



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

GEOGRAPHY

EXAMINATION GUIDELINES

SENIOR CERTIFICATE (SC)

GRADE 12

2015

These guidelines consist of 15 pages.

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CHAPTER 1: INTRODUCTION

The Curriculum and Assessment Policy Statement (CAPS) for Geography outlines the nature and purpose of the subject Geography. This guides the philosophy underlying the teaching and assessment of the subject in Grade 12.

The purpose of these Examination Guidelines is to provide clarity on the depth and scope of the content to be assessed in the Grade 12 Senior Certificate (SC) Examination in Geography.

These Examination Guidelines should be read in conjunction with:

- A résumé of subjects for the Senior Certificate
- Curriculum and Assessment Policy Statements for all approved subjects

CHAPTER 2: ASSESSMENT IN GRADE 12**FORMAT OF THE EXAMINATION PAPERS****2.1 PAPER 1 (THEORY)**

- 2.1.1 This is a three (3) hour paper and will be written first on the day of the Geography examination.
- 2.1.2 The paper is divided into two sections, namely SECTION A and SECTION B.
SECTION A: Climate and Weather and Geomorphology
SECTION B: Settlement Geography and Economic Geography of South Africa
- 2.1.3 Each of the two sections consists of two (2) questions of 75 marks each.
- 2.1.4 Any THREE of the four questions must be answered.
- 2.1.5 Each of the four questions will start with short/objective type questions of $(15 \times 1) = (15)$.
- 2.1.6 Each of the four questions will include two paragraph questions for (8) marks, that is two questions of $(4 \times 2) = (8)$. These questions may NOT be answered in point form and will require analytical thinking and insight.
- 2.1.7 A variety of source materials will be used, e.g. satellite images, synoptic weather charts, graphs, tables, sketch maps, cartoons, photographs and newspaper articles.
- 2.1.8 The following instructions and information will appear on the second page of the question paper. Candidates should be advised of these instructions from the beginning of the year, as many candidates do not adhere to these instructions.
- Answer ANY THREE questions of 75 marks each.
 - ALL diagrams are included in the annexure.
 - Number ALL your answers in the CENTRE of the line.
 - Where possible, illustrate your answers with labelled diagrams
 - Leave a LINE between subsections answered.
 - Start EACH question at the top of a NEW page.
 - Number your answers correctly according to the numbering system used in this question paper.
 - Do NOT write in the margins of your ANSWER BOOK.
 - ENCIRCLE the numbers of the questions that you answered on the front page of your ANSWER BOOK.
 - Write neatly and legibly.

2.2 PAPER 2 (MAP WORK)

- 2.2.1 This is a one and a half hour (1½) paper and will be written second on the day of the Geography examination.
- 2.2.2 This question paper consists of four (4) questions that are COMPULSORY and is comprised as follows:
QUESTION 1: Multiple choice – 15 (single marks) – cuts across the whole syllabus
QUESTION 2: Geographical techniques and calculations (includes cross sections and application) – 20 (single marks)
QUESTION 3: Application of theory/map and photo interpretation – 25 (single marks for definitions and identification of features such as landforms, slopes, drainage patterns, settlement patterns, street patterns, etc. Double marks for providing reasons, application, interpretation, analysis and evaluation.)
QUESTION 4: Geographical Information Systems – 15 (Single marks for definitions. Double marks for providing reasons, application, analysis and evaluation.)

2.3 WEIGHTING OF COGNITIVE LEVELS

Lower Order (Knowledge and Remembering)	Middle Order (Understanding and Applying)	Higher Order (Analysing, Evaluating and Creating)
25%	50%	25%

CHAPTER 3: ELABORATION OF CONTENT/TOPICS

3.1 PAPER 1 (THEORY)

3.1.1 Climate and Weather

Mid-latitude Cyclones

- General characteristics
- Areas of formation
- Conditions necessary for formation
- Stages in the formation
- Associated weather patterns
 - Cold front conditions
 - Warm front conditions
 - Occluded front conditions
- Cyclone families
- Impact on human activities and the environment
- Possible pre-cautionary and management strategies
- Identification on synoptic weather maps and satellite images
 - Identification of stages of development on synoptic weather maps
 - Interpretation of weather symbols, predicted weather and impact

Tropical Cyclones

- General characteristics
- Areas of formation and associated terms
- Conditions necessary for formation
- Stages in the formation
- Associated weather patterns
- Impact on human activities and the environment (including impact of floods)
- Pre-cautionary and management strategies to manage the effect of tropical cyclones (including floods)
- Identification on synoptic weather maps and satellite images
 - Identification of stages of development on synoptic weather maps
 - Interpretation of weather symbols
- Case study of ONE recent tropical cyclone that affected Southern Africa

Subtropical Anticyclones (High-Pressure Cells) and the Resultant Weather over South Africa

- Location and identification of the THREE high pressure cells that affect South Africa
 - South Atlantic/St Helena high-pressure cell
 - South Indian/Mauritius high-pressure cell
 - Kalahari/Continental high-pressure cell
- General characteristics of the THREE high-pressure cells
- Influence of anticyclones on South Africa's weather and climate
- Interpretation and reading of information related to the THREE high-pressure cells on synoptic weather maps
- Development of travelling disturbances associated with anticyclonic circulation
 - Moisture front and line thunderstorms
 - Coastal low pressure
 - South African berg wind
- Resultant weather and impact associated with moving disturbances
- Identification of moving disturbances on synoptic weather maps and satellite images
- Reading and interpretation of synoptic weather maps and satellite images that illustrate weather associated with anticyclonic conditions

Valley Climates

- Slope aspect
 - Definition
 - Impact on the distribution of temperature in a valley
 - Impact on human activities in a valley
- Development of
 - Anabatic winds
 - Katabatic winds
 - Inversions/thermal belt
 - Frost pockets
 - Radiation fog
 - Draw simple freehand sketches to depict anabatic and katabatic winds
- Influence on human activities
 - Settlement
 - Farming

Urban Climates

- Reasons for differences between rural and urban climates
- Urban heat islands
 - Causes of urban heat islands/factors contributing to higher city temperatures
 - Effects of urban heat islands
- Pollution domes
 - Causes of pollution domes
 - Effects of pollution domes
- Strategies to reduce the urban heat island effect

Interpretation of Synoptic Weather Maps

- Use of international symbols
- Identification and characteristics of high- and low-pressure cells
- Interpretation of the impact of high- and low-pressure cells
- Reading and interpretation of station models
- Satellite images - reading and interpretation
- Compare satellite images to synoptic weather maps

3.1.2 Geomorphology**Drainage Basins in South Africa**

- Concepts of
 - Drainage basin
 - Catchment area
 - River system
 - Tributary
 - Confluence
 - Watershed
 - Interfluvium
 - Source
 - River mouth
 - Surface run-off
 - Groundwater
 - Water Table
- Types of rivers
 - Permanent
 - Periodic
 - Episodic
 - Exotic

- Underlying rock structure, development and characteristics of the following drainage patterns:
 - Dendritic
 - Trellis
 - Rectangular
 - Radial
 - Centripetal
 - Deranged
 - Parallel
- Definition and factors influencing drainage density
 - Precipitation
 - Soil moisture
 - Vegetation
 - Slope/Gradient
 - Porosity
 - Permeability
- Determining stream order
- Use of topographic maps to determine drainage patterns, drainage density and stream order
- Discharge of a river
 - Laminar flow
 - Turbulent flow

Fluvial Processes

- River profiles
 - Definition, description and associated characteristics
 - Cross/Transverse profile
 - Longitudinal profile
 - Relationship of both profiles to the stages of a river (upper, middle, lower course)
- River grading
 - Distinguish between graded and ungraded streams
 - Base level of erosion
 - Temporary base level of erosion
 - Permanent base level of erosion
- River rejuvenation
 - Reasons for rejuvenation
 - Features of rejuvenation
 - Knick point
 - Terraces
 - Valey in a valley
 - Incised/entrenched meanders
- Identification, description and formation of fluvial landforms
 - Meander
 - Undercut slope
 - Slip-off slope
 - Oxbow lake
 - Sand island
 - Braided stream
 - Flood plain
 - Natural leveé
 - Waterfall
 - Rapid
 - Delta
 - Utilisation of fluvial landforms by humans

- River Capture/Stream Piracy
 - Concepts of
 - Abstraction
 - River capture/stream piracy
 - Features associated with river capture
 - Captor stream
 - Captured stream
 - Misfit stream
 - Elbow of capture
 - Wind gap/River gravels
 - Impact of river capture on captor stream and captured stream
 - Implications of river capture for human activities, settlements, recreation, agriculture and flooding
 - Identification of features associated with river capture on topographic maps
- Superimposed and antecedent drainage patterns

Catchment and River Management

- Importance of managing drainage basins/catchment areas
- Impact of people on drainage basins/catchment areas
 - River pollution
 - Overgrazing
 - Deforestation
 - Human settlement
- Strategies to manage drainage basins/catchment areas
- Case study of one catchment management strategy in South Africa

3.1.3 Rural Settlement and Urban Settlement

Study of Settlements

- Concepts of
 - Settlement
 - Site
 - Situation
- Rural and urban settlements
- Classification of settlements according to
 - Size and complexity
 - Pattern
 - Function
 - Urban/rural

Rural Settlements

- How site and situation affect the location of rural settlements
- Classification of rural settlements according to
 - Pattern
 - Function
- Reasons for different shapes of rural settlements
 - Round
 - Linear
 - Cross road
 - T-shape
- Land use in rural settlements

Rural Settlement Issues

- Concept of rural-urban migration
- Concept of rural depopulation
 - Causes and consequences of rural depopulation on people and the economy
 - Strategies to address rural depopulation
 - Case study that illustrates effects of rural depopulation and strategies to address them
- Social justice issues associated with rural settlements
 - Access to resources
 - HIV/Aids
 - Land reform
 - Land reform
 - Land redistribution
 - Land restitution

Urban Settlements

- The origin and development of urban settlements
- Urbanisation of the world population
- Concepts of
 - Urbanisation
 - Urban growth
 - Urban expansion
 - Urban sprawl
 - Rate of urbanisation
 - Level of urbanisation
 - Interpretation of graphs and statistics
- How site and situation affect the location of urban settlements
- Classification of urban settlements according to function
 - Central places
 - Trade and transport towns
 - Break-of-bulk points
 - Specialised towns
 - Junction towns
 - Gateway/gap towns

Urban Hierarchies

- Concepts of
 - Urban hierarchy
 - Central place
 - Threshold population
 - Sphere of influence
 - Range of goods
- Concepts of
 - Low- and high-order functions/services
 - Low- and high-order centres

Urban Structure and Patterns

- Internal structure and patterns of urban settlements
 - Land-use zones including reasons for location and characteristics
 - Commercial
 - Residential
 - Industrial
 - Zone of decay/transition zone
 - Greenbelt
 - Rural-urban fringe
 - Factors influencing the morphological structure of a city

- Urban profiles
 - Concept of urban profile
 - Reasons for shape of urban profile
- Models of urban structure
 - Burgess/Concentric
 - Hoyt/Sector
 - Harris and Ullman/Multiple nuclei
 - Modern American-western city
 - Third World city
 - South African city-changing urban patterns and land use

Urban Settlement Issues

- Recent urbanisation patterns in South Africa
- Urban issues related to rapid urbanisation
 - Inner city problems
 - Urban blight
 - Traffic congestion
 - Lack of planning
 - Overcrowding
 - Housing shortages
 - Service provision
- Informal settlements
 - Growth of informal settlements
 - Issues associated with informal settlements
 - Strategies to address issues relating to informal settlements
 - Case studies from the world and South Africa
- Case studies on how selected urban areas in South Africa are managing urban challenges
 - Environmental injustices
 - Air pollution
 - Noise pollution
 - Destruction of ecosystems
 - Economic injustices
 - Poverty
 - Poor public transport systems
 - Social injustices
 - Unequal access to services
 - Unequal access to resources

3.1.4 Economic Geography of South Africa

The Structure of the Economy

- Economic sectors - definitions and examples
 - Primary activities
 - Secondary activities
 - Tertiary activities
 - Quaternary activities
- Contribution of economic sectors to the South African economy
 - Value/Contribution to GNP and GDP
 - Employment
- Use/Interpretation of statistical and graphical information

Agriculture

- Contribution of agriculture to South African economy
- The role of small-scale farmers and large-scale farmers
- Main products produced
 - Cattle
 - Maize
 - Sugar cane
 - Home market
 - Export market
- Apply factors favouring agriculture in South Africa to main products produced
- Apply factors hindering agriculture in South Africa to main products produced
- Food security/Food insecurity
 - Definition
 - Importance of food security in South Africa
 - Factors influencing food security in South Africa
- Case studies related to food security in South Africa

Mining

- Contribution of mining to South African economy
- Significance of mining to development in South Africa
- Main products produced
 - Coal
 - Gold
 - Platinum
- Apply factors favouring mining in South Africa to main minerals mined
- Apply factors hindering mining in South Africa to main minerals mined
- Case study of one of South Africa's main minerals in relation to the above

Secondary and Tertiary Sectors

- Contribution of secondary activities to South African economy
- Types of industries
 - Heavy and light
 - Raw material orientated
 - Market orientated
 - Footloose industries
 - Ubiquitous industries
 - Bridge industries/break of bulk industries
- Factors favouring industrial development in South Africa
 - Raw materials
 - Labour supply
 - Water supply
 - Energy supply
 - Transport
 - Political intervention
 - Competition
 - Trade
- Factors hindering industrial development in South Africa
 - Overconcentration
 - Transport
 - Air pollution
 - Labour supply
 - Water supply
 - Raw materials
 - Political interference
 - Competition
 - Trade

- Four core industrial areas of South Africa
 - PWV (Gauteng)
 - Durban-Pinetown (eThekweni)
 - Port Elizabeth-Uitenhage (Nelson Mandela Metropole)
 - South-western Cape
 - Map showing location
 - Factors favouring their location
 - Main industrial activities
 - South African case studies to illustrate the above
- Strategies for industrial development in South Africa
 - Overview of apartheid and post-apartheid industrial development strategies
 - The Good Hope Plan (apartheid)
 - The Reconstruction and Development Programme (RDP) (post-apartheid)
 - Growth, Employment and Redistribution (GEAR) (post-apartheid)
 - Concept and distribution of Industrial Development Zones (IDZs)
 - Case studies of two Spatial Development Initiatives (SDIs)
 - Maputo Development Corridor
 - Wild Coast
 - Issues related to industrial centralisation and decentralisation
- Contribution of tertiary activities to South African economy
 - Definition of tertiary activities
 - Examples of tertiary activities
 - Interpretation of graphs and tables
 - Case studies of contribution of tertiary activities to South African economy

The Informal Sector

- Concept of informal sector employment
- Characteristics of informal sector employment
- Reasons for high informal sector employment in South Africa
- Challenges facing South Africa's informal sector
- Importance/role of the informal sector in the economy
- Strengthening the informal sector
- Case studies to illustrate the above in the South African Context

3.2 PAPER 2 (GEOGRAPHIC SKILLS AND TECHNIQUES)

3.2.1 1 : 50 000 Topographic Maps

All the geographical skills and knowledge studied in Grades 10 and 11 are relevant to Grade 12.

Map Work Techniques

These concepts should be taught in an integrated fashion.

- Contour lines, contour interval and height and conventional signs
- Compass direction
- True/geographic bearing
- Magnetic declination and bearing
- Map scale – types of scales and comparing the scales of topographic maps, orthophoto maps and aerial photographs
- Calculating straight-line distance in reality
- Calculating area of regular features
- Map reference numbers/map index
- Alphanumeric reference/grid reference
- Map coordinates/fixing position – stating the coordinates
- Calculation and interpretation of gradient
- Cross-sections – drawing of cross-sections, indicating position of features on cross-sections and identifying features represented by cross-sections
- Intervisibility
- Calculating vertical exaggeration

Topographic Map Application

- Interpretation of 1 : 50 000 topographic maps
 - Interpreting physical features, e.g. relief, drainage, climate and vegetation
 - Interpreting cultural features, e.g. settlement, land-use and transport networks
- Application of all aspects of syllabus covered in the theoretical section of Geography
- Interpreting of temperature, rainfall, climate zones and biomes, graphs and tables that are related to the 1 : 50 000 topographic map and the 1 : 10 000 orthophoto map being assessed

Photographs

- Types of photographs
- Advantages and disadvantages of different types of photographs
- Orthophoto maps
- Interpreting size, shape, tone, texture, shadow and patterns of vertical aerial photographs to identify features, landforms and activities on photographs and orthophoto maps
- Orientation of orthophoto map to topographic map
- Compare orthophoto maps to topographic maps
- All techniques mentioned under map work techniques applicable to orthophoto maps

Orthophoto Map Application

- Interpretation of 1 : 10 000 orthophoto maps
 - Interpreting physical features e.g. relief, drainage, climate and vegetation
 - Interpreting cultural features e.g. settlement, land-use and transport networks
- Application of all aspects of syllabus covered in the theoretical section of Geography

3.2.2 Map Projections

- Types of map projections
 - Mercator
 - Gauss Conformal
- Types of maps
 - Reference maps
 - Thematic maps – defining, identifying and interpreting of different types of thematic maps with the aid of atlases

3.2.3 Geographical Information Systems (GIS)

- Concepts of
 - GIS
 - Remote sensing
 - Resolution
 - Pixels
 - Spatial and spectral resolution
 - Spatial and attribute data
 - Vector and raster data
 - Spatial objects
 - Points/nodes
 - Lines
 - Area/polygons
- Concept of layering of information
- Components of GIS
- Sources of information for GIS
- Data manipulation and analysis
 - Concept of data manipulation
 - Data integration
 - Buffering
 - Querying
 - Statistical analysis
- Data standardisation
- Data sharing
- Data security
- Application of GIS by the
 - Government
 - Private sector
- Developing a 'paper GIS' from existing maps, photographs and other sources of information on layers of tracing paper
- Identify and interpret concepts by using given data such as satellite images, topographic maps, orthophoto maps, aerial photographs, pictures and statistics indicated on graphs and tables

CHAPTER 4: GENERAL GUIDELINES FOR MARKING

4.1 PAPER 1

- Definitions should be marked looking at the concept. Definitions should not be marked verbatim as given in textbooks.
- Allocate ticks next to the fact/information for which marks are awarded.
- The entire answer must be marked. Do not look at the first facts/information provided and allocate marks e.g. 0 (nil). There may be correct facts/information later in the answer and marks must be awarded for those.
- Read the answer properly. Correct answers may be provided that are not on the memorandum/marketing guideline. Candidates must be awarded marks for these answers.
- When marking paragraph style questions, ensure that candidates write full sentences and not answer in point form.
- No negative marking is allowed.

4.2 PAPER 2

- Definitions should be marked looking at the concept. Definitions should not be marked verbatim as given in textbooks.
- Allocate ticks next to the fact/information for which marks are awarded.
- The entire answer must be marked. Do not look at the first facts/information provided and allocate marks e.g. 0 (nil). There may be correct facts/information later in the answer and marks must be awarded for those.
- Read the answer properly. Correct answers may be provided that are not on the memorandum/marketing guideline. Candidates must be awarded marks for these answers.
- No negative marking is allowed.
- Calculations:
 - Marks may be awarded for providing the correct formula, if the formula is not given.
 - Marks will be provided for the correct substitution of values in the formula.
 - When an error is made during substitution into a correct formula, a mark will be awarded for the correct formula and for the correct substitutions, but no further marks will be given.
 - Marks will be awarded for the correct answer.
 - If the answer is incorrect, the calculation must be marked from the top and marks must be awarded up to the point where the candidate calculated incorrectly.
 - If a unit is required, e.g. kilometres, the answer must be marked wrong if it is not provided. However, marks must be awarded for all the steps in the calculation leading up the answer.
 - Marks are only awarded for a formula if a calculation has been attempted, i.e. substitutions have been made or a numerical answer is given.
 - All calculations, when not specified in the question, must be done to a minimum of ONE decimal place.
 - If a final answer to a calculation is correct, full marks may be awarded if the candidate shows the formula, substitutions and calculation steps. If the candidate only writes down the answer, marks will only be awarded for the answer.

CHAPTER 5: CONCLUSION

This Examination Guidelines document is meant to articulate the assessment aspirations espoused in the CAPS document. It is therefore not a substitute for the CAPS document which educators should teach to.

Qualitative curriculum coverage as enunciated in the CAPS cannot be over-emphasised.