



# basic education

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

## **COMPUTER APPLICATIONS TECHNOLOGY**

### **EXAMINATION GUIDELINES**

**GRADE 12**

**2014**

**These guidelines consist of 20 pages.**

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## 1. INTRODUCTION

The Curriculum and Assessment Policy Statement (CAPS) for Computer Applications Technology outlines the nature and purpose of the subject Computer Applications 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 Computer Applications 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), Practical Assessment Tasks (PATs) or final external practical examinations, as these are clarified in a separate PAT document which is updated annually.

These Examination Guidelines should be read in conjunction with:

- The *National Curriculum Statement (NCS) Curriculum and Assessment Policy Statement (CAPS): Computer Applications 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)*
- The national policy pertaining to the programme and promotion requirements of the National Curriculum Statement, Grades R–12

## 2. ASSESSMENT IN GRADE 12

### 2.1 Format of question papers

The CAT examinations consist of two papers.

#### 2.1.1 Paper 1: 3-hour practical examination (180 marks)

- Preparation of the computer centre for this practical examination needs to comply with the requirements laid down by the Department of Basic Education. These requirements are found in the *National policy on the conduct, administration and management of the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF) – ANNEXURE G*.
- The questions in this question paper are based on the following main application packages studied over the 3-year CAT course:
  - Word processing
  - Spreadsheets
  - Databases
  - HTML coding (using an HTML editor such as Notepad ++)

**NOTE:** These four applications are infused with the aspects of file and folder management.

- The question paper is an externally set examination. The question paper is normally written at the beginning of the Grade 12 final examination period.
- The candidates' answers are marked and moderated at provincial marking centres.

#### 2.1.2 Paper 2 – 3-hour theory examination (150 marks)

- The questions in this examination are based on the theoretical aspects of Information and Communication Technologies (ICT).
- The question paper is externally set.
- The candidates' answer books are marked and moderated at provincial marking centres.
- The question paper may also assess newer concepts in technology, not specifically mentioned in the CAPS document. This would not exceed 10% of the question paper. Schools and teacher will be informed of the aspects that will be tested at the beginning of the year. (See point 4 for the new technologies that will be tested in 2014.)

The table below summarises the Grade 12 assessment programme.

| NATURE OF ASSESSMENT   | PERIOD   | MARK ALLOCATION                             |
|--|--|---|
| School-based Assessment (SBA)<br>4 tests<br>2 exams as outlined in the CAPS document (page 50) | Throughout the Grade 12 year<br>Mid-year and Trial in the 3rd term | 25% of the final mark                       |
| Practical Assessment Task (PAT)<br>Externally set, internally marked                           | Throughout the Grade 12 year                                       | 25% of the final mark                       |
| Paper 1 – Practical Examination<br>(externally set)<br>3 hours                                 | End of year  | 180<br>(converted to 25% of the final mark) |
| Paper 2 – Theory Examination<br>(externally set)<br>3 hours                                    | End of year  | 150<br>(converted to 25% of the final mark) |

## 2.2 Cognitive levels

The question papers, i.e. Paper 1 and Paper 2, will assess different cognitive levels and levels of difficulty within each cognitive level. The cognitive levels are based on Bloom's Revised Taxonomy.

### 2.2.1 Paper 1 – Practical examination

For the purposes of CAT, the cognitive levels used for Paper 1 are as follows:

| LEVEL | TAXONOMY  | DESCRIPTION   |
|-------|---|---|
| L1    | <b>Routine procedures</b><br>Knowledge<br>Remembering         | Elementary procedures found in the application packages. These could include basic formatting, basic calculations, basic file actions and specific instructions, such as inserting a table.   |
| L2    | <b>Multi-step procedures</b><br>Understanding<br>Applying     | Extended tasks/actions/procedures. These could include reproduction of documents, more complex instructions, longer calculations and multi-step procedures, such as performing a mail merge.  |
| L3    | <b>Problem-solving</b><br>Analysing<br>Evaluating<br>Creating | These will comprise multi-step actions/strategies/procedures where candidates will be required to create their own solutions to challenges different to those learners may have encountered in the classroom. These could include analysing documents, advanced file actions, advanced calculations and interpretation and decision-making. |

Within each of the cognitive levels (L1, L2 and L3) there will be differences in the level of difficulty.

The percentages for each level of difficulty within each cognitive level are shown in the table below.

|       | EASY  | MODERATE | DIFFICULT | TOTAL |
|-------|-------|----------|-----------|-------|
| L1    | ± 5%  | ± 10%    | ± 15%     | 30%   |
| L2    | ± 10% | ± 20%    | ± 10%     | 40%   |
| L3    | ± 15% | ± 10%    | ± 5%      | 30%   |
| Total | 30%   | 40%      | 30%       | 100%  |

### 2.2.2 Paper 2 – Written examination (Theory)

The cognitive levels used for Paper 2 are based on Bloom's Revised Taxonomy as follows:

| LEVEL | BLOOM'S REVISED TAXONOMY | DESCRIPTION  |
|-------|--------------------------|--|
| L1    | Remembering              | Recalling previously learnt information (bookwork)   |
| L2    | Understanding            | Comprehending and explaining ideas or concepts   |
|       | Applying                 | Using what has been learnt and relating this to comparable situations  |
| L3    | Analysing                | Breaking information into parts to explore understandings and relationships                                      |
|       | Evaluating               | Making judgements and justifying a decision or course of action  |
|       | Creating                 | Generating new ideas, solutions, or ways of viewing concepts<br>Constructing new meaning out of diverse elements |

Within each of the cognitive levels (L1, L2 and L3) there will be differences in the level of difficulty.

The percentages for each level of difficulty within each cognitive level are shown in the table below.

|       | EASY  | MODERATE | DIFFICULT | TOTAL |
|-------|-------|----------|-----------|-------|
| L1    | ± 5%  | ± 10%    | ± 15%     | 30%   |
| L2    | ± 10% | ± 20%    | ± 10%     | 40%   |
| L3    | ± 15% | ± 10%    | ± 5%      | 30%   |
| Total | 30%   | 40%      | 30%       | 100%  |

### 3. ELABORATION OF THE CONTENT FOR GRADE 12 (CAPS)

The extent of the content and mark allocation of each question paper and the Practical Assessment Task is shown below.

#### 3.1 Paper 1 – Practical examination (3 hours)

| TOPIC           | MARKS            | CONTENT/FOCUS  | DURATION | Weighting of questions across cognitive levels |     |     |
|-----------------|------------------|--|----------|--|-----|-----|
|                 |                  |  |          | L1   | L2  | L3  |
| Word processing | ± 50             | One or more main questions containing subquestions related to the content, concepts and skills in word processing  | 3 hours  | 30%  | 40% | 30% |
| Spreadsheets    | ± 50             | One or more main questions containing subquestions related to the content, concepts and skills in spreadsheets   |          |  |     |     |
| Databases       | ± 40             | One or more main questions containing subquestions related to the content, concepts and skills in databases  |          |  |     |     |
| Web Development | ± 20             | One or more main questions containing subquestions related to the content, concepts and skills in web development<br><br>An information sheet with HTML tags will be provided for use with the question on web development |          |  |     |     |
| General         | ± 20             | Integration and application of techniques, knowledge and procedural skills   |          |  |     |     |
| TOTAL           | <b>180 marks</b> |  |          |  |     |     |

#### NOTES:

- Refer to the CAPS page 12 for a broad overview, and pages 19–46 for the specific content relating to the content and scope per topic.
- Features common to all packages, such as printing options, basic file handling, the use of templates, screenshots, passwords and file protection could be included across some or all of the sections as required.
- In most cases the relevant data files will be provided, although candidates can be asked to export or to create a new file or object within a file.
- Candidates will not be required to enter any lengthy amounts of data or text and the accuracy of text input will not be assessed.

**3.2 Paper 2 – Theory examination (3 hours)**

| PAPER 2 – THEORY            |  | MARK ALLOCATION | CONTENT/FOCUS  |
|-----------------------------|--|-----------------|--|
| <b>SECTION A</b>            |  |                 |  |
| <b>Questions 1, 2 and 3</b> | <b>Short Questions</b>                   | <b>± 25</b>     | This section will include all or some of the following: <ul style="list-style-type: none"> <li>• Multiple-choice questions covering all topics</li> <li>• Matching-items questions covering all topics</li> <li>• Modified True/False questions covering all topics</li> </ul>   |
| <b>SECTION B</b>            |  |                 |  |
| <b>Question 4</b>           | <b>Systems Technologies</b>              | <b>± 25</b>     | Questions relating to the content, concepts and skills in the topic as listed in the CAPS document, including (but <b>NOT</b> limited to): <ul style="list-style-type: none"> <li>• Computer hardware in all its different forms and configurations</li> <li>• Peripheral devices, such as printers, routers, scanners, etc.</li> <li>• System and application software</li> <li>• Network hardware and software</li> <li>• Housekeeping and management of computing devices</li> <li>• Basic troubleshooting, etc.</li> </ul> Refer to pages 19–46 of the CAPS document for a detailed list of possible topics that may be asked in this section. |
| <b>Question 5</b>           | <b>Internet and Network Technologies</b> | <b>± 15</b>     | Questions relating to the content, concepts and skills in the topic as listed in the CAPS document, including (but <b>NOT</b> limited to): <ul style="list-style-type: none"> <li>• What is a network and why would one want to use a network?</li> <li>• Types of networks</li> <li>• The Internet and Internet services and the World Wide Web</li> <li>• Websites, web technologies and browsers</li> <li>• E-communications, including e-mail, instant messaging, etc.</li> </ul> Refer to pages 19–46 of the CAPS document for a detailed list of possible topics that may be asked in this section.  |
| <b>Question 6</b>           | <b>Information Management</b>            | <b>± 10</b>     | Questions relating to the content, concepts and skills in the topic as listed in the CAPS document, including (but <b>NOT</b> limited to): <ul style="list-style-type: none"> <li>• Formulation of key questions to locate data and direct problem-solving</li> <li>• Choosing, locating and accessing appropriate data sources</li> <li>• Checking the quality and accuracy of data</li> <li>• Data-processing</li> <li>• Interpretation of data and information, etc.</li> </ul> Refer to pages 19–46 of the CAPS document for a detailed list of possible topics that may be asked in this section.   |



|                   |                             |                  |   |
|-------------------|-----------------------------|------------------|---|
| <b>Question 7</b> | <b>Social Implications</b>  | <b>± 10</b>      | <p>Questions relating to the content, concepts and skills in the topic as listed in the CAPS document, including (but <b>NOT</b> limited to):</p> <ul style="list-style-type: none"> <li>• The impact of ICT on society</li> <li>• Legal, ethical and security issues related to the use of ICTs</li> <li>• Educational and ergonomic issues</li> <li>• Environmental issues, including green computing, etc.</li> </ul> <p>Refer to pages 19–46 of the CAPS document for a detailed list of possible topics that may be asked in this section.</p> |
| <b>Question 8</b> | <b>Solution Development</b> | <b>± 15</b>      | <p>Questions focussing on the knowledge, understanding and development of solutions using application software. These questions will essentially revolve around the theoretical aspects of the applications studied.</p>  |
| <b>SECTION C</b>  |                             |                  |   |
| <b>Question 9</b> | <b>Integrated Scenario</b>  | <b>± 50</b>      | <p>Candidates will be presented with a real-life scenario on which questions covering all topics will be examined. The questions will assess candidates' understanding of the technologies, their ability to make informed decisions ranging from choice of technology, application software to be used, networking, etc., through to the responsible use of such technologies.</p>   |
| <b>TOTAL</b>      |                             | <b>150 marks</b> |   |

**NOTES:**

- The content listed in the table above is NOT an exhaustive list of all the content – also refer to the CAPS document which contains a list of all possible content to be covered.
- Some of the topics fall into two or more focus areas, so learners might be examined in different sections/questions from year to year, depending on examiner's discretion.

### 3.3 EXAMPLE OF PRACTICAL COGNITIVE LEVELS

These examples are subject to the phrasing of the question, the context in which the instruction is given, the difficulty level of the content tested etc. This is a guideline document that can be used as an example for the classification of level and is subject to change.

| CAT Practical Content | Lower Order<br><i>Knowledge/Remembering</i><br><b>Routine Procedures</b>   | Middle Order<br><i>Understanding/Application</i><br><b>Multi-step Procedures</b>  | Higher Order<br><i>Analysing/Evaluating/Creating</i><br><b>Problem-solving</b>   |
|-----------------------|--|---|--|
| Word processing       | <ul style="list-style-type: none"> <li>• <b>Basic formatting</b>, such as bold, insert simple table, set margins, insert bullets/numbers, page break, insert page number, change orientation, copy and paste, use styles from gallery, insert cover page from – 'one-two-click'/ straightforward actions</li> <li>• <b>Basic file actions</b>, simple, straightforward actions, e.g. save, save as, print</li> <li>• <b>Specific instructions</b> that tell 'what' and 'how to', e.g. insert table, 3 columns, 10 rows, merge first row, shade specific cell, change font size to 12 pt</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Reproduce a smaller part of a document deciding on appropriate basic steps to achieve a desired result, e.g.:</b> <ul style="list-style-type: none"> <li>○ Give screenshot of e.g. scissors symbol with dotted line and ask to reproduce. Learners will have to figure out and decide how to do correctly and effectively, e.g. symbol and tab stop with leader line (limited number of things to figure out and do)</li> <li>○ Provide images to reproduce without specific instructions of how to – learners must figure out</li> <li>○ Provide image of a table where some cells are merged, shaded, customised borders, etc. that learners have to reproduce</li> </ul> </li> <li>• <b>General instructions to reproduce</b>, e.g. use paragraph borders, drop-down and check box controls and appropriate spacing to reproduce the above</li> <li>• <b>Multi-step procedures</b>, e.g.           <ul style="list-style-type: none"> <li>○ General customising, e.g. outline numbering, customising bullets, change number formats, start at different number, headers and footers, different sections with different page formatting,</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>Analyse, figure out a larger part of a document given as a screenshot to reproduce by applying best and appropriate functions and techniques, e.g.</b> <ul style="list-style-type: none"> <li>○ Provide a screenshot of a completed word document such as a form or brochure, e.g. should have different sections with different formatting, e.g. portrait switching to landscape, part of page no column, next part two columns, then one column again, etc. (various skills to reveal and accomplish)</li> </ul> </li> <li>• <b>Advanced file actions</b>, e.g. changing/ customising <b>file options</b> (display, save, language, proofing, advanced)</li> <li>• Ask to <b>use appropriate principles and techniques</b> to:           <ul style="list-style-type: none"> <li>○ Fit on one page, e.g. without decreasing font (could give some limitations – what learners e.g. may not use)</li> <li>○ <b>Improve</b> a given document for better understanding, readability, specific purpose, meet specific requirements</li> <li>○ <b>Make</b> a given document <b>accessible</b>, e.g. for visually impaired (when printed or used electronically/using screen</li> </ul> </li> </ul> |

etc.

- Create a new style or changing a style
- Paste special, deciding which options to use to achieve specific result
- Table of contents with document given where headings are done in styles
- Bookmarks
- Mail merge
- Permissions and restrictions

readers)

- **Create** a document, where, for example, you provide questions for a survey and ask learners to create the survey, using the questions. Give instruction that it should be an 'electronic' form, certain parts should not be accessible by respondent, etc. Learners will need to group questions appropriately, figure out which controls to use where, how to protect parts, etc.
- Auto Table of Contents, e.g. where headings are not done with styles

| CAT Practical Content | Lower Order<br><i>Knowledge/Remembering<br/>Routine Procedures</i>  | Middle Order<br><i>Understanding/Application<br/>Multi-step Procedures</i>   | Higher Order<br><i>Analysing/Evaluating/Creating<br/>Problem-solving</i>  |
|-----------------------|---|--|---|
| Spreadsheet           | <ul style="list-style-type: none"> <li>• <b>Basic formatting</b>, such as bold, add a simple data table to a chart, set margins, insert symbols, page break, insert page number, add worksheet, change orientation, copy and paste, fill simple series, etc. – 'one-two-click'/straightforward actions</li> <li>• <b>Basic calculations</b> using common, straightforward functions in one row/column, in simple scenarios, e.g. functions that only include a range/list of cell references/list of text or values (e.g. SUM, MAX, MIN, AVERAGE) or formula to substitute any one of these functions or functions that include only empty brackets or simple calculations using only 1 arithmetic operator (+, -, *, /)</li> <li>• <b>Basic file actions</b>, e.g. save as</li> <li>• <b>Specific instructions</b> that tell 'what' and 'how to', e.g. create spreadsheet table using the following headings, merge first row, shade this cell, add first column, calculate by telling exactly how, simple sort according to column A, create simple graph on the basis of instructions regarding specific data to use, etc.</li> <li>• <b>Simple conditional formatting</b> (only &gt;, &lt;, =, etc.) using simple formatting</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Reproduce a smaller part of a spreadsheet deciding on appropriate basic steps to achieve a desired result, for example:</b> <ul style="list-style-type: none"> <li>○ Give screenshot of e.g. invoice with simple logo and different cell borders, shading, merged cells, text wrapping, etc. and ask to reproduce. Learners will have to figure out borders and shading, layout (limited number of things to figure out and do)</li> <li>○ Provide images (e.g. currency converter with one result row/column) to reproduce with general instructions (not specific 'how to' – learners must figure out formatting as well as calculation for results (simple, known type of calculations)</li> <li>○ Provide image of spreadsheet showing simple incorrect formula/function and incorrect results. Short description of what should have been achieved, ask to correct</li> </ul> </li> <li>• <b>General instructions</b> to reproduce, e.g. use cell borders, appropriate image/graphics, average function and appropriate layout to reproduce the above</li> <li>• <b>Longer (multi-step)/intermediate/less common calculations</b>, e.g. using data from two or more rows/columns, less</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Analyse, figure out larger part of a spreadsheet given as a screenshot to reproduce by applying best and appropriate functions and techniques, for example:</b> <ul style="list-style-type: none"> <li>○ Provide data in e.g. Word processing table format, a screenshot of a completed spreadsheet, well formatted using different types of formatting with various results, etc. Learners should import data, figure out formatting, figure out calculation in a column, graph, etc.</li> </ul> </li> <li>• <b>Advanced calculations</b>, e.g. calculations using a combination of different types of operators, brackets <i>and</i> other functions or calculations using date/time functions, or functions including a range/list of cell references/text or values plus two or more parameters/criteria, calculations combining more than two other functions, lookup or nested IF function/IF function combining Boolean/relational/arithmetic operators, calculations using problem-solving scenarios</li> <li>• Ask to <b>use appropriate techniques</b> to             <ul style="list-style-type: none"> <li>○ Fit on one page, e.g. without decreasing font (give some limitations, e.g. what learners may not use)</li> <li>○ <b>Improve</b> a given spreadsheet for better understanding, readability</li> </ul> </li> </ul> |

common functions that include only a range/list of cell references/list of text or values, (e.g. MEDIAN, MODE) functions that include a range/list of cell references/list of text or values *plus* one parameter/criterion, or functions using range/list of cell references/text or values plus criterion with one relational operator (e.g. COUNTIF) or simple IF function (IF(test, true, false)) or calculations using a combination of arithmetic/relational operators, brackets or calculations using a combination of two basic functions

- **Multi step procedures**, e.g.
  - **General customising**, e.g. change data types, number/date/time formatting, move or copy sheets, etc.
  - Creating a simple graph, add simple formatting to graph
  - **Custom sort**, e.g. one column, then other column(s)
  - **Customise** conditional formatting, e.g. create new rule
  - Simple summaries
  - Paste special
  - Mail merge
  - Permissions and restrictions

- **Make** given spreadsheet **accessible**, e.g. for visually impaired (when printed/used electronically)
- Provide survey data and ask learners to create spreadsheet to provide certain information/to answer data questions, e.g. provide data questions to answer, such as How many? What is the highest? etc.
- Provide data and ask to **produce appropriate graph** to show specific information
- **Modify/amend** conditional formatting rule to fit specific purpose
- **Create appropriate** graph with appropriate labels for specific purpose
- **Create appropriate** summaries for specific purpose
- Work between sheets/link formulas
- **Interpretation** - interpret data, spreadsheets, graphs
- **Correct** incorrect calculations, functions, graphs, conditional formatting, etc.
- **'Reverse engineering'**, e.g. provide graph with relevant information and recreate

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|-----------------------|---|--|--|
| Databases             | <ul style="list-style-type: none"> <li>• <b>Basic design</b> of a simple table, simple report (no grouping), simple form and simple queries, storing fields</li> <li>• <b>Basic calculations</b> in a report such as count, count(*), sum, average, min and max in simple scenarios, e.g. without groupings</li> <li>• <b>File actions</b>, e.g. rename forms, queries and reports, copy or duplicate table</li> <li>• <b>Specific instructions</b> that tell 'what' and 'how to', e.g. create database, form, query or report using the following headings, shade this field, add new records and fields, calculate by telling exactly how, simple sort according to specific criteria, etc.</li> <li>• <b>Formulation of simple criteria</b> using single operator like greater than, equal to, not equal to, one field only, etc.</li> <li>• <b>Basic sorting and filtering</b> in a database-specific view</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Reproduce a small fragment</b> of a database, e.g. a table, report, form or query, deciding on appropriate basic steps to achieve a desired result. <ul style="list-style-type: none"> <li>○ Give screenshot of a form and report with simple logo and different field borders, shading, etc. and ask to reproduce. Learners will have to figure out borders and shading, layout (limited number of things to figure out and do)</li> <li>○ Provide textboxes (e.g. properties with one result field) to reproduce without specific instructions of how to – learners must figure out formatting as well as calculation for results (simple, known type of calculations)</li> <li>○ Provide image of queries and reports showing simple incorrect criteria and incorrect results. Short description of what should have been achieved, ask to correct</li> </ul> </li> <li>• General instructions to reproduce, e.g. use field borders, appropriate image/graphics, functions and appropriate layout to reproduce the above.</li> <li>• Longer calculations in the report footer, e.g. using data from more than two groupings, combine functions and formulae, etc.</li> <li>• Multi-step procedures, e.g.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Analyse and figure out a larger segment</b> of a database, e.g. report, form or query, given as a screenshot to <b>reproduce</b> by <b>applying best and appropriate functions and techniques</b>, e.g. <ul style="list-style-type: none"> <li>○ Provide data in spreadsheet format, a screenshot of a completed database, well formatted using different types of formatting with various results, etc. Learner should import data, figure out formatting in a form, figure out calculation in a query or report, etc.</li> <li>○ Ask to use appropriate techniques to fit on one page, e.g. without decreasing font (give some limitations, e.g. fitting all the information onto one page e.g. format can shrink or grow)</li> <li>○ Improve a given database for better understanding, readability</li> <li>○ Make given document accessible, e.g. for visually impaired (when printed)</li> <li>○ Create a document, where, for example completed survey data is provided and ask learners to create a query or report and get certain information to answer data questions, e.g. provide data questions to answer, such as How many?, What is the highest?, etc.</li> <li>○ Customise conditional formatting, e.g. new rule, using advanced formatting</li> </ul> </li> <li>• <b>Interpretation</b> – interpret data,</li> </ul> |

- General customising things, e.g. change data types, number/ date/time formatting, perform simple conditional formatting (only >, <, =, etc.) using simple formatting, etc.
  - Custom sort, e.g. using filters
  - Mail merge
  - Permissions and restrictions
  - Import data from spreadsheet or word table, text file
  - Queries using more than one field or combining two operators, or use AND, OR, NOT
  - Report using simple straightforward groupings
  - Basic data validation, simple and straightforward – one or two fields
  - Deciding on appropriate data types and field sizes
- databases, tables, queries and reports
  - **Correct** incorrect calculations, functions in queries, report groupings, etc.
  - **Improve** the data capturing on a given form using input masks, validation rules, default values, etc.
  - **Create** a report based on information not 'directly' provided, e.g. learner first need to perform query before report can be generated
  - **Import** data from CSV file/text file using different types of delimiters – learner needs to figure out
  - **Export** data – learner needs to figure out how
  - **Export** reports and format in new format, e.g. Word
  - **Calculations** in queries
  - **Calculations** in groups (group footer) and at end of report (report footer)
  - **Sorting** report **with groupings** using different levels
  - **Data validation** – more than two fields, more advanced validation

| CAT Practical Content | Lower Order<br><i>Knowledge/Remembering<br/>Routine Procedures</i>  | Middle Order<br><i>Understanding/Application<br/>Multi-step Procedures</i>   | Higher Order<br><i>Analysing/Evaluating/Creating<br/>Problem-solving</i>  |
|-----------------------|---|--|---|
| HTML                  | <ul style="list-style-type: none"> <li>• <b>Create basic webpage</b> with few elements</li> <li>• <b>Basic formatting</b>, such as bold, italic, etc. - one-tag actions</li> <li>• <b>Basic file actions</b>, e.g. save as a web page</li> <li>• <b>Specific instructions</b> that tell 'what' and 'how to', e.g. insert table of 3 columns, 10 rows, etc.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Reproduce a small fragment of a webpage, deciding on appropriate basic steps to achieve a desired result, e.g.</b> <ul style="list-style-type: none"> <li>○ Give screenshot of heading with one or two paragraphs and ask to reproduce. Learners will have to figure out formatting and which tags to use (limited number of things to figure out and do)</li> <li>○ Provide image of table to reproduce. Learners must figure out the alignment, border and cell padding attributes</li> <li>○ Provide image of numbered, bulleted or listed lists – learners must figure out how which tags to use</li> <li>○ Provide image of hyperlinks to a URL on the Internet, a link to a page in a web on site, and a link to an e-mail – learners must figure out how to create the links</li> </ul> </li> <li>• <b>General instructions</b> to reproduce, e.g. must have picture, table, headings must be bold, etc.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Analyse, figure out a web page given as a screenshot</b> to reproduce by applying best and appropriate functions and techniques, e.g. <ul style="list-style-type: none"> <li>○ Provide a screenshot of a completed web page, well formatted using different types of formatting, etc. Learner should figure out formatting, tags, etc.</li> </ul> </li> <li>• Create a website of linked html pages</li> <li>• Ask to use appropriate principles/ techniques to <ul style="list-style-type: none"> <li>○ Improve a given web page for better understanding, readability, purpose, meet specific requirements</li> <li>○ Make a given page accessible, e.g. for visually impaired users</li> </ul> </li> </ul> |



### 3.4 Example of an HTML Tag Sheet

| Basic Tags                                |   |
|---|---|
| Tag                                       | Description   |
| <code>&lt;body&gt; &lt;/body&gt;</code>   | Defines the body of the web page                      |
| <code>&lt;body bgcolor='pink'&gt;</code>  | Sets the background colour of the web page            |
| <code>&lt;body text='black'&gt;</code>    | Sets the colour of the body text                      |
| <code>&lt;head&gt; &lt;/head&gt;</code>   | Contains information about the document               |
| <code>&lt;html&gt; &lt;/html&gt;</code>   | Creates an HTML document – starts and ends a web page |
| <code>&lt;title&gt; &lt;/title&gt;</code> | Defines a title for the document                      |
| <code>&lt;!-- --&gt;</code>               | Comment   |

| Text Tags  |                                |
|--|--------------------------------|
| Tag  | Description                    |
| <code>&lt;h1&gt;&lt;/h1&gt;</code>                             | Creates the largest heading    |
| <code>&lt;h6&gt;&lt;/h6&gt;</code>                             | Creates the smallest heading   |
| <code>&lt;b&gt;&lt;/b&gt;</code>                               | Creates bold text              |
| <code>&lt;i&gt;&lt;/i&gt;</code>                               | Creates italic text            |
| <code>&lt;font size='3'&gt; &lt;/font&gt;</code>               | Sets size of font, from 1 to 7 |
| <code>&lt;font color='green'&gt; &lt;/font&gt;</code>          | Sets font colour               |
| <code>&lt;font face='Times New Roman'&gt; &lt;/font&gt;</code> | Sets font type                 |

| Links  |   |
|--|---|
| Tag  | Description   |
| <code>&lt;a href='URL'&gt; &lt;/a&gt;</code>                       | Creates a hyperlink   |
| <code>&lt;a href='URL'&gt; &lt;img src='URL'&gt; &lt;/a&gt;</code> | Creates an image link   |
| <code>&lt;a name='NAME'&gt; &lt;/a&gt;</code>                      | Creates a target location   |
| <code>&lt;a href='#NAME'&gt; &lt;/a&gt;</code>                     | Links to a target location created somewhere else in the document |

| Formatting   |  |
|--|--|
| Tag  | Description  |
| <code>&lt;p&gt;&lt;/p&gt;</code>                             | Creates a new paragraph  |
| <code>&lt;p align='left'&gt;</code>                          | Aligns a paragraph to the left (default), can also be right, or centre                               |
| <code>&lt;br/&gt;</code>                                     | Inserts a line break   |
| <code>&lt;ol&gt;&lt;/ol&gt;</code>                           | Creates a numbered list  |
| <code>&lt;ul&gt;&lt;/ul&gt;</code>                           | Creates a bulleted list  |
| <code>&lt;li&gt;&lt;/li&gt;</code>                           | Inserted before each list item, and adds a number or symbol depending upon the type of list selected |
| <code>&lt;img src='name'&gt;</code>                          | Adds an image  |
| <code>&lt;img src='name' align='left'&gt;</code>             | Aligns an image: can be left, right, centre; bottom, top, middle                                     |
| <code>&lt;img src='name' border='1'&gt;</code>               | Sets size of border around an image  |
| <code>&lt;img src='name' width='200' height='200'&gt;</code> | Sets the height and width of an image  |
| <code>&lt;img src='name' alt='alternative text'&gt;</code>   | Displays alternative text when the mouse hovers over the image                                       |
| <code>&lt;hr/&gt;</code>                                     | Inserts a horizontal line  |
| <code>&lt;hr size='3' /&gt;</code>                           | Sets size (height) of line   |
| <code>&lt;hr width='80%' /&gt;</code>                        | Sets width of line, in percentage or absolute value  |
| <code>&lt;hr color='ff0000' /&gt;</code>                     | Sets the colour of the line  |

| Tables                                     |  |
|--|--|
| Tag  | Description  |
| <code>&lt;table&gt;&lt;/table&gt;</code>   | Creates a table  |
| <code>&lt;tr&gt;&lt;/tr&gt;</code>         | Creates a row in a table   |
| <code>&lt;td&gt;&lt;/td&gt;</code>         | Creates a cell in a table  |
| <code>&lt;th&gt;&lt;/th&gt;</code>         | Creates a table header (a cell with common bold, centred text)           |
| <code>&lt;table border='1'&gt;</code>      | Sets the width of the border around the table cells                      |
| <code>&lt;table cellspacing='1'&gt;</code> | Sets the space between the table cells                                   |
| <code>&lt;table cellpadding='1'&gt;</code> | Sets the space between a cell's border and its contents                  |
| <code>&lt;table width='50'&gt;</code>      | Sets width of table  |
| <code>&lt;tr align='left'&gt;</code>       | Sets alignment for cell(s) (left, can also be centre, or right)          |
| <code>&lt;tr valign='top'&gt;</code>       | Sets vertical alignment for cell(s) (top, can also be middle, or bottom) |
| <code>&lt;td colspan='2'&gt;</code>        | Sets number of columns a cell should span                                |
| <code>&lt;td rowspan='4'&gt;</code>        | Sets number of rows a cell should span                                   |

#### 4. GENERAL INFORMATION

##### NEW TECHNOLOGY/CONCEPTS

As per the CAPS document, new technology concepts relating to hardware and software may be assessed during each examination. The following list contains the new technology/concepts that may be examined from 2014, as well as a short definition of each:

- **3D printing/printers:** 3D printers can create three-dimensional solid objects (e.g. motor vehicle parts, human tissue replacement, jewellery, clothing, etc.) from a digital model of the item by adding successive layers of material on top of one another.
- **BYOD:** 'Bring your own device' refers to a concept where employees/students are allowed to bring and use their own portable devices, such as smartphones, laptops, tablets, etc. to work on and access the network instead of a device owned/supplied by the company/institution.
- **Click-jacking:** Users are tricked into clicking on an item on a web page which acts as a concealed link.
- **Geo-tagging:** A process where a geographical position of where a photograph was taken is added to the metadata of a file, such as adding the latitude and longitude.
- **LTE:** A standard used in wireless communication which provides for high-speed data transfers between cellular devices (such as smartphones and tablets) and ISPs. It is the next generation of cellular connectivity after 3G.
- **Micro-USB:** A smaller version of a USB port, usually found on portable devices such as smartphones.
- **Multi-touch screen:** Feature of a screen that allows it to register more than one point being touched simultaneously.
- **Phablet:** A smaller version of a tablet which (over and above tablet features) also incorporates features found on a smartphone, such as voice calls and SMSs.
- **E-readers:** Portable devices specifically created to read e-books. An example is the Kindle.
- **QR code:** A selection of black and white squares that are combined in one square grid that represents text such as a URL. The QR code can be scanned and translated using a smartphone and the appropriate application.
- **Thread:** A thread or threaded discussion is a feature in many e-mail clients, online forums, newsgroups, IM clients, etc., which automatically groups messages according to a topic or sender.
- **URL shortener:** URL shortening is a tool or service used to convert a long URL to a shorter version. This shorter version of the URL will take a user to the same web address, but is easier to remember and/or type out.

- **802.11 a/b/g/n:** Refers to a set of specifications and protocols used in communication on a wireless network. The letters (a, b, g, n) simply indicate different versions of the Wi-Fi standard (each with different speeds, etc.).
- **NFC:** NFC (near field communication) is a standard that allows devices, such as smartphones, to connect wirelessly simply by touching them together or bringing them into close proximity, for example exchange files by just touching two smartphones together.
- **Wireless video display:** Wireless video streaming (up to HD quality) to an output device such as a high definition TV. An example is Intel's WiDi system.
- **Crowd funding:** A process where a single idea or business practice is funded by multiple small donations from volunteer contributors, usually before the business venture is started. The contributors will then receive the product when it is finally put into production. Examples include [www.indiegogo.com](http://www.indiegogo.com) and [www.kickstarter.com](http://www.kickstarter.com).

## 5. CONCLUSION

It is envisaged that this Examination Guidelines document will serve as an instrument to strengthen and empower teachers to set valid and reliable assessment items in all their classroom activities.

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 over-emphasised.