

PRINCIPAL EXAMINER'S REPORT



BOTSWANA
EXAMINATIONS
COUNCIL

BGCSE COMPUTER STUDIES 2025

PAPER 1: PRACTICAL TEST

General Comments

Some Centres are still inserting printouts in the middle of the question paper, which makes marking difficult for examiners. One Centre used staples instead of strings. Some Centres continue to struggle with arranging Candidates' work in the correct order before submission (question paper first, followed by printouts according to the sections attempted, then tied using a string at the top-left corner). Some printouts were submitted upside down, and the overall arrangement of papers was poor. There are still instances of Centres allowing Candidates to write on printouts using pen or pencil. Some scripts were not securely bound, resulting in pages becoming mixed up. Some Centres submitted unnecessary duplicate printouts for a single Candidate, which delayed the marking process.

Comments on Individual Items

Section A

- 1 (a) Almost all candidates were able to insert the candidate number/name in the footer. However, a few candidates inserted the Candidate number/name in the header instead which was wrong. Additionally, a small number of candidates did not attempt the part question.
- (b) This part question was well done by most of the candidates; they correctly inserted the bullet points. However, a few candidates failed this task, they inserted only one bullet in the list, used full stops instead of bullets, or did not attempt the question.
- (c) Most of the candidates successfully indented the school address to 11 cm from the left margin. However, some candidates either indented only one line instead of the entire address, used a measurement of less than 11 cm, applied right alignment instead of indentation, or did not attempt the question at all.
- (d) Almost all candidates correctly set the line spacing for the entire document to double spacing. However, a few candidates set the line spacing to 1.5 lines instead of double spacing or did not attempt the question.
- (e) This question was well done by most of the candidates; they were able to justify the paragraph. However, some candidates used right alignment instead of justification, centred the paragraph, or did not attempt the question.
- (f) This task was well done by almost all candidates; they were able to check the document for spelling errors and correcting them. However, a few candidates corrected some errors but left others uncorrected or did not attempt the question at all.
- (g) Almost all Candidates managed to create the data source and entered the data accurately. Some created the data source as part of the letter instead of creating it as a separate document, but their data entry was correct. Some candidates created the data source but made errors in the data entry. A small number of candidates did not attempt the question.
- (h) A few Candidates managed insert the fields, while most of the candidates did not attempt the question.

- (i) This question was well done by almost all candidates, they were able to produce the three letters. Some candidates produced only one letter instead of three or who did not attempt the question.

Section B

- 2 (a) Most of the candidates successfully changed the text orientation of the column heading to 45°. However, some candidates changed the text orientation to -45° instead and others did not attempt the question.
- (b) Most of the candidates successfully formatted the values to Botswana currency. However, some candidates only changed the currency symbol without setting the decimal places to 2. Other candidates formatted only the first row, which did not earn any mark, while some Candidates did not attempt the question at all.
- (c) A few Candidates correctly inserted the function to calculate **Total_Amount_Paid** and copied it down properly. Some candidates did not produce a formula sheet, but their values were correct, so they gained 1 mark for correct values only. Other Candidates gained 1 mark for having the correct formula but failing to copy it down. Candidates who did not attempt the question did not gain any marks.
- (d) A few Candidates managed to gain the full 2 marks by using the absolute cell reference correctly and copying the formula down. Candidates who gained 1 mark either had the correct formula but did not copy it down, or used the formula without the dollar sign to indicate an absolute cell reference. Others did not attempt the question and therefore did not gain any marks.
- (e) A few Candidates correctly used the COUNTIF function. Some candidates used the COUNT function, which returned an incorrect result. Others did not attempt the question.
- (f) Most of the candidates correctly creating the pie chart with a title and data labels. Some Candidates were only able to create the pie chart with the title but without data labels or used incorrect data labels for **Month 1** or **Amount_Owed**. A few candidates created a bar graph instead of a pie chart, but with the correct title and data labels. Some candidates create the pie chart without title and data labels, while others created a different chart type with the title but without data labels. Some candidates did not attempt the question.

Section C

- 3 (a) Most of the candidates successfully created the database table with fields and entered the correct records. A few Candidates were able to create the database table with fields but made errors in data entry. Some Candidates used a spreadsheet or a word-processing table instead of a database application but entered data correctly. Other Candidates failed to create the specified fields, and instead had *Field 1*, *Field 2*, etc. even though their records were correct keyed in. Some candidates did not attempt the question.
- (b) The question was well done by most of the candidates they correctly amended the record. However, some Candidates inserted 45 in the wrong column (under **Price (P)** instead of **Quantity**). A few candidates also failed to increase the quantity for **Product** Screw Butterfly to 45.



- (c) Most of the candidates were able to sort the data correctly in descending order. A few candidates either sorted in ascending order, sorted in descending order using the **Product** column instead of **Product_No** or did not attempt the question.
- (d) A few Candidates were able to create a query listing records where **Price (P) < 30**. Some candidates produced queries with only the **Price (P)** column, omitting other fields, or they queried records with **Price (P) > 30**. Some Candidates queried under **Quantity** instead of **Price (P)**. Others did not attempt the question.
- (e) The question was poorly done by most of the candidates. A few candidates were able to create a query for **Total**, displaying the **Total** field, and calculating each product correctly. Other candidates were only able to add the **Total** field but without any calculations, while some had the **Total** field with incorrect calculations. Other Candidates did not attempt the question at all.
- (f) The question was fairly done. Few candidates were able to create a report, selecting the required fields, and correctly performing the summary calculations. A few Candidates were only able to create the report and select the required fields but omitting the summary calculations. Some Candidates created a report showing all fields instead of only the specified fields but still performed the correct summary calculations. Other candidates were able to create a report showing all fields and without the summary calculations. Still other candidates who did not attempt the question.

PAPER 2: WRITTEN PAPER

General Comments

The overall performance of candidates was average. Candidates need more attention on how they convey their answers. They are only good on articulating knowledge and understanding questions and questions which requires application have since proven to be more challenging to candidates. Their biggest challenge is failing to align answers to the stem of the question although this was mentioned in the previous marking reports e.g. in monitoring and control question, candidates gave general answers which applies to all control systems instead of aligning them to the stem. Answers such as; receiving signal, comparison, conversion, decision were common in candidates' scripts. Difference questions were fairly done as majority of candidates were using different features to differentiate.

Comments on Individual Questions

- 1 This question was fairly done with majority of the candidates being able to get at least two points out of three. Expected answers include; Task scheduling, memory allocation, error detection, Security etc.
- 2
 - (a) This part of the question was well done, with most of the candidates being able to get at least one mark for mentioning a braille keyboard. Another acceptable point include microphone.
 - (b) This part of the question was poorly done as candidates failed to give a specific use of the devices mentioned in question 2 (a). The answers they gave were; Microphone is used to input data, Braille keyboard is used to input data instead of; A user speaks commands on the microphone and a user types commands with a braille keyboard.
- 3
 - (a) This question was well done. Acceptable responses include; Control unit, arithmetic logic unit and immediate access store.
 - (b) This part of the question was also well done except a few candidates who failed to give the exact function of an immediate access store. Expected answers should be holds data temporarily during processing.
- 4
 - (a)
 - (i) This part of the question was well done. Almost all candidates were able to recall and give the correct definition of the term Computer Hardware which is; All physical parts/components of a computer.
 - (ii) This part of the question was poorly done. Acceptable point is that a network protocol is set of rules which guide communication on a network.
 - (b)
 - (i) This part of the question was well done. Almost all candidates were able to give an example of a computer hardware.
 - (ii) This part of the question was poorly done. Some candidates were giving abbreviations which were not accepted. Some acceptable points include; File transfer protocol, Internet protocol, Simple mail transfer protocol etc.

- 5 (a) It was fairly done with majority of candidates being able to get one point correct. Some candidates gave examples of each method which was not accepted.
- (b) It was fairly done with majority of candidates being able to get one point correct. Some candidates gave some examples of types of printers which was not a requirement in the question and as such lost a mark.
- (c) It was fairly done with majority of candidates being able to get one point correct. Most of the candidates swapped answers by placing points for data under information and vice versa and this made them lose some marks.
- (d) It was fairly done with majority of candidates being able to get one point correct. Majority of candidates failed to give a second point stating that WAN is expensive whereas LAN is cheap which has never been a feature used to differentiate the two types of networks.
- 6 This question was well done except a few candidates who gave responses as 'documentary' and 'Oral interview', which leaves out the written interview part as one of the methods. Acceptable points are; Questionnaire, Observation, Interview, Document study/Literature review.
- 7 (a) It was well done except by a few candidates who gave a device barcode reader instead of the method barcode reading.
- (b) It was fairly done as most of the candidates were able to get at least one point. Some candidates were giving unacceptable answers like; saves time, easy to use. Some of the acceptable points include; fast to capture, Accurate in capturing.
- (c) It was fairly done although some candidates gave answers such as 'expensive' which was not accepted. Acceptable points are; expensive to buy, will not read a damaged code.
- 8 (a) It was well done almost all candidates got two points out of three. Those who lost marks had given a software protection method
- (b) (i) It was fairly done except a few candidates who gave effects of computer viruses. Some candidates gave answers such as "More memory consumption, hanging/freezing of a computer, slow processing speed" instead of giving effects of computer viruses which include; Opening an infected file, Running an infected program, Booting the computer with an infected removable media inserted in a drive or plugged in a port, Connecting an unprotected computer to a network, Opening infected email attachment
- (ii) This part of the question was poorly done. Some of the acceptable points includes; Formatting the hard disk, Scanning using an up-to-date antivirus software. Majority of candidates gave ways of protecting a computer against viruses.
- (iii) This part of the question was well done as majority of candidates gave correct answers which includes; Do not start a computer with removable media inserted in the drive or plugged in the ports; Never open email attachment unless you are expecting the attachment and it is from a trusted source; Install an antivirus program and update it regularly etc.

- (c) (i) This part of the question was fairly done. Some candidates gave an incorrect answer i.e differential backup instead of incremental backup.
- (ii) This part of the question was fairly done. Some candidates gave an incorrect answer i.e incremental backup instead of differential backup.
- 9 (a) This part of the question was poorly done. Some of the acceptable points are; input is processed immediately, output influences next input. Some of the points which were given by candidates include; 'input influences the output' which was supposed to be the other way round.
- (b) This part of the question was well done. Majority of candidates managed to give a correct point. Some acceptable points include; Kidney dialysis system, Heart rate monitoring system, Auto pilot system, Greenhouse system.
- 10 (a) This part of the question was fairly done. Some of the acceptable points include; network interface card, router, bridge, hub, switch, server. Some candidates gave transmission medias as network hardware which was not accepted.
- (b) This part of the question was fairly done. Some candidates could not indicate the terminators on their diagram which made them lose a mark for an incomplete diagram.
- (c) This part of the question was poorly done. Some of the acceptable points include; if the bus cable breaks, network will be affected, difficult to troubleshoot a problem on the network, if there are no terminators there won't be transmission. Majority of candidates said 'if the server is down, there will not be communication' which was not a correct point.
- 11 (a) This part of the question was well done except a few candidates who gave 'communication' as the service. Some of the acceptable points include; E mail, E learning, E Banking, E commerce etc.
- (b) This part of the question was fairly done except a few candidates who gave general benefits of using the internet instead of aligning them to the given service in 11(a).
- (c) This part of the question was fairly done except a few candidates who gave general limitations of using the internet instead of aligning them to the given service in 11(a).
- 12 (a) This part of the question was well done as candidates were able to identify the inputs given in the stem of the question.
- (b) This part of the question was well done as candidates were able to identify the processes given in the stem of the question.
- (c) This part of the question was well done as candidates were able to identify the outputs given in the stem of the question which includes; Date of issue, student name, class, laptop number and serial number, date of return, student signature, IT officer signature, Total laptops not returned.
- (d) This part of the question was well done as candidates were able to identify the list of items captured in the report of not returned laptops.

- (e) (i) This part of the question was poorly done as candidates did not relate their answers to the given stem of the question. They gave general advantages of computerisation. Acceptable points included; Less queues of students returning the laptops as verification will be faster, Less errors made in counting the laptops hence saving time instead of the general points which were given by candidates such as; Computers are fast, computers are accurate.
- (ii) This part of the question was poorly done as candidates did not relate their answers to the given stem of the question. They gave general advantages of computerisation to an employee. Acceptable points included; The technician will have less work to do, The technician will complete tasks quickly instead of 'Computers are fast, computers are accurate' which were the points candidates repeated.
- (f) (i) This part of the question was well done. However, some candidates gave a wrong method. The correct method is 'Direct/instant changeover'.
- (ii) This part of the question was fairly done. Majority of candidates were able to list the implementation strategies and failed to describe them.
- (iii) This part of the question was fairly done with majority of candidates being able to get at least two points correct. Acceptable points are; Normal data test, Abnormal data test and extreme data test.
- 13 (a) This part of the question was well done. Most candidates were able to identify the sensor as the fingerprint sensor.
- (b) This part of the question was fairly done. While other candidates related the function of the ADC to the stem of the question, others gave the general function of the ADC which was incorrect.
- (c) This part of the question was well done with majority of candidates being able to give correct points.
- (d) This part of the question was well done as majority of candidates were able to give the correct outputs from the system which are; beeping sound and gate opening.
- 14 (a) This part of the question was poorly done. Some candidates use a program flowchart which most of them only indicated the start and stop symbols and ignored to write the other processes in the program and this made them lose marks. For those who used a pseudocode, they failed to include the iteration part which also made them lose marks.
- (b) This part of the question was poorly done. Majority of the candidates were writing the differences between a compiler and interpreter instead of what the question was asking which was differences between compiler and assembler. Acceptable points include; Compilers translate high level languages to machine code whereas assembler translates assembly language to machine code, compiler occupies more storage space, and assembler occupies less storage space.

PAPER 3: COURSEWORK PAPER

General Comments

Intention of the Report

This report is produced each year with the intention to help guide centres on areas which have been done well and those where there is need improvement. The concern noticed is that, though comments are made to try to correct certain areas in candidates work, there seems to be few centres responding to such resulting in the same errors being noticed every year. Centres should ensure that they receive the report every year and seek clarity where needed.

Marking of Scripts at Centre

The following observations were made during the validation process:

- The marks especially above 'C' grade are inflated with no candidates work to back them up. However, marking for candidates below C grade was harsh. It is suggested that centres should standardise before they start marking and apply the same standard for all candidates during marking.
- All centres are advised to familiarise themselves with the marking criteria. New teachers should be inducted on the same so that when they have completing classes they mark according to the standard.

Response by Centres to the Report

It is observed that centres do not utilise the report because the same mistakes are seen every year. Advice has been given on how each criterion should be handled but very little improvement is noticed. This makes the report address the same points year in year out. Centres are encouraged to request reports from BEC every year.

Approach to Project Work

The centres are advised to ensure that candidates focus on the internal processes of record keeping not physical handling of records. This will be elaborated according to the criterion. Furthermore, candidates should also choose from a variety of topics with different fields, instead of working on the same fields, to avoid cases of malpractice where candidates collude or copy from each other.

Candidates Work

Some candidates still produce incomplete work even though they are given 36 weeks to complete coursework. Detailed comments on areas that need improvement have been captured under each criterion.

However, an improvement at the following criteria was seen:

- Criteria 1: some candidates were able to vary their problems and explain them. Although majority of candidates managed to score 2 marks or less in this criterion. This was because of inadequate reasons for the problems.
- Criteria 3: Description of data flow diagram: some students managed to score 1 or 2 marks for stating the consistent input-process-output and an attempt to data flow diagram.

- Criteria 5: Evaluation of the existing solution; some candidates managed to get one mark for listing the points and using consequences as reasons.
- Criteria 20: Students were able to get 2 or 3 marks here because they only must list and explain a possible improvement with its benefits to get full marks.

Packaging

There was an improvement with packages because most of the Centres used boxes supplied by BEC. Centres are advised to use boxes which are normally used to deliver the examination question papers to Centres or those supplied by BEC for packaging. These boxes are recommended because they it's easier to pack scripts in them without damaging them. There should be no tight or bulk packing so that repacking of projects could be easily without damaging the scripts. Back-to-back printing and spiral binding of projects is highly recommended.

Each box should be labelled with a sticker showing;

- Centre name
- Centre Number
- Candidate number range
- Number of scripts enclosed
- Box 1 of _____ per box
- Individual mark sheets, summary mark sheet, attendance registers and order of merit should be submitted in a separate package. The order of merit is a list of students with their project marks ranked from highest to lowest score in a center.

Comments on Individual Criteria

Criterion 1-Introduction and Identification of the Problem

- Most candidates performed well in the overview section of the project introduction. They were able to address all the required elements regarding the organisation and its records.
- The listing of problems was generally well done by most students. However, many candidates struggled to explain the problems in detail. Explaining a problem requires students to provide justification, reasons, and causes that are clearly linked to the processes within the system.
- Despite listing the problems effectively, most candidates failed to provide adequate explanations for them.

Note: Diversity of Problems - Problems identified should be diverse within a center. Some Centres focused on a limited range of problem types and allowed all candidates to use the same problems. For example: "It is difficult to calculate the total cost." This increases the likelihood of candidates duplicating each other's work.

- Additionally, calculations involving only two fields, such as Qty × Price to determine total cost, cannot be classified as a difficult problem.

- Problems Not Permitted - The following are not acceptable as problems: General/administrative issues such as: Data entry being tiring, untidy records, missing fields, duplication of records, updating of records, records having no backup, difficulty in finding a record, use of permanent ink, erroneous data.
- Problems must be specific to the system's processes and demonstrate a genuine need for a computerised solution.

Criterion 2-Statement of Specific Objectives of Current System

- Candidate performance for this criterion was average, with most students not attaining the maximum marks. This was largely due to candidates stating objectives that were either unrelated to the system or too general in nature.
- Candidates are expected to list specific objectives of the current system. These objectives must be directly related to the records and processes within the system. Each point listed should have an explanation of how it is achieved or why it needs to be achieved in the current system.
- Some students struggled with explaining and ended up providing general descriptions not related to the current system.

Note: Diversity of objectives – Objectives should also be diverse within a center. Some Centres focused on a limited range of objective types and allowed all candidates to use the same kind of objectives. This increases the likelihood of candidates duplicating each other's work.

Criterion 3-Description of Data Flow in Current System

At this criterion, candidates are expected to outline the inputs (with the source of data), the process(s) in detail (e.g. total cost = Qty*Price not just writing calculating total cost). There must be consistency in the spelling of the field names, and there must be correct flow of data e.g. a field cannot be used or appear in the process when it has not been input unless it is being processed at that stage and a field cannot appear in the output when it has never been input or processed.

Some candidates were challenged here because they included a process in the input e.g. they are going to calculate the total cost, but it appears in the list of inputs. They sometimes use words such as recording, entering and capturing which are all processing words in the input.

The following will result in a zero mark for this criterion;

- Inconsistent field names,
- Lack of a data source,
- Processing fields under the input,
- General points under the output e.g. receipt produced, invoice without the mention of output fields,
- Dataflow diagram with the wrong symbols.

Where there is only one output being the calculated field, the candidate will only get 1 mark for a brief statement.

Criterion 4 - Broad Description of Existing Solution

Most of the candidates were able to access marks on this criterion.

Some candidates did not get marks for the **perspective** because they did not mention the views of the user of the system. They must use words such as the manager said, according to the manager, when interviewed etc.

Criterion 5 - Evaluation of Existing Solution

The candidate must list two good points and two bad points, these points must not be stated in general terms. The explanation of the points must also focus on the specific cause of the point then followed by the consequence of the point.

Most of the candidates used consequences as points rather than stating a point that leads to that consequence.

For the good points, it is worth noting that there is a difference between an objective and a good point. An objective is something the system intends to do while a good point will signal whether the system is managing to achieve it or whether it's a bad point, the system is struggling to achieve it. For example, objective: To find the number of customers with outstanding balances, Good point: It is able to find the number of customers with outstanding balances.

The reasons/causes of bad points should also be explained in relation to the records while the consequences can be generally explained.

Criterion 6 - Evaluation of Alternative Solutions

This assessment criterion continues to present a significant challenge for candidates. The vast majority failed to secure any marks, while most remaining students achieved only a single mark. Full marks were exceptionally rare and heavily concentrated within a few specific Centres. Centres are advised to consider the following to improve candidates' performance.

Candidates must share an analysis of the existing manual system by detailing its inputs, processes, and outputs. Furthermore, this evaluation must clearly outline problems identified in the preceding criteria.

For the improved manual, when stating the improvement, it must be clear what the improvement is and how exactly it is going to be done.

For Semi-computerised system, candidates were struggling to state which fields are going to be left manual and which ones are going to be in the computerised system. There must also be a clear link between the manual system and the computerised system. The candidate can make one or more improvements here for manual or computerised system.

For fully computerised system, the candidates must state one or more computerised improvement.

Costs and benefits must be mentioned for each solution.

The software to be used was also not mentioned, candidates must choose software to be used and mention it.

Criterion 7 - Statement of Specific Objectives of Proposed System or Solution

Candidates did well in this Criterion.

Candidates can provide an umbrella statement for the software to be used to achieve all objectives.

Ensure that points have computer terms in them.

Points like to create and to design are not allowed.

Criterion 8 - Clarity of Plan of Action

While overall performance on this criterion was commendable, certain sections require further refinement. Most candidates demonstrated a strong understanding, though specific components still offer opportunities for growth.

Statement on what is planned to solve the problems was not clearly explained. It must be specific to the system being done along with the features of the software to be used. A minimum of three features from the software chosen must be explained.

Regarding input/process/output stages, output (all output fields should have data) and input formats,

File structures and timeframe, candidates did well, however there is need to separate all these items **with clear headings**.

Note: The heading is required for this criterion.

Criterion 9 - Explanation of Hardware Required

Candidates generally excelled in this criterion, reflecting a positive upward trend in overall performance in most of the components in this criterion. However, a single component remains a frequent source of lost marks, specifically the justification of the hardware.

The justification component remains a weak area for most of the candidates, especially for the monitor and processor. In the justification candidates must clearly explain how the hardware fulfils a functional requirement of **their** system.

Additionally, examiners noted two recurring issues: the inclusion of non-permissible media for backup such as drives, and a failure to correctly align an alternative hardware to its chosen hardware.

Criterion 10 - Use of Separate Modules

Most candidates managed to do well in this criterion particularly on components that overlap with other criteria such as the listing of fields, description of fields and listing of a calculation script. However, *explanation of fields should be done for all fields* appearing in the project from criterion 6 to the computer

solution must be explained. Some students missed a mark for this component because they either spelled the same field differently several times or it was excluded from provided descriptions.

The explanation of system modules remains a primary area of difficulty for the majority of candidates. It is important that candidates provide comprehensive explanations for every module created within their project. For database software, this includes all buttons, forms, tables, queries, reports, and the switchboard. For spreadsheet software, candidates must detail all functions and formulas used. As explicitly stated in the mark scheme, **all** modules must be explained; the omission of even a single module identified within the project will result in a forfeiture of the mark.

Criterion 11 - Algorithms Related to System Requirements (System Flow Chart)

A notable improvement was observed in the application of standard system flowchart symbols, allowing most candidates to secure at least one mark for this criterion. However, to access the full range of marks, the system flowchart must comprehensively cover the entire architecture of the proposed system. Additionally, candidates must ensure that all validation checks are clearly defined and that the overall logic of the diagram is coherent and sequentially sound.

Criterion 12 - Clarity of Algorithms

The maximum allocation of three marks for this criterion proved elusive for most candidates, with most securing only a single mark. This low performance was mainly driven using non-standard symbols or the inconsistent naming of field names.

Furthermore, a significant portion of the candidates failed to provide adequate descriptive annotations of their algorithms, resulting in a loss of marks. To access more marks, every symbol must be thoroughly explained. Specifically, decision annotations must explicitly define the provided condition, alongside the precise operational pathways for both 'true' and 'false' outcomes. To demonstrate meaningful variable declaration, field names must adhere to standard single-word syntax (e.g., `customername` or `customer_name`). Additionally, any error messages embedded within the logic must be strictly enclosed in quotation marks ("").

Criterion 13 - Plausibility of the Algorithm(s)

Candidate performance on this criterion stagnated, with the vast majority failing to achieve full marks, typically securing only zero or one mark. This persistent challenge was primarily caused by the submission of non-functional algorithms that failed to fully flow from start to finish solving a problem. To address this issue, centres are advised to rigorously dry-run their logic to verify that the algorithm successfully executes the intended task prior to final submission.

Furthermore, the inaccurate use of field names remained a frequent source of lost marks. This was characterised by internal misspelling variations within a single algorithm or the introduction of "hanging" field names that lacked structural context or prior declaration.

Note: It is strongly recommended that candidates construct a comprehensive program flow chat having all components for criterion 12 and 13 as a single diagram will be marked for both criteria.

Criterion 14 - Suitability of Tools and Techniques

Candidates were able to access full marks in this criterion.

Candidates who choose two software but only use one lose marks for good use of the software since they would not have used it.

Criterion 15 - Testing of Standard, Extreme and Abnormal Data

Many candidates demonstrated a commendable command of this criterion, with a significant proportion securing either three marks or the maximum allocation of four. However, localised performance deficits were noted at specific centres, where candidates consistently struggled with the practical use of validation rules during software data testing particularly concerning extreme data testing. Several candidates lost marks by selecting data fields and validation rules that were inherently unsuited for upper or lower boundary testing.

Regarding abnormal data testing, a recurring error involved screenshots where the targeted data field was obscured by an overlapping error message dialogue box. This concealment prevented examiners from verifying the exact field undergoing validation.

Note: The presence of an active cursor within the input field of a screenshot indicates that the system has not yet processed the input data or generated a definitive response. Consequently, examiners cannot conclusively determine whether the data has been accepted or rejected, loss of a mark.

Furthermore, the test plan table must be clearly labelled along with each of the data tests carried out by the candidate.

Criterion 16 - Use of Documentation

This criterion remains a persistent area of difficulty across most centres, with the maximum mark allocation proving largely elusive. The common mark achieved by the candidates was two. This low performance was primarily driven by documentation that failed to provide a comprehensive, sequential, step-by-step overview of the system, supported by organised visual evidence of functional features through sample runs or screenshots.

To meet the minimum requirements, candidates must document a complete operational cycle of their system. This includes the initiation, addition, deletion, saving, and termination of records within both forms and reports, accompanied by detailed sample runs. A cohesive, step-by-step demonstration from initialisation to system exit is mandatory. For a significant portion of the candidates, vital sample runs and screen captures were omitted for primary control buttons, most notably 'Add' and 'Delete'.

While error handling was frequently attempted, several candidates failed to provide adequate explanation of troubleshooting these errors.

Criterion 17 - Usefulness of Sample Runs

Most candidates were restricted to a single mark for this criterion, with maximum mark allocations heavily concentrated within a small number of specific centres. To access a two-mark award, test comments must be highly detailed and technically precise. While most of the candidates successfully provided accurate commentary for both normal and abnormal data testing, significant challenges were observed with those provided for extreme data testing.

Comments on extreme data were inaccurate. Candidates routinely mischaracterised extreme values which sit precisely at the upper or lower limits of a range as standard "normal" values or simply stated that they were "within the range." This generalised phrasing fails to explicitly evaluate the boundary conditions.

Criterion 18 - Technical Documentation

This criterion was well done. However, it is still important to indicate inputs, processes, outputs and file structure with clear headings.

Criterion 19 - Evaluation of the Solution

Overall performance on this criterion has improved significantly, with the majority of centres demonstrating a strong command of the requirements. In instances where candidates failed to secure marks, they either listed points in general terms, or they provided general explanations of the reasons.

For future candidates, centres must follow a strict Point-Reason-Consequence approach, as illustrated below:

- Point: The system automatically computes the grand total cost for all items.
- Reason: A calculation using the SUM function is executed on the total cost field to find all data entries.
- Consequence: The candidate's accompanying explanation must specifically detail the outcome of this action rather than reverting to a generalised summary.

It is a mandatory requirement that all stated points are supported by sample run evidence somewhere in the documentation.

Criterion 20 - Opportunities for Development

The overall performance on this criterion was average. Most candidates managed a one or two, failing to secure maximum marks while avoiding zero scores. Only a nominal number of Centres demonstrated a high density of full-mark candidates.

High-scoring candidates were rare and heavily concentrated within a small number of specific Centres.

To access the maximum mark allocation, candidates must list a minimum of two distinct, system-specific enhancements defined by specific modules or feature of the software's that they would implement given extended development time. Each idea must be accompanied by a clear explanation detailing its operational/functional benefits to the organisation. The main reason for lost marks was the tendency to provide general, non-specific points supported by generalised descriptions.

Centres must remind candidates that any proposed areas for future development must not already exist within the newly developed computerised system.

Criterion 21 - Technical Skill and Mastery

The candidates achieved a highly commendable standard on this criterion. Because marks are directly awarded based on visible screenshot evidence of the deployed software features, most candidates secured full marks. Losses under this criterion were isolated to candidates who presented incomplete documentation.

Criterion 22 - Presentation and Communication

Many candidates secured at least two marks for this criterion. Those who failed to achieve marks generally struggled to maintain a consistent layout and format throughout their documentation. A smaller number of candidates were penalised due to excessive spelling errors.

The many different formatting errors seen in the work of candidates are listed below;

- Inconsistent spacing between paragraphs
- Callouts outside margins
- Callouts clouding algorithms
- Use of different types of bullets
- Program flow charts arrows should point to right points
- Inconsistent formatting for headings
- Tables outside margins
- Inconsistent formatting (line spacing, text alignment, font size etc)

Criterion 23 - Evidence of Realisation

Candidate achievement on this criterion was highly satisfactory. Most submissions that completed the documentation successfully attained the maximum three marks. Omissions were rare, with the loss of a single mark isolated exclusively to candidates who neglected to define the data collection methodology utilised.