



# basic education

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Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **CIVIL TECHNOLOGY**

## **EXAMINATION GUIDELINES**



**GRADE 12**

**2021**

**These guidelines consist of 10 pages.**

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**THIS GUIDELINE DOCUMENT IS *NOT* A WORK SCHEDULE.  
IT DOES *NOT* REPLACE THE CONTENT IN THE CAPS DOCUMENT**

## 1. INTRODUCTION

The *Curriculum and Assessment Policy Statement (CAPS)* for Civil Technology outlines the nature and purpose of the subject Civil Technology. 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 National Senior Certificate Examination in Civil Technology
- Assist teachers to adequately prepare learners for the examinations

This document deals with the final Grade 12 external examinations. It does not deal in any depth with the school-based assessment (SBA), performance assessment tasks (PATs) or final external practical examinations as these are clarified in a separate PAT document which is updated annually.

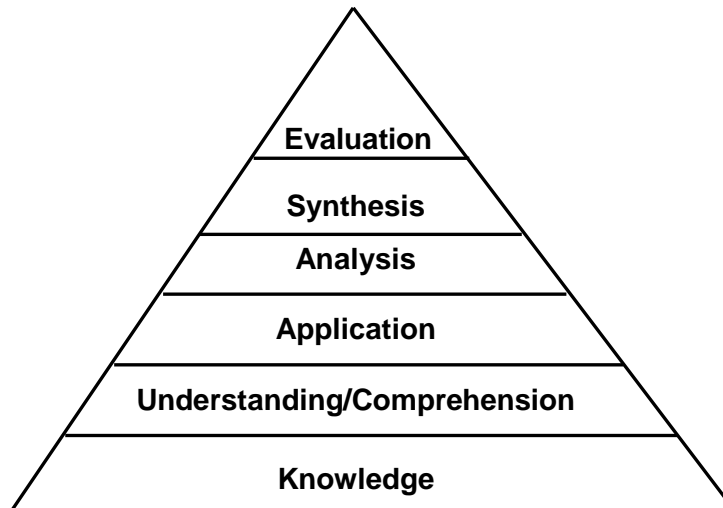
These guidelines should be read in conjunction with:

- The *National Curriculum Statement (NCS) Curriculum and Assessment Policy Statement (CAPS): Civil Technology*
- The National Protocol of Assessment: *An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding the National Protocol for Assessment (Grades R–12)*
- National policy pertaining to the programme and promotion requirements of the *National Curriculum Statement, Grades R to 12*



## 2. COGNITIVE LEVELS

Bloom's Taxonomy consists of six levels, as shown below.



The following cognitive levels, examples of verbs and weightings are applicable to Civil Technology:

COGNITIVE LEVELS – THINKING SKILLS REQUIRED			
LEVELS OF COGNITIVE DEMAND	TYPES OF COGNITIVE DEMAND	EXAMPLES OF VERBS/ACTION WORDS	WEIGHTING
Lower order	<b>Knowledge</b> Memorise and recall information	Arrange; Choose/Select; Define; Describe; Find; Identify; Label; List/Notate; Name; Recognise; Repeat; State	30%
	<b>Comprehension</b> Understand/Interpret information in one's own words	Classify; Comprehend; Choose/Select; Define; Describe; Discuss; Distinguish; Explain; Generalise; Indicate; Illustrate; Infer; Interpret; Match; Make; Outline; Paraphrase/Revise; Restate; Summarise	
<b>Application:</b> Apply knowledge to new situations		Apply; Adapt; Calculate; Compare; Complete; Determine; Discover; Draw; Explain; Gather; Identify; Illustrate; Modify; Operate; Prepare; Show; Sketch; Solve; Use	

<b>Higher order</b>	<b>Analysis</b>	Analyse; Classify; Categorise; Compare; Contrast; Differentiate; Critique; Discriminate; Distinguish; Examine; Investigate; Test	20%	
	<b>Synthesis</b>	Arrange; Assemble; Combine; Compose; Construct; Create; Depict; Design; Develop; Find errors/Find out; Formulate; Incorporate; Integrate; Invent; Organise; Plan; Problem solving; Produce; Structure		
	<b>Evaluation</b>	Appraise; Assess; Comment on; Compare; Critically analysis; Conclude; Explain; Evaluate; Interrogate; Infer; Judge; Predict; Recommend; Study		
	Breakdown knowledge into parts and show relationship between parts.	Bring together parts of knowledge to form a whole.  Build relationships for new situation	Make judgments on basis of criteria	

**NOTE:** The level of difficulty will not be determined by the verb used but rather by the context of the question/content assessed.

### 3. STRUCTURE OF THE QUESTION PAPER

These examination guidelines have been compiled in line with the CAPS document (issued in 2014) that focuses on specialisation in technical subjects.

These guidelines should be used in conjunction with the content outline per term and Section 4 of the CAPS document for Grade 12 Civil Technology. The *SANS/SABS Code of Practice for Building Drawings* must also be adhered to. The duration of the final examination paper is 3 hours. The maximum mark is 200 and the paper will consist of SIX questions. The summative assessment (examinations) will cater for a range of cognitive levels and abilities of learners.

- In EACH specialisation, the GENERIC part consists of the same questions and the same weighting. This part consists of TWO questions.
- In EACH specialisation, the SPECIFIC part focuses only on content applicable to that specialisation. This part consists of FOUR questions.

There will be SEPARATE question papers for EACH of the specialisations. There will be SIX questions in each paper. Candidates must answer ALL SIX the questions in the paper.

## 3.1 Construction – Structure of the question paper

QUESTION	CONTENT	TOTAL MARKS	TIME
<b>GENERIC – SECTION A</b>			
1	OHSA, Safety	20	18 minutes
	Materials		
	Tools and Equipment		
	Joining		
2	Interpretation of advanced drawings: <ul style="list-style-type: none"> <li>• Site plan, floor plan and elevation of multi-storey buildings (including calculations of area, perimeter and length of a wall by deducing dimensions from the given drawings)</li> <li>• Basic drawing symbols relating to the built environment in accordance with the <i>SANS for Building Drawings</i> (candidates must be able to interpret draw basic drawing symbols relating to the built environment)</li> </ul>	40	36 minutes
<b>SUBJECT SPECIFIC – SECTION B</b>			
3	Roofs	30	27 minutes
	Staircases		
	Joining (Subject specific)		
4	Excavations	40	36 minutes
	Formwork		
	Tools and Equipment (Subject specific)		
	Materials (Subject specific)		
5	Plaster and screed	30	27 minutes
	Brickwork		
	Graphics as Means of Communication		
6	Reinforcement in Concrete	40	36 minutes
	Foundations		
	Concrete Floors		
	Quantities (Subject specific)		
<b>GRAND TOTAL:</b>		<b>200</b>	<b>180 minutes</b>

3.2 Civil services – Structure of the question paper

QUESTION	CONTENT	TOTAL MARKS	TIME
<b>GENERIC – SECTION A</b>			
1	OHSA, Safety	20	18 minutes
	Materials		
	Tools and Equipment		
	Joining		
2	Interpretation of advanced drawings: <ul style="list-style-type: none"> <li>Site plan, floor plan and elevation of multi-storey buildings (including calculations of area, perimeter and length of a wall by deducing dimensions from the given drawings)</li> <li>Basic drawing symbols relating to the built environment in accordance with the <i>SANS for Building Drawings</i> (candidates must be able to interpret basic drawing symbols relating to the built environment)</li> </ul>	40	36 minutes
<b>SUBJECT SPECIFIC – SECTION B</b>			
3	Construction Associated with Civil Services	30	27 minutes
	OHSA, Safety (Subject specific)		
	Quantities (Subject specific)		
4	Cold-water Supply	40	36 minutes
	Hot-water Supply		
	Tools and Equipment (Subject specific)		
	Materials (Subject specific)		
5	Graphics as Means of Communication (Pattern Development)	30	27minutes
	Roof Work		
	Storm Water		
6	Above-ground Drainage (Sewerage)	40	36 minutes
	Below-ground Drainage (Sewerage)		
	Sanitary Fitments		
	Joining (Subject specific)		
<b>GRAND TOTAL:</b>		<b>200</b>	<b>180 minutes</b>

**3.3 Woodworking – Structure of the question paper**

QUESTION	CONTENT	TOTAL MARKS	TIME
<b>GENERIC – SECTION A</b>			
1	OHSA, Safety	20	18 minutes
	Materials		
	Tools and Equipment		
	Joining		
2	Interpretation of advanced drawings: <ul style="list-style-type: none"> <li>Site plan, floor plan and elevation of multi-storey buildings (including calculations of area, perimeter and length of a wall by deducing dimensions from the given drawings)</li> <li>Basic drawing symbols relating to the built environment in accordance with the <i>SANS for Building Drawings</i> (candidates must be able to interpret basic drawing symbols relating to the built environment)</li> </ul>	40	36 minutes
<b>SUBJECT SPECIFIC – SECTION B</b>			
3	Casements	30	27 minutes
	Cupboards		
	Wall-panelling		
	Quantities (Subject specific)		
4	Roofs	40	36 minutes
	Ceilings		
	Tools and Equipment (Subject specific)		
	Materials (Subject specific)		
5	Centering	30	27 minutes
	Formwork		
	Shoring		
	Graphics as Means of Communication		
6	Suspended Floors	40	36 minutes
	Staircases		
	Ironmongery		
	Doors		
	Joining		
<b>GRAND TOTAL:</b>		<b>200</b>	<b>180 minutes</b>



#### 4. TYPES OF QUESTIONS TO BE SET IN A CIVIL TECHNOLOGY QUESTION PAPER

The question paper will consist of various types of questions including, but not limited to, the following:

- Matching items
- Multiple choice
- Give ONE word/term for each of the following descriptions by choosing a word/term from the list below.
- Questions where candidates will have to be able to state facts, compare, differentiate, describe, explain concepts and identify faults with recommendations and statements.
- Drawings and sketches related to the curriculum in order to demonstrate the compilation, working principles and other aspects of subject matter.

#### 5. SCHOOL-BASED ASSESSMENT (SBA)

Section 4 Assessment: On page 106 the weighting of Grade 12 SBA marks is incorrectly indicated in the Civil Technology CAPS. The weighting should be 5 of the 25 (20%) for term 1 test and 10 out of 25 (40%) for the June and preparatory exams respectively.

SBA marks for Civil Technology need to be calculated as indicated above.

#### 6. GENERAL REMARKS

**6.1** Candidates need to be aware that markers can only mark what the candidate wrote. Markers may not interpret what they think the candidate meant. It is therefore very important that candidates write well-constructed sentences and structure responses in a logical and chronological manner.

Correct subject terminology need to be enforced as marks is not awarded for incorrect subject terminology.

**6.2 For calculations:**

- A mark is only awarded if the correct unit is written next to the answer.
- Where the candidate made a principle error, e.g. added instead of multiplying, no marks will be awarded for the calculation.

**6.3 For drawings:**

- The member for which the mark should be awarded should be drawn correctly in the correct position to receive a mark.
- Marks can only be awarded for a label if the label indicates the correct member.

**6.4 When a candidate drew the wrong drawing, e.g.:**

- A horizontal section instead of a vertical section, no marks will be allocated for the drawing as the candidate did not respond to the expected outcome.
- An orthographic view instead of sectional view, no marks will be allocated to the drawing as the candidate did not respond to the expected outcome.
- An orthographic view instead of an isometric view, no marks will be allocated to the drawing as the candidate did not respond to the expected outcome.

## 7. 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 teachers should teach to.

Qualitative curriculum coverage as enunciated in the *CAPS* cannot be overemphasised.

