on the management of the environment and sustainable development of resources;
7. develop an understanding of different communities and cultures throughout the world and an awareness of the contrasting opportunities and constraints presented by different environments.

## **ASSESSMENT OBJECTIVES**

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Assessment Objectives in Geography are:

- A** Knowledge with Understanding
- B** Analysis
- C** Judgement and Decision-Making
- D** Investigation and Evaluation.

A description of each assessment objective follows.

### **A KNOWLEDGE WITH UNDERSTANDING**

Learners should be able to demonstrate knowledge and understanding of:

1. physical, human and geographical features within the range of local, regional (Southern African Development Community) and international scales;
2. geographical concepts, principles and processes;
3. the inter-relationships between people's activities and the total environment and ability to seek explanations for them;
4. the spatial patterns and an appreciation of the range of physical, economic, social and political processes and interactions which are experienced by peoples in different environments;
5. the changes which occur through time in places, landscapes and spatial distributions;
6. causes and effects of geographical forces and processes;
7. the importance of scale (whether local, regional and global).

### **B ANALYSIS**

Learners should be able to:

8. select, organise, present and interpret geographical data;
9. extract, use, apply and interpret geographical knowledge and understanding in numerical, diagrammatic, pictorial, graphical tables, maps, photographs, and cartoon forms;
10. recognise patterns, deduce relationships, draw valid conclusions, and make inferences;
11. use a variety of techniques for presenting geographical information in an acceptable, effective and appropriate way.

### **C JUDGEMENT AND DECISION-MAKING**

Learners should be able to:

12. demonstrate an ability to make reasoned judgements;
13. suggest, justify and evaluate proposed solutions to environmental and socio-economic challenges;
14. recognise how values and perceptions affect both individuals and groups in making decisions within a geographical context.

### **D INVESTIGATION AND EVALUATION**

Learners should be able to:

15. formulate the statement of a problem;
16. use different sources of gathering information including
  - (a) Documentary: books, magazines, journals, newspaper
  - (b) Audio-visuals: radio, television, films, pictures, photographs
  - (c) Statistics
  - (d) Maps and plans at a variety of scales
  - (e) Internet;
17. use suitable techniques for observing, collecting, classifying, presenting, analysing and interpreting data;
18. depict information in a variety of effective ways.



**Specification Grid**

The relationship between the assessment objectives and components of the scheme of assessment.

Paper	Assessment Objectives			
	A Knowledge with understanding	B Analysis	C Judgement and decision-making	D Investigation and evaluation
1	40%	30%	30%	
2 Section A	10%	80%	10%	
2 Section B	20%	20%	20%	40%

The assessment objectives are weighted to give an indication of their relative importance. The percentages are not intended to provide a precise statement of the number of marks allocated to particular assessment objectives.

## ASSESSMENT

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### Scheme of Assessment

**All papers are compulsory.** Candidates must enter for Papers 1 and 2 and are eligible for the award of Grades A\* to G. A description of each paper follows.

**Paper 1** (1 hour 45 minutes) consisting of 75 marks •

Candidates will be required to answer **three** questions (25 marks each).

Six questions will be set: two questions from Theme 2 (The Physical World), two questions from Theme 3 (Economic Development, Utilisation and Management of Resources) and two questions from Theme 4 (Population and Settlements).

Questions will be structured with gradients of difficulty, will be resource-based and involve problem solving and free response writing. This paper will mainly be concerned with Assessment Objectives A, B, and C.

See '**Paper 1 Study Notes**' under Appendix: Study Notes.

This paper will be weighted at 50% of the final total available marks.

**Paper 2** (2 hour 15 minutes) consisting of 90 marks

Candidates will be required to answer **all** questions in Section A (60 marks) and **one** of two questions in Section B (30 marks) which will be about geographical enquiry.

This paper will be mainly skills-based and will test a candidate's ability to handle various ways of depicting geographical information. The questions will be neutral in that they will not require specific information of place. Candidates will be able to demonstrate skills of analysis and interpretation and application of graphical, enquiry skills (questionnaires, observation, counts and measurements) and other techniques as appropriate.

In Section A one question will be based on a map of a tropical area at (1: 25 000 or 1: 50 000) scale. This may be in full colour or be a black and white simulated map. A key will be provided.

Will be answered on the question paper.

See '**Paper 2 Study Notes**' under Appendix: Study Notes.

This paper will be weighted at 50% of the final total available marks.

### Weighting of Papers

Paper	Weighting
1	50%
2	50%

**CURRICULUM CONTENT**

Learners will study all themes in the Curriculum Content outlined below. 'Notes for Guidance' on each of the themes are provided as an Appendix.

Appropriate teaching time for the Geography syllabus should be equivalent to six (6) periods of forty (40) minutes each over a period of sixty (60) weeks/cycles.

<b>THEME 1 – MAP READING AND INFORMATION HANDLING</b>	
<b>GENERAL OBJECTIVES</b>	<b>SPECIFIC OBJECTIVES</b> All learners should be able to:
1.1 Features of a map (to be done in relation to the World, Africa and Swaziland): atlas type, survey maps, large scale plans	<ul style="list-style-type: none"> <li>• List different types of maps (physical, population, weather)</li> <li>• Identify symbols used in maps by using a key</li> <li>• Identify physical features on a map: river valleys and uplands, ridge, plateau, scarp, flood plains</li> <li>• Orient a map</li> <li>• Design and construct a large-scale plan (2-dimensional map) of the school</li> <li>• Identify settlement patterns (linear, nucleated, sparsely)</li> <li>• Suggest reason for the site and growth of individual settlements</li> <li>• Describe land use and communications</li> </ul>
1.2 Measuring distance	<ul style="list-style-type: none"> <li>• List and construct the different types of map scale: linear, representative, and statement scale</li> <li>• Calculate gradient from maps</li> </ul>
1.3 Location in maps	<ul style="list-style-type: none"> <li>• Demonstrate the principle used when reading 4 and 6-figure grid references</li> <li>• Locate features on a map using 4 and 6-figure grid references</li> </ul>
1.4 Directions in maps	<ul style="list-style-type: none"> <li>• Identify features of a sixteen-point compass and explain how it works</li> <li>• Measure whole circle bearing using a protractor</li> </ul>
1.5 Measuring gradient	<ul style="list-style-type: none"> <li>• Interpretation of relief from contour lines, spot heights</li> <li>• Interpret and calculate gradient from maps</li> </ul>
1.6 The relationship between physical and human features on maps	<ul style="list-style-type: none"> <li>• Explain the effects of physical landscape on man-made features and human activities, such as transport routes, farming, and settlement</li> </ul>
1.7 Introduction to basic research methods	<ul style="list-style-type: none"> <li>• Identify a problem area/topic</li> <li>• State the aims</li> <li>• Formulate the hypotheses</li> <li>• Application of methods of data collection: <ul style="list-style-type: none"> <li>Observation</li> <li>Interview schedules</li> <li>Questionnaires</li> <li>Sampling methods</li> <li>Counts</li> <li>Measurements</li> </ul> </li> <li>• Describe the advantages and limitations of the methods used</li> </ul>

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1.8 Data analysis and presentation	<ul style="list-style-type: none"> <li>• Analyse data collected</li> <li>• Presentation of data using: Maps Graphs (line, bar, triangular, pie charts) Tables Photographs Label field sketches</li> </ul>
1.9 Data interpretation and evaluation	<ul style="list-style-type: none"> <li>• Draw effective conclusions based on the hypotheses of the study</li> <li>• Suggest solutions and make recommendations where possible</li> </ul>
<b>THEME 2 – THE PHYSICAL WORLD</b>	
<b>GENERAL OBJECTIVES</b>	<b>SPECIFIC OBJECTIVES</b> All learners should be able to:
2.1 Plate movements and resulting landforms	<ul style="list-style-type: none"> <li>• Describe the processes involved in plate movement</li> <li>• Describe the landforms that result from the processes of plate movement, such as volcanoes, fold mountains</li> <li>• Describe and explain the formation and distribution of volcanoes and earthquakes in relation to plate movements</li> <li>• Explain the impact of the above landforms on man and environment</li> </ul>
2.2 Weathering	<ul style="list-style-type: none"> <li>• Define weathering</li> <li>• Discuss the different types of weathering: physical (freeze thaw action, exfoliation) chemical (carbonation, oxidation) and biological</li> <li>• Explain why weathering is more rapid in humid tropical regions of the world than in temperate regions</li> </ul>
2.3 River processes and forms	<ul style="list-style-type: none"> <li>• Discuss the work of a river in eroding, transporting and depositing</li> <li>• Describe the erosion processes of hydraulic action, corrasion, corrosion (solution) and attrition</li> <li>• Describe river transport through the processes of traction, saltation, suspension and solution</li> <li>• Explain why and where in a river's course deposition takes place</li> <li>• Describe how the volume and velocity of running water affect river processes</li> <li>• Describe the nature of the load (boulders, pebbles, sand and silt) and how they are affected by the transport along the course of the river</li> <li>• Describe and explain the landforms associated with river processes (rapids, waterfalls, potholes, meanders, ox-bow lakes, deltas, levees and floodplains)</li> <li>• Discuss forms of river valleys (long profile and shape in cross section) and flood plains</li> <li>• Discuss the impact of rivers on human activities</li> </ul>

2.4 Weather	<ul style="list-style-type: none"> <li>• Distinguish between weather and climate</li> <li>• Describe and explain the use and siting of the following instruments at a weather station: rain gauge, maximum-minimum thermometer, wet and dry bulb thermometer (hygrometer), barometer, anemometer and wind vane</li> <li>• Make calculations where appropriate using information from these instruments</li> <li>• Use and interpret graphs and other diagrams showing weather data</li> <li>• Describe and explain the characteristics, siting and use made of a Stevenson screen</li> <li>• Describe the main types of cloud and be able to estimate the extent of cloud cover</li> <li>• Describe simple synoptic charts – isobars patterns, cyclones and anticyclones</li> <li>• Describe warm / cold fronts</li> <li>• List and locate the different pressure belts</li> <li>• Explain the atmosphere processes that leads to differences in air pressure</li> <li>• Identify and locate global with patterns and resulting pressure belts</li> <li>• Explain the formation of the three types of rainfall with example from both the home country and outside</li> <li>• Describe the effects of rainfall on the lives of people and economies</li> <li>• Explain the responses of people to rainfall hazards in developed and developing countries</li> </ul>
2.5 Climatic regions	<ul style="list-style-type: none"> <li>• For each of the following climatic regions: tropical rainforest, tropical savannah, hot desert, and Mediterranean region Name, locate and give an example Describe and explain the main features of the climate: annual temperature range, rainfall, cloud, humidity, pressure and winds Describe the natural vegetation and explain how it is adapted to the climate and affected by human activities</li> <li>• Define in simple terms the concepts of El Nino and La Nina</li> <li>• Assess the effects of El Nino and La Nina on human activities in Southern Africa</li> <li>• Explain how the following factors affect climate: latitude, distance from the sea, ocean currents and winds</li> </ul>
2.6 The inter-relationship of physical and human geography	<ul style="list-style-type: none"> <li>• Discuss hazards caused by the natural environment with reference to volcanic eruptions, earthquakes, tropical storms, flooding and drought</li> <li>• Explain opportunities for human activities offered by the natural environment</li> </ul>
<b>THEME 3 – ECONOMIC DEVELOPMENT, UTILISATION AND MANAGEMENT OF RESOURCES</b>	
<b>GENERAL OBJECTIVES</b>	<b>SPECIFIC OBJECTIVES</b> All learners should be able to:
<b>3.1 AGRICULTURE</b>	
3.1.1 Preparing virgin land for agriculture	<ul style="list-style-type: none"> <li>• Outline the steps in land preparation for agriculture</li> <li>• Outline problems encountered in preparing land for agriculture</li> </ul>

<p>3.1.2 Subsistence farming with reference to Swaziland</p>	<ul style="list-style-type: none"> <li>• Define subsistence farming</li> <li>• Describe subsistence farming under the following headings: Inputs (natural and human) Processes Outputs (products) Challenges and possible solutions</li> <li>• Assess the problems and limitations of subsistence farming</li> <li>• Suggested solutions to the problems listed</li> </ul>
<p>3.1.3 Intensive cash crop farming with reference to Swaziland, e.g., Vuvulane, Tjaneni irrigated farms</p>	<ul style="list-style-type: none"> <li>• Define intensive cash crop farming</li> <li>• Describe intensive cash crop farming under the following headings: Inputs (natural and human) Processes Outputs (products)</li> <li>• Describe the strategies undertaken by the Swaziland Government to promote intensive farming</li> <li>• Evaluate strategies undertaken by government to promote intensive farming</li> </ul>
<p>3.1.4 Large scale extensive commercial farming with reference to a developing country (LEDCs), e.g., sugar cane in Swaziland, and in a developed (MEDCs) country, e.g., wheat growing in Canada or cotton growing in the USA</p>	<ul style="list-style-type: none"> <li>• Define a large scale commercial farm</li> <li>• Describe large scale commercial farming under the following headings: Inputs (natural and human) Processes Outputs (products) Challenges and possible solutions with reference to Swaziland</li> </ul>
<p>3.1.5 Overproduction of food</p>	<ul style="list-style-type: none"> <li>• List causes of overproduction</li> <li>• Describe the effects of overproduction on people and economies</li> <li>• Suggest solutions to the problems</li> </ul>
<p>3.1.6 Shortage of food</p>	<ul style="list-style-type: none"> <li>• List causes of food shortage</li> <li>• Describe the effects on the people and economy of the country of overproduction</li> <li>• Suggest solutions to the problems</li> </ul>
<p>3.1.7 Pastoralism with reference to Swaziland, Botswana and South Africa</p>	<ul style="list-style-type: none"> <li>• Describe the features of subsistence pastoral farming and large-scale pastoral commercial farming</li> <li>• Describe subsistence pastoral and large-scale commercial farming under the following headings: Inputs (natural and human) Process Outputs (products)</li> </ul>
<p>3.1.8 Modern and traditional methods of agriculture</p>	<ul style="list-style-type: none"> <li>• Evaluate advantages of modern methods over traditional agriculture with reference to Swaziland</li> </ul>

<b>3.2 INDUSTRY</b>	
3.2.1 Classification of industries with examples from LEDCs and MEDCs	<ul style="list-style-type: none"> <li>• Define and give examples of primary, secondary, and tertiary industries</li> <li>• List features of secondary industries</li> <li>• List features of tertiary/quaternary industries</li> <li>• Describe the industrial structure of an LEDC and an MEDC including the role of Trans National Companies (TNCs)</li> </ul>
3.2.2 Location and development of industries	<ul style="list-style-type: none"> <li>• Describe the factors that influence the location of industries</li> <li>• Discuss the factors that influence the location and development of each of the following processing and manufacturing industries: Craft industries (Lesotho and Swaziland) Motor vehicle assembly (Japan) High technology industries (Germany)</li> </ul>
3.2.3 Industrial estates in LEDCs and MEDCs	<ul style="list-style-type: none"> <li>• Name the features of an industrial estate you have studied</li> <li>• Describe the factors, which influence its location</li> <li>• Outline the advantages and disadvantages of agglomeration</li> </ul>
3.2.4 Leisure activities and tourism	<ul style="list-style-type: none"> <li>• Describe the following types of tourism – coastal tourism, inland tourism, eco-tourism</li> <li>• Describe and account for the growth of tourism in relation to the main attractions of the physical and human landscape with examples from the Southern African Development Community (SADC) region countries</li> <li>• Discuss the major promotion and marketing factors of tourism in Swaziland</li> <li>• Assess the benefits and disadvantages to tourism to a receiving area</li> <li>• Suggest strategies for sustainable tourism</li> </ul>
3.2.5 Mining	<ul style="list-style-type: none"> <li>• Describe and explain the factors influencing the exploitation of minerals (geology, ore content, quantity, quality, and market)</li> <li>• Describe the mining methods: Surface – open/strip, panning, quarrying Underground – shaft, adit, drift, drilling</li> <li>• Describe the distribution of major minerals found in Swaziland and minerals that were mined in the past</li> <li>• Evaluate the economic impact of coal mining in Swaziland</li> </ul>
3.2.6 Environment risks and benefits: resources conservation and management	<ul style="list-style-type: none"> <li>• Describe how agriculture, extractive, manufacturing industries, transport may improve the quality of life/pose threats to the environment with named examples</li> <li>• Describe how human activities interfere with natural ecosystems leading to soil erosion, the greenhouse effect and global warming</li> <li>• Identify areas at risk (wetlands, coastal areas, forestry, atmosphere, rivers, virgin/pristine land) with examples from Swaziland and an MEDC</li> <li>• Demonstrate the need for resource conservation and management in different environments with reference to Swaziland and an MEDC</li> <li>• Describe any attempts to maintain, conserve or improve the quality of the environment</li> </ul>

<b>3.3 ENERGY RESOURCES</b>	
3.3.1 Renewable and non-renewable resources	<ul style="list-style-type: none"> <li>• Identify sources of renewable and non-renewable resources</li> <li>• Differentiate between renewable (hydro-electric power, solar, wind, geothermal, and biogas) and non renewable resources (fuel wood, coal, nuclear, natural gas, and oil)</li> <li>• Describe the distribution of the world energy resources</li> <li>• Describe quantities of worlds energy resources</li> <li>• Describe the advantages and disadvantages of renewable resources</li> <li>• Describe the advantages and disadvantages of non-renewable resources</li> <li>• Describe the significance of fuel wood in LEDCs</li> <li>• Describe the uses of and competition for water resources – agricultural, domestic and industrial demand</li> <li>• Discuss the energy crisis in Africa (fuel wood) with special reference to Swaziland and LEDC countries</li> </ul>
3.3.2 Power stations	<ul style="list-style-type: none"> <li>• Describe the factors that influence the development and siting of power stations</li> <li>• Hydro-electricity (H.E.P.) with reference to Swaziland and one other example from LEDCs</li> <li>• Evaluate Africa's potential in generating H.E.P., Thermal and Nuclear power with examples</li> <li>• Describe the main features of the three power stations</li> <li>• Describe how power is generated from each of the three sources</li> <li>• State the advantages and disadvantages of each of the three sources of power</li> <li>• Assess the impact of each of the three sources of power on the environment</li> </ul>
3.3.3 Alternative sources of power	<ul style="list-style-type: none"> <li>• Identify the alternative sources of power: Tidal energy Solar Wind Geothermal Biogas/Biomass</li> <li>• Describe power generation by these alternatives</li> <li>• Discuss advantages and disadvantages of these alternatives sources of power</li> </ul>
<b>THEME 4 – POPULATION AND SETTLEMENTS</b>	
<b>GENERAL OBJECTIVES</b>	<b>SPECIFIC OBJECTIVES</b> All learners should be able to:
4.1 Rural settlements with reference to selected examples where possible	<ul style="list-style-type: none"> <li>• Describe the patterns, layout, size and functions of rural settlements (dispersed, linear, nucleated)</li> <li>• Describe factors, which influence the location and development of rural settlements (relief, soil, water supply and other factors such as accessibility, agricultural use)</li> </ul>



<p>4.2 Urban settlements with reference to selected examples where possible</p>	<ul style="list-style-type: none"> <li>• Define terms associated with urban settlements hierarchy – sphere of influence, threshold population</li> <li>• List the features of an urban settlement</li> <li>• Describe factors affecting location and growth of urban development</li> <li>• Classify urban settlements according to size, functions and location</li> <li>• Describe and give reasons for the structure of urban settlements according to the different models in LEDCs and MEDCs</li> <li>• Describe the influence of urban settlements on surrounding areas, i.e., informal settlements</li> <li>• Describe and suggest reasons for the hierarchy of urban settlements and services</li> <li>• Describe problems associated with the growth of urban areas such as congestion in the Central Business District (CBD), housing shortages, and squatter settlements</li> <li>• Suggest solutions to overcome problems associated the growth of urban areas</li> <li>• Describe the effects of urbanisation on the environment: Pollution (air, water, visual, noise) Urban sprawl Satellite towns</li> </ul>
<p>4.3 Population dynamics</p>	<ul style="list-style-type: none"> <li>• Definition of terms – life expectancy, population explosion, population pressure, infant mortality, fertility rates</li> <li>• Describe the factors influencing population growth and structures: Birth rates Death rates Natural increase Migration</li> <li>• Discuss factors influencing population distribution and density with reference to Swaziland (physical, economic, social, political)</li> <li>• Describe and explain population structure for both MEDCs and LEDCs</li> <li>• Describe the concept of the Demographic Transition Model</li> <li>• Explain the demographic transition model</li> <li>• Define and describe the different types of migration</li> <li>• Describe the influence of migration on population structure, environment and economy of both sending and receiving countries</li> <li>• Suggest ways of reducing the rate of migration (Government policy, sphere of influence)</li> </ul>
<p>4.4 HIV and AIDS</p>	<ul style="list-style-type: none"> <li>• Define HIV and AIDS</li> <li>• Interpret HIV and AIDS statistics with reference to Swaziland</li> <li>• Assess the social and economic impact of HIV and AIDS in Swaziland</li> <li>• Discuss efforts being made to address the HIV and AIDS</li> </ul>

## **GRADE DESCRIPTIONS**

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The scheme of assessment is intended to encourage positive achievement by all candidates. Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The grade awarded will depend on the extent to which the candidate has met the assessment objectives overall and may conceal weakness in one aspect of the examination that is balanced by above-average performance on some other.

Criteria for the standard of achievement likely to have been shown by candidates awarded Grades A, C and F are shown below.

### **A Grade A candidate should be able to:**

#### **A Knowledge with understanding**

- demonstrate a wide knowledge and comprehension of physical and human geography, and a clear understanding of their inter-relationship

#### **B Analysis**

- analyse inter-relationships between people and their environment
- recognise the dynamic nature of these relationships and how and why they may change through time and space

#### **C Judgement and decision-making**

- make balanced judgements and to show an awareness of the different attitudes and priorities of individuals and groups, and hence the problematical nature of the interaction of people with the environment

#### **D Investigation and evaluation**

- (given a minimum amount of guidance) carry out independently, geographical enquiry in which appropriate methodology is applied
- communicate effectively the gathering, processing and analysis of the information
- recognise that solutions or conclusions may not readily be drawn from the enquiry.

### **A Grade C candidate should be able to:**

#### **A Knowledge with understanding**

- demonstrate a knowledge of physical and human geographical phenomena and demonstrate a comprehension of important geographical ideas, concepts, generalisation and process

#### **B Analysis**

- analyse inter-relationships between people and their environment
- recognise the dynamic nature of changes in these relationships

#### **C Judgement and decision-making**

- make balanced judgement on economic, political, environmental and social issues which have a geographical dimension through a recognition of conflicting viewpoints and solutions

#### **D Investigation and evaluation**

- (given general guidance) plan and carry out effectively a geographical enquiry using relevant data from a variety of primary and/or secondary sources
- apply geographical techniques, map interpretation at different scales, and a range of graphical, numerical and pictorial information such as flow-line diagrams, simple census extracts and photographs.

**A Grade F candidate should be able to:**

A Knowledge with understanding

- demonstrate an elementary level of knowledge of physical and human geography
- demonstrate a comprehension of simple geographical ideas and simple geographical relationships

B Analysis

- describe inter-relationships between people and their environment and analyse them in simple terms

C Judgement and decision-making

- recognise at an elementary level, the existence of differing systems of values which influence economic, environmental, political and social issues which have a geographical dimension

D Investigation and evaluation

- (given specific guidance at all stages) observe, record and attempt to classify geographical data
- draw simple sketch maps and construct diagrams such as a information by brief statements.

## NOTES FOR GUIDANCE

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The aim of these notes is to provide teachers with additional guidance on certain content areas of the syllabus. These notes should be read in conjunction with the main syllabus. Where no further guidance is considered necessary the teaching of the main syllabus content will be entirely adequate to prepare students for the SGCSE examinations.

### THEME 1 – MAP READING AND INFORMATION HANDLING

The study of large scale and simulated maps of the home area (SADC) is especially important and familiarity with maps of other tropical regions is recommended. The maps chosen for examination purposes will be on a scale of either 1: 25 000 or 1: 50 000 and will always contain a full key. Techniques should be practiced for describing and for analysing topographical and simulated maps. Candidates should be able to give grid reference and directions (both compass and bearings from grid North), measure distances and calculate gradients with reasonable speed and accuracy. Cross sections may be set for interpretation but candidates will not be asked to construct them.

Candidates are also advised to practice dividing a map into broad areas of markedly differing relief such as low river valleys, well drained plateaux, steep sided (perhaps deeply eroded) uplands and to give brief descriptions of each using appropriate geographical terms (such as a ridge, plateau, scarp, flood plain) and simple adjectives showing an appreciation of their nature (such as broad, flat steep sided, deeply cut gently sloping). To interpret these maps candidates should be able to recognise essential differences and density of drainage, pattern of streams, gradients or sizes of streams in relation to the relief. Likewise, practice in describing land use variations in association with different types of relief should be part of the preparation for the examination. The interpretation of human features would also require candidates to recognise and analyse patterns of settlements (dispersed, linear, and nucleated) and candidates should be able to draw and interpret sketch maps illustrating these patterns. Candidates should be able to interpret and describe features of urban morphology as represented on large scale and simulated maps.

Explanations should be based clearly on map evidence showing the interaction between humans and their physical environment, for example, differences in land use between upland and lowland; differences in land use within a town and with increasing distance away from a town; differences between dense settlement, say on river plains, and sparse settlement on generally dry areas and dispersed settlement where water is evidently more easily available; dispersed linear patterns along roads or irrigation canals. Communication networks should be recognised in terms of the type and density in relation to physical and human features. Careful studies need to be made of communications in urban areas in terms of their type and density.

Practice in describing landforms, natural vegetation, land use and settlement shown on photographs is essential. Attention should be given to drawing simple annotated sketches to illustrate the features recognised and described from photographs. The varied size and scale of photographic features should be noted. Simple descriptions only are required by the examiners but candidates may be required to explain the features recognised, for example the process present at work and those responsible for their formation. It should be stressed that these processes have operated over a considerable time scale and present landforms are often the product of the processes in the past.

Diagrams, maps and statistics should be regarded as important ways of representing data. They may be used to illustrate basic principles and it is essential that candidates should be directed towards their interpretation. For example, a population pyramid may be used to illustrate the age and sex structure of a country or an individual town. With such resources the candidates may be required to describe the broad features of the population structure and attempt to explain them. A mere repetition of information given in the population pyramid would be of a little value but an analysis of say, 'working' and 'non working' population or 'male' and 'female' or 'schooling' and 'retired' age groups would show that some analysis had been attempted.

Sketch maps or sketch sections should always be closely related to the text in order to explain or locate features mentioned in the text, or to add further information to the text of an answer. Similarly, diagrams of a physical feature or a climatic graph need to be annotated and referred to in the text so that they add to and explain with greater exactness the feature described or discussed in the text. The use of local named examples is encouraged but diagrams must be well labelled and often a scale is essential to give exactness to the example.

Direction is drawn to the value of outdoor field studies and direct questions will be set on fieldwork, and credit will be given for evidence of fieldwork studies in answers to questions on the home area (SADC). For example, answers to landforms, river channels and flow, weather and climate, land use and farming types, rural settlement urban land use and urban problems may all gain credit for well explained examples based on local field studies. Field studies are mandatory and their value of importance in geography is emphasised.

## THEME 2 – THE PHYSICAL WORLD

### 2.1 Plate movements and resulting landforms

Learners should be able to

- Describe the general processes involved in plate movements e.g., folding, faulting.
- Describe the general distribution of fold mountains, volcanoes and earthquakes and explain how this distribution is related to movements at plate boundaries.
- Show a basic understanding of plate tectonics, describing the global patterns of plates, their structure, and be aware of plates and their effects. Plates moving towards each other (sea floor spreading) plates moving towards each other (subduction) and plates sliding past each other.
- Describe an understanding of the main features of volcanoes (and their eruption) and earthquakes.

### 2.2 Weathering

Learners should be able to

- Recognise that weathering involves the breakdown of rock *in situ* and as such should be able to distinguish it from erosion.
- Explain the main factors influencing the type and rate of weathering – climate and rock features (mineral composition, grain size of rock, presence of line of weakness). The influence of climate on the rate of weathering could be illustrated with reference to simple explanation as to why weathering is more rapid in humid tropical regions of the world than in temperate regions.

### 2.3 River processes and forms

Learners should be able to

- Demonstrate an understanding of the work of a river in eroding, transporting, and depositing. Reference should be made to the erosional processes of hydraulic action, corrasion, corrosion (solution) and attrition. River transport should include the processes of traction, saltation, suspension, and solution. Reasons why, when and where in a rivers course deposition takes place should be studied. It should be realised that the effectiveness of the river processes concerned will vary according to the volume and velocity of the running water and the nature of the load (boulders, pebbles, sand and silt), which in turn will be affected by the bedrock along the course of the river.
- Describe and explain the landforms associated with these processes.  
A study should be made of the following: forms of river valleys (long profile and shape in cross section), rapids, waterfalls, potholes, meanders, ox-bow lakes, deltas, levees, and floodplains.
- Discuss the impact of rivers on human activities, e.g., water supply, fertile flood plain, transport, production of hydro-electric power, etc. Negative impact – flooding, harbouring dangerous animals, diseases, and communication breakdown.

### 2.4 Weather

Learners should be able to

- Draw, describe and explain the use and siting of the following instruments at a weather station: rain gauge, maximum-minimum thermometer, wet dry bulb thermometer (hygrometer), barometer, anemometer and wind vane.
- Make calculations using information from these instruments.
- Use and interpret graphs and other diagrams showing weather data.
- Describe and explain characteristics, siting and use made of a Stevenson Screen.
- Describe the main types of cloud and be able to estimate the extent of cloud cover.

## 2.5 Climatic regions

Learners should be able to

- Describe and explain the main characteristics of climate in the regions listed in the Syllabus: temperature – mean temperature of hottest month, mean temperature of coolest month, therefore the annual range; rainfall – the amount and seasonal distribution; other climatic features – wind, cloud, humidity etc. Factors influencing these characteristics should be noted such as latitude, pressure systems, and the winds to which they give rise, distance from the sea, altitude and ocean currents. Candidates should be familiar with climatic graphs showing the main characteristics of temperatures and rainfall of the climates in the regions listed.
- For each of the following climatic types – tropical rainforest, tropical savannah, hot desert, and Mediterranean region:  
Name and locate an example of each and explain the main features of the climate annual temperature, rainfall, clouds, and winds.  
Describe the natural vegetation and explain how it adapted to the climate.  
Describe how human interference has affected the vegetation.

## 2.6 The inter-relationship of physical and human geography

Learners should be able to

- Demonstrate an understanding that the natural environment present hazards and offers opportunities for human activities. References should be made to the hazards and offers posed by volcanic eruptions, earthquakes, tropical storms, flooding and drought.  
Use could be made of the study of contemporary examples to illustrate. This information would provide candidates with valuable case study information. Such examples could form resource material given in examination questions when candidates might be expected to illustrate inter-relationships between the natural environment and human activities from the data presented. Reference to the opportunities and problems posed for people could be incorporated when studies are made of the natural environment, for example the advantages and difficulties offered by river floodplains and deltas. The impact of human activities on the two ecosystems named in 2.2 should be considered.

## THEME 3 – ECONOMIC DEVELOPMENT, UTILISATION AND MANAGEMENT OF RESOURCES

### 3.1 Agriculture

Studies should include consideration of the physical (including relief, climate and soil) and human conditions (such as economic, social, government) which affect the kind of crops grown, the type of animals reared, the scale of production and the methods of organisation. Consideration should be given to farming processes and the outputs, including their uses and importance.

The following should be studied:

- Small-scale subsistence farming, e.g., growing of maize on subsistence basis in Swaziland.
- Intensive cash crop farming, e.g., in irrigated areas commercial farming in Swaziland.
- Extensive Commercial farming. The following examples must be studied: Sugar cane production in Swaziland (LEDCs), wheat farming in Canada or cotton growing in the United States of America (MEDCs).
- Pastoral farming, e.g., cattle rearing in Botswana, sheep farming in Swaziland, and sheep farming in South Africa.

### 3.1.5 Overproduction of food

Learners should be able to

- Recognise causes and effects of overproduction and suggest solutions. Causes should include government subsidies, increased mechanisation, and increase of farm size. Effects should include surplus production, reduction in profits. Solutions include diversification of farm use, and agricultural reforms.

### 3.1.6 Shortage of food

Learners should be able to

- Recognise the causes and effects of food shortages. Shortages of food may be related to natural problems such as soil exhaustion, drought, floods, tropical cyclones, pests, disease, etc. There should be an awareness of the effects of these natural problems on selected areas within LEDCs. Economic and political factors and their effects upon food shortages should be noted for example low capital investment, poor distribution/transport difficulties, wars, etc. The effects of food shortages in encouraging food aid and measures such as those of the 'Green Revolution' to produce more food should also be considered.

## 3.2 Industry

### 3.2.1 Classification of industries with examples from LEDCs and MEDCs

Learners should be able to

- Define and give examples of primary industries: fishing, mining, forestry.
- Define and give examples of secondary industries: oil refinery, pulp processing, fish processing.
- Define and give examples of tertiary industries: financial institutions, transport services, legal services, medical services.
- Define and give examples quaternary industries: high technology industries, high research industries.

### 3.2.2 Location and development of industries

Learners should be able to

- Explain how factors such as water supply, capital, markets, power, communication, labour and technology contribute to the choice of site and development of industries.
- Make an in-depth study of craft industries in Lesotho and Swaziland, motor vehicle assembly in Japan and high technology industries in Germany.

### 3.2.3 Industrial estates in LEDCs and MEDCs

Learners should be able to

- Describe the layout of the estate, type of buildings and the variety of industries.
- Describe the factors of location such as water supply, raw materials, power, labour, capital, transport.
- Explain the advantages such as sharing of transport and labour, and inputs from the other industries.
- Explain the disadvantages such as overcrowding, traffic congestion, pollution and competition for labour.

### 3.2.4 Leisure activities and tourism

Learners should be able to

- Define the following, giving examples: beaches; climatic attractions; scenic attractions; attractions of natural vegetation; cultural attractions; architectural attractions; historical attractions; recently built attractions/theme parks, etc.
- Discuss the major promotion and marketing factors of tourism in Swaziland such as advertisement, package holidays, investment of transportation routes (air and roads), improvement of hotel facilities.
- Suggest strategies for sustainable tourism such as diversity, honey pot sites and wilderness areas, interdependence (people, economy and the environment).

### 3.2.5 Mining

Each study should consider the factors which affect the exploitation of the mineral (geological occurrence, accessibility of deposits, mining costs, local and distant demand) the method of mining and of mine organisation and the uses of the mineral. Suitable studies include coal mining in Swaziland and gold mining in South Africa.

### **3.2.6 Environmental risks and benefits: resource conservation and management**

Learners should be able to

- Demonstrate the need for sustainable development, resource conservation and management in different environments. It is not intended that candidates should be familiar with a wide variety of illustrations here. Rather that by the use of well-selected case studies, possibly integrated with the study of other concepts referred to above, candidates become familiar with general principles and can illustrate from these examples.
- Identify and describe the benefits associated with the development of agriculture, manufacturing, industries, energy production, tourism and transport.
- Describe how these developments may also pose threats to the environment when natural ecosystems are interfered with including: soil erosion, global warming, and pollution, (air, water, noise and visual).
- Identify areas at risk from these threats to the environment and describe attempts made to maintain, conserve, or improve the quality of the environment.

## **THEME 4 – POPULATION AND SETTLEMENTS**

### **4.1 Rural settlements**

Learners should be able to

- Describe the patterns of rural settlements – dispersed, linear, nucleated.
- Explain how physical factors (relief, soil, water supply) and other factors such as accessibility, agricultural land use, influence the sites and patterns of rural settlements.

### **4.2 Urban settlements**

Learners should be able to

- Describe and explain the factors, which may influence the size, growth and functions of urban settlements.
- Define terms associated with urban settlements (sphere of influence, threshold population), etc.
- Describe and explain the land use zones of towns and cities to include the CBD, residential areas, and industrial areas.
- Describe the factors affecting the location and growth of urban settlements.
- Describe the influence of urban settlements on surrounding areas i.e., informal settlements.
- Describe problems associated with the growth of urban areas such as congestion in the CBD, housing shortages, and traffic congestion. Suggest solutions to overcome these problems should be illustrated by reference to example (sic) LEDC and MEDC.
- Describe the effects of urbanisation on the environment – pollution (air, water, visual, noise).

### **4.3 Population dynamics**

Learners should be able to

- Define terms associated with population (life expectancy, population explosion, population pressure, infant mortality, fertility rates, etc.)
- Describe population distribution and density with reference to Swaziland.
- Describe the factors affecting population growth structures (birth rate, death rate, natural increase, migration).
- Describe urbanisation and its causes with reference to MEDC/types of migration in LEDC's/MEDCs.
- Describe the relationship between population growth and resources and explain why problems may result in some areas such as overpopulation and under population.
- Explain the Demographic Transition Model.
- Suggest reasons for different types of population structure as shown by age-sex pyramids. Candidates should be able to describe population pyramids and relate them to different stages of the demographic transition model.

### **4.4 HIV and AIDS**

Learners should be able to

- Define HIV and AIDS and interpret HIV and AIDS statistics with reference to Swaziland.
- Assess the social and economic impact of HIV and AIDS in Swaziland.
- Describe efforts being made to address the HIV and AIDS.



## STUDY NOTES

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The Curriculum Content outlined in the syllabus booklet and described in these notes is to be pursued by all candidates.

### Paper 1

Questions are resource based. The resources presented are for analysis and interpretation in answering a part question or part questions. All of the information required to answer these part questions is contained within the resource itself. No previous knowledge is needed of the particular illustration presented. What is required is that candidates use the data provided to illustrate their understanding of the particular concept being assessed.

The resources offered may be photographic, map extracts, sketch maps, drawings, diagrams, graphs, text extracts, statistics, and tables of data. Resource materials are selected from various world areas. As a result candidates may be dealing with world areas which they are not familiar. The resources used do not require specific regional knowledge. This should be stressed to the candidates as they may be influenced in their question selection by the nature/location of the resource included.

Throughout a study of the curriculum content it is stressed that for that Paper 1 reference should be made to appropriate case studies to illustrate the individuals themes. It is suggested that much of the preparation of themes could be undertaken through case studies. Some case studies could incorporate a number of concepts and assessment objectives and present candidates with an integrated approach to the study of curriculum content.

A case study may be selected because it relates to:

the local school area;

a contemporary development such as the occurrence of a natural hazard in part of the world;

a particular illustration with which the teacher is familiar;

a presentation in a newspaper, on video, film, a well documented illustration in a textbook, etc.

The essence of a good case study is that it provides candidates with details of a particular illustration, which can be profitably used in answers to certain questions on Paper 1. Some part questions on the paper request that reference is made to information from specific case studies made by candidates and opportunity is also provided for candidates to volunteer such details in answering other questions.

It is important that candidates comply with the rubric. **Three** questions only are to be selected. Sometimes within individual questions choice is provided. It is very important that candidates make the correct choice and do not answer more than is required. Candidates are also advised to heed closely the sub marks on the question paper. These are included in order to guide candidates to the amount of detail and length of response anticipated.

### Paper 2

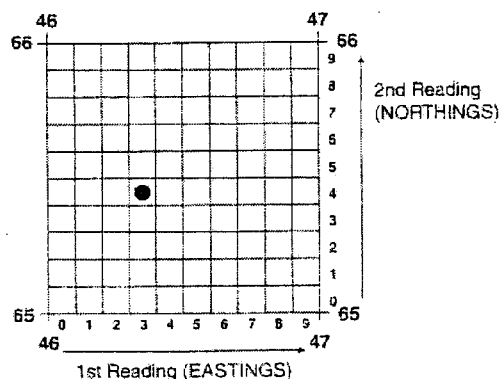
Candidates must answer **all** the questions in **Section A** but choose **one** question between question 7 and 8 (investigative questions) in **Section B**. The paper will be entirely skills based and will test a candidate's ability to handle various ways of depicting geographical information, e.g., topographical maps, other maps, diagrams, graphs, tables of data, written material, photographs and pictorial material. The questions in Paper 2 will be neutral in that they will not require specific information of place. Candidates will be able to demonstrate skills of analysis and interpretation and application of graphical and other techniques as appropriate.

### EQUIPMENT

It is essential that candidates have the following equipment with them in the examination room: a pencil, ruler, set square and a protractor. It is also advisable that they should have access to a straight edged piece of paper for measuring distance on large-scale topographic map or simulated map.

- One question, worth 20 marks, will be based on a large-scale (either 1: 25 000 or 1: 50 000) topographical map or simulated map. A key will be provided. The topographical map will be of a tropical area such as Zimbabwe, the Caribbean, or Mauritius. Simulated maps will show information of any place. It is essential that they become proficient in map reading and interpretation skills to enable them to describe and analyse maps.

Candidates should also be able to use a co-ordinate reference system and be able to give and to read 4-figure and 6-figure grid references to locate places. For example, the 4-figure reference for the dot in the diagram below is 4665 whilst the 6-figure grid reference for the dot would be 463654. To give the 6-figure grid reference, first of all identify the grid square, in this case 4665. The third figure is obtained by dividing the space between grid lines 46 and 47 into ten equal parts. Similarly the sixth figure is obtained by a similar division of the gap between 65 and 66. This would result in a grid reference of 463654 for the dot and 460650 for the star. It should be noted that the first tenth is 0 and the last tenth is 9 in the divided grid square.



Candidates should be able to give directions, both as a point of the compass, such as north, northeast, etc., and as a bearing from grid north of one place from another. It is, therefore, important that candidates have protractors in the examination room with them.

Candidates should be able to measure horizontal distances. This is most accurately done by using a straight edged piece of paper and the scale line. If the line to be measured is curved, divide the curve into straight sections and rotate the paper after each straight section to follow the next straight section. Finally place the completed straight edged piece of paper along the linear scale line on the map extract and read off the distance in kilometres/metres. This method avoids complicated mathematical calculations which can arise when rulers are used.

Contour reading, which enables candidates to calculate differences in height, should be practiced. The information gained from measuring horizontal and vertical distances should enable candidates to calculate gradients using the formula:

$$\frac{\text{Vertical Interval}}{\text{Horizontal Equivalent}} = \frac{\text{(Difference in)}}{\text{(Horizontal distance)}}$$

It should be noted that both measurements must be made in the same units before the calculation can be made.

Cross sections may be set for interpretation but candidates will not be asked to construct them.

Candidates should be able to draw inferences about the physical and human landscape by interpretation of map evidence such as patterns of relief, drainage, settlement, communication and land use.

Candidates are advised to practice identifying basic landscape features such as river valleys and uplands and to give brief descriptions of them using appropriate geographical terms (such as ridges, plateau, scarp, flood plain) and simple adjectives showing an appreciation of their nature (such as broad, flat, steep sides, deeply cut, gently sloping). To interpret these maps candidates should be able to recognise essential differences in density of drainage, streams, patterns, gradients, or size of streams in relation to the relief. They should be able to describe the physical features of rivers and the shape and form of river channels as they are shown on large scale and simulated maps

Practice in describing variations in land use should be part of the preparation for the examination especially with topographic maps. The interpretation of human features would also require candidates to recognise and analyse patterns of settlement (dispersed, nucleated, linear). Candidates should be able to interpret and describe features of urban morphology as represented on large scale and simulated maps. They will be asked to describe the functions of and services provided by settlements. They should also be able to give reasons for the site and growth of individual settlements. Communication networks should be recognised in terms of their type and density in relation to physical and human features.

Explanations should be based entirely on map evidence showing the interaction between humans and their physical environment, e.g., differences in land use between upland and lowland, differences in land use within a town, differences between dense settlement on river plains and sparse settlement on river plains and sparse settlement on steep upland slopes.

**NOTE:** *It must be stressed that all answers to this question must be based on map evidence only.*

- Other questions on the paper will be set using some or all of the following resources: maps, diagrams, graphs, tables of data, written material. They should be regarded as important ways of representing geographical data. They may be used to illustrate a basic principle and it is essential that candidates should be directed towards their interpretation. For example, a population pyramid may be used to illustrate the age sex structure of a country. With such a resource a candidate may be required to describe the broad features of the population structure to show comparisons and contrasts between the male and the female populations, the working and non-working population and the young and old age groups.

Maps based on global and other small scales may be used and candidates may be asked to identify and describe significant features of the human and physical landscape on them, e.g., population distribution, population movements, transport networks, settlements layout, relief and drainage, etc. Candidates may be asked to recognise patterns and deduce relationships.

Candidates will be expected to be able to extract specified geographical information from graphs, diagrams, tables of data and written material. Pie graphs, line graphs, triangular graphs, radial graphs, bar graphs, and scatter graphs may be used and candidates may be asked to describe variations and identify trends in information. Graphs may show, for example, temperature, birth rate, death rate, energy, rainfall distribution, river discharge, etc. Candidates may be required to plot information on graphs when axes and scales are provided. Data tables may provide information on physical landscapes (landforms, natural vegetation, land use, and settlement) and geographical phenomena from photographs. Simple descriptions only will be required. Candidates may be expected to add specified detail on maps or other material provided, thereby applying geographical knowledge and understanding. Field sketches of physical and human landscapes may be used to stimulate geographical description and annotation. Cartoons illustrating a geographical theme may be set for interpretation and analysis.

Candidates may also be asked to use supporting material in conjunction with large-scale maps to identify, describe and analyse features and thereby recognise patterns and deduce trends.

Candidates should be aware of the general requirements for the investigative questions. Some practical experience, however limited, of research methodology is preferable in preparation for these questions. One approach is to introduce the appropriate enquiry skills and techniques. For example after the river topic time could be spent discussing how rivers could be measured, the plotting of depth data and the calculation of cross sectional area and discharge. The skill required for questionnaires, counts and observations might be introduced in a variety of topics.

References should be made to the range of aspects involved in research or investigative methods such as (i) formulating aims and hypotheses, (ii) using enquiry skills to collect data, (iii) presentation techniques to display data, (iv) making analyses of data, and (v) the formulation of conclusions.

The research or investigative skills are as follows:

- (i) **Formulating aims and hypotheses**  
Candidates should be familiar with hypotheses as statements that form the basis of coursework assignments. The hypotheses may investigate a geographical concept, e.g., a CBD has the highest concentration of comparison shops, collecting relevant data, analysis and drawing conclusions using the data as evidence can test these.

- (ii) **Research or investigative skills to collect data**  
Questions on these will test knowledge and application of the methodology used in the following range of data collection enquiry skills.

**Questionnaires**

Questionnaires can be oral or written to gain information from an individual or a group of individuals. Suitable themes in the syllabus where questionnaires may be appropriately studied include spheres of influence, use of services, shopping habits, a farm study, a factory or industrial study, leisure activities, tourism or attitudes of public to developments associated with resource development. Considerations of conducting a questionnaire, e.g., the sampling methods, pilot survey, and location of survey should also be discussed.

**Observation**

Examples of using observations as a research or investigative skill, collect data include the recording of land use in an urban area or observation of river features. Maps, recording sheets, field sketches, and annotated photographs may all be used to record student observations.

**Counts**

Pedestrian and traffic counts are two significant examples of this research or investigative skill. Appropriate methods for recording counts should be discussed including the layout of recording sheets; instructions and the necessary information required identifying the sheet following the count (i.e., time, date, location and name of recorder).

**Measurement**

When recording measurements, due consideration should be given to planning the layout of the recording sheet, the location of instruments and the sampling methods adopted to provide reliable data. Knowledge of the equipment used in measurement is required such as the quadrant and the clinometers, etc. Candidates should be familiar with river measurements of channel, width, depth, speed flow and the size and shape of bedload, and weather study instruments.

- (iii) **Data presentation techniques**  
A knowledge of the illustrative techniques to present research data is required. This should include, various types of graphs, maps, and diagrams, e.g., line graphs, bar graphs, histograms, flow diagrams, wind rose graphs, isoline maps, and scatter graphs.

- (iv) **Analysis**  
Candidates should be able to describe the patterns in data presented in graphs and tables of results. Reference to relevant geographical knowledge and understanding is often required in the interpretation of the data. Practice of this skill will improve success in research or investigative questions.

- (v) **Formation of conclusions**  
Using the evidence from the data should be able to make judgments on the validity of the original hypothesis or aims of the assignment. Reference is also required of the reliability of collected data and a critical evaluation of the chosen data collection method.

## **GLOSSARY OF TERMS**

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It is hoped that the glossary will prove helpful as a guide, i.e., it is neither exhaustive nor definitive. The glossary has been deliberately kept brief not only with respect to the number of terms included but also to the descriptions of their meanings. Candidates should appreciate that the meaning of a term must depend in part on its context.

In all questions, the number of marks allocated is shown on the examination paper, and should be used as a guide by candidates to how much detail to give or time to spend in answering. In describing a process the mark allocation should guide the candidate about how many steps to include. In explaining why something happens, it guides the candidate on how many reasons to give, or how much detail to give for each reason.

<b>ANNOTATE</b>	Add labels of notes or short comments, usually to a diagram, map or photograph to describe or explain.
<b>CALCULATE</b>	Work out a numerical answer. In general, working should be shown, especially where two or more steps are involved.
<b>COMPARE</b>	Write about what is similar and different about two things. For a comparison, two elements or themes are required. Two separate descriptions do <b>not</b> make a comparison.
<b>COMPLETE</b>	To add the remaining detail or details required.
<b>CONTRAST</b>	Write about the differences between two things.
<b>DEFINE STATE THE MEANING OF MEANT BY</b>	Give the meaning or definition of a word or phrase.
<b>DESCRIBE</b>	<p>Write what something is like or where it is. Describe may be used for questions about resources in the question paper (describe the trend of a graph, the location of a settlement on a map, etc.). It may also be used when you need to describe something from memory (describe a meander, etc.).</p> <p>It is often coupled with other command words such as Name and describe (name the feature and say what it is like), Describe and explain (say what it is like and give reasons for),</p>
<b>DEVISE OR PLAN</b>	Presentation of a particular feature such as a form or questionnaire to meet a specific requirement or requirements.
<b>DRAW</b>	Make a sketch of. Often coupled with a labelled diagram (draw a diagram/illustration with written notes to identify its features).
<b>EXPLAIN ACCOUNT FOR GIVE REASONS FOR</b>	Write about why something occurs or happens.
<b>GIVING YOUR VIEWS COMMENT ON</b>	Say what you think about something.
<b>HOW</b>	In what way? To what extent? By what means/method? May be coupled with show how (prove how, demonstrate how).
<b>IDENTIFY</b>	Pick out something from information you have been given.
<b>ILLUSTRATING</b>	Account for by using specific examples or diagrams. Often coupled with by a labelled diagram.

<b>INSERT LABEL</b>	Placing specific names or details to an illustrative technique in response to a particular requirement.
<b>JUSTIFY</b>	Say why you chose something or why you think in a certain way.
<b>LIST</b>	Identify and name a number of features to meet a particular purpose.
<b>LOCATE</b>	Find where something is placed or state where something is found or mark it on a map or diagram.
<b>MEASURE</b>	Implies that the quantity concerned can be directly obtained from a suitable measuring instrument.
<b>NAME</b>	To state or specify or identify. To give the word or words by which a specific feature is known or to give examples which illustrate a particular feature.
<b>PREDICT</b>	Use your own knowledge and understanding, probably along with information provided to state what might happen next.
<b>REFER TO WITH REFERENCE TO</b>	Write an answer which uses some of the ideas provided in map/photograph/diagram, etc., or other additional material such as a case study.
<b>STATE</b>	Set down in brief detail. To refer to an aspect of a particular feature by a short statement or by words or by a single word.
<b>STUDY SUGGEST</b>	Look carefully at (usually one of the figures in the question paper). Set down your ideas on or knowledge of. Often coupled with why [requires a statement or an explanatory statement referring to a particular feature or features].
<b>USE USING</b>	Base your answer on the information provided.
<b>WITH THE HELP OF</b>	Write an answer that uses some of the information provided as well as additional material.
<b>WHAT</b>	Used to form a question concerned with selective ideas/details/factors.
<b>WHAT DIFFERENCES</b>	What differences are shown between.... Use comparative statements to describe the changes involved as A changes to B.

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