National
Qualifications
2026

2026 Computing Science

National 5

Question Paper Finalised Marking Instructions

These marking instructions have been prepared by examination teams for use by Qualifications Scotland appointed markers when marking external course assessments.

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General marking principles for National 5 Computing Science

This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this paper. These principles must be read in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.

(a) Marks for each candidate response must **always** be assigned in line with these general marking principles and the detailed marking instructions for this assessment.

(b) Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted.

(c) If a candidate response is not covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.

(d) Award marks regardless of spelling, as long as the meaning is unambiguous. This applies to all responses, including code. Award marks as per the detailed marking instructions, regardless of syntax errors, if the intention of the coding is clear.

(e) For questions where candidates are asked to design or write code, a sample response is shown in the detailed marking instructions. This will not be the only valid response. You must use the detailed marking instructions and additional guidance to ensure that you consider alternative approaches and nuances of different programming languages. If in doubt you should refer to your Team Leader.

(f) A correct response can be negated if the candidate includes an extra, incorrect response which demonstrates they do not know the correct answer. For example, in a 'state' question where the only correct answer is 'white', if the candidate answers 'white orange', you should not award the mark.

(g) If a candidate puts a score through a response and makes a further attempt, you should only mark the further attempt. If no further attempt is made and the original is legible, you should mark the original response.

(h) Where an incorrect response is carried forward and used correctly in a following part of the question, you should give credit for subsequent responses that are correct with regard to the original error. Candidates should not be penalised more than once for the same error.

(i) Only award marks for a valid response to the question asked. Where candidates are asked to:

- **Identify**, **name**, **give** or **state,** they need only name or present in brief form.
- **describe**, they must provide a statement or structure of characteristics and/or features. This will be more than an outline or a list. It may refer to, for example, a concept, process, experiment, situation, or facts, in the context of and appropriate to the question. Candidates must make the same number of factual/appropriate points as there are marks available in the question.
- **explain**, they must relate cause and/or effect and/or make relationships between things clear, in the context of the question or a specific area within the question.
- **write code,** they must write recognisable code, not prose nor a diagram.
- **design,** they must use a design technique appropriate to the problem. Award marks as per the detailed marking instructions, regardless of errors in the exemplification of the technique, if the intention of the design is clear.

(j) In the marking instructions, if a word is underlined then it is essential; if a word is in brackets() then it is not essential. Words separated by/are alternatives.

Marking instructions for each question

Section 1 — Software design and development, and computer systems

Question			Expected response	Max mark	Additional guidance
1.			• brightness of Monitor • low power mode (eco mode)	**2**	Do not accept any answer that involves the machine not being "in use". Also accept: • reduce clock speed • reduce refresh rate of screen • reduce running applications • remove external devices not being used

2.			• round function with brackets
			• with correct parameters
			  ○ screentime
			  ○ 2
				2	

3.			• digital barrier between external and internal network • prevents/blocks unauthorised access	**1**	Award **1 mark** for any one bullet.
4.	(a)		AND	**1**	
	(b)	(i)	Ensure the program works correctly with the expected inputs.	**1**	
		(ii)	(peerMentor:) True and (attendance:) any value > 95	**1**	
5.			conditional loop	**1**	Also accept assignment.
6.	(a)		01110010	**1**	
	(b)	(i)	ellipse	**1**	
		(ii)	• each pixel • is stored as a binary value (bits)	**2**	Accept '1s and 0s' as binary.
7.			• previous stages (in development) can be revisited • a suitable example that describes the return to a previous stage of the software development cycle is required	**1**	Award **1 mark** for any one bullet. For example: • the program is not fit for purpose so requires additional design/implementation/testing • errors found during testing so implementation is revisited • errors are found which require returning to a previous stage

Question			Expected response	Max mark	Additional guidance
8.	(a)		• calculate total cost • calculate number of people that require refreshments • calculate the initial/entrance cost • calculate cost of refreshments • check if Y or N selected • validate entry of Y or N	**2**	Award **1 mark** for each bullet. Maximum **2 marks**.
	(b)		• fixed (loop) • (to repeat) number of times entered as input/number of people in the group	**2**	Do not accept generic answer for 2nd bullet – must refer to this scenario.
	(c)		• input of password into `userPass` • calculate length of input	**2**	
	(d)		• real • character/string	**2**	
9.	(a)		• conditional loop for validation • correct loop condition (input is not equal to 1,2, 4) • input assigned inside the loop • error message inside the loop	**4**	Candidates may write or describe the conditions a variety of ways. Where candidate does not use a loop, one mark may be awarded for the error message where attached conditions are correct. If the loop is missing the start/end of the loop assume that everything above or below the start/end is inside the loop.
	(b)		• number of paddle boards * cost of one paddle board • number of wetsuits * 5 • store sum of two calculations	**3**	
	(c)		register(s)	**1**	

Question			Expected response	Max mark	Additional guidance
10.	(a)	(i)	User instruction and input area for all three: • name • age • job	**1**	Input area and user instruction for text entry may be combined within one box for a single input. Award **0 marks** if the candidate has designed a program (pseudocode, flow chart, structure diagram) rather than a user interface. Ignore any additional objects/text/buttons that may have been added to the user interface.
		(ii)	• labelled output area for interview date	**1**	
	(b)	(i)	• array • integer	**2**	
		(ii)	• loop for each applicant/84 times • add the provided value from the `ages` array to the total within the loop • use of incrementing array index in running total • calculate the average using a calculated total and display average	**4**	Award bullet 3 if candidates uses a collection loop (`for age in ages`) rather than using an index. If `ages` array overwritten do not award bullet point 2.
	(c)		• Mantissa: 783 • Exponent: 1	**2**	

Question			Expected response	Max mark	Additional guidance
11.	(a)		• correct use of if, else if, else • correct conditions for feeling fine (foodpoints >= 40 AND healthpoints >= 50) • correct condition for getting tired (foodpoints <40 OR healthpoints < 50) • all three character statuses as result of a condition	**4**	Accept correct nested IF.
	(b)		• execution • the program has divided by 0	**2**	Also accept runtime.
	(c)		Data bus	**1**	
	(d)		• display the appropriate message using quotes • `bonusCoins` variable used between text with appropriate separators	**2**	Note that the question does not ask for concatenation.
	(e)		• explanation of readability • identify example from Lines 15-18	**2**	Do not accept white space or comment lines as they are not within these lines of code.
	(f)		• random function • correct parameters to get numbers 1 to 15 • number generated by above is assigned to `bonus` variable	**3**	
	(g)		• compiler	**1**	

Section 2 — Database design and development

Question			Expected response	Max mark	Additional guidance
12.	(a)		This will not delete all the MBA League cards.	**1**	Other series may also have an expansion called "The Court".
	(b)		`WHERE series="MBA League";`	**1**	
13.			• PK in Car entity • PK and FK in Repair job entity	**2**	Do not award a mark if additional attributes have been marked • Car – PK: regNumber • RepairJob – PK jobNum, FK regNumber
14.			• ScotN: Length Check/9 characters/Range Check/Presence Check • Transport: Restricted Choice/ Car, Bus, Walk, Cycle, Other	**2**	
15.	(a)		The data contains a space.	**1**	
	(b)	(i)	**Field(s)** • memberName, contactNum **Table(s)** • member, borrowed **Search Criteria** • genre = Adventure • dateBorrowed < 15/03/2026 **Sort order** • dateBorrowed DESC	**5**	**Fields:** • fields can be in any order • do not award a mark if additional fields have been included • allow use of dot notation with fields **Table(s):** • table names can be in any order **Search Criteria:** • conditions can be in any order • equi-join not required • logical operators not required • date could have any format **Sort Order:** • accept description of descending order
		(ii)	• using the personal data for the wrong purpose • data has been shared without customer permission	**1**	Award **1 mark** for any one bullet.

	(c)		• insert into Borrowed with no fields stated or with all 6 fields stated
			• correct 6 matching values
			
			`INSERT INTO Borrowed (title, author, genre, borrowRef, memNum, dateBorrowed)`
			`VALUES ("Beyond the Veil", "Billy Jameson", "Classic", "6780061", "CH0S1162", 28/04/2026)`
				2	

Question			Expected response	Max mark	Additional guidance
15.	(d)		The new record includes a memNum that doesn't exist in the Member/other table.	**1**	
16.	(a)		• `SELECT staffName, numGuests` • `FROM staff, booking` • `WHERE time>21:00` • `AND numGuests >=5` • `AND staff.employeeID = booking.employeeID`	**5**	**Select:** • fields can be in any order • do not award a mark if additional fields have been included **From:** • table names can be in any order **Where:** • conditions can be in any order • second/ third condition must include AND • also accept (and) numGuests > 4
	(b)		• `UPDATE booking` • `SET employeeID = 99` • `WHERE employeeID = 213` • `AND date = 04/06/2026`	**4**	

Section 3 - Web design and development

Question			Expected response	Max mark	Additional guidance
17.	(a)		Determines how the web page looks.	**1**	
	(b)		• one stylesheet can be applied to multiple webpages • ensure consistency across pages • to separate (CSS) design from HTML content	**1**	Award **1 mark** for any one bullet.
18.			To apply the same style to different headings/tags.	**1**	
19.			• centred text heading – 'players wanted' beneath the badge • labelled picture present beneath info about team • link back to the home page	**3**	The picture and link can be aligned anyway.

20.	(a)		`<title>`
			`Gary's garden centre`
			`</title>`
				1	

	(b)		• GGC centre aligned • 'Plants' right aligned in correct position • bulleted list in correct position and order	**3**	

	(c)	(i)	• anchor tag opening and closing around "Rose"
			• `rose` used as folder path
			• correct file used `roseplants.html`
			`<a href = "rose/roseplants.html"> Rose</a>`
			
			Also accept folder path from website folder
			`<a href = "plants/rose/roseplants.html"> Rose </a>`
				3	

		(ii)	• correct use of img tag • correct file used	**2**	`<img src= "Rose1.gif" />` Ignore path.
	(d)	(i)	JavaScript	**1**	
		(ii)	(on)mouseover	**1**	
	(e)		Copyright Design and Patents (Act)	**1**	

<table>
<tr><th colspan="3">Question</th><th>Expected response</th><th>Max mark</th><th>Additional guidance</th></tr>
<tr><td>21.</td><td>(a)</td><td></td><td>See solution below.
<table><tr><th></th><th>‘Italian food’</th><th>‘Welcome to our restaurant’</th></tr><tr><td>Font</td><td>Arial</td><td>Verdana</td></tr><tr><td>Text size</td><td>20px</td><td>18px</td></tr><tr><td>Background colour</td><td>red</td><td>green</td></tr><tr><td>Text alignment</td><td>right</td><td>center</td></tr></table></td><td>4</td><td>Award 1 mark per row.</td></tr>
<tr><td></td><td>(b)</td><td></td><td>Absolute</td><td>1</td><td></td></tr>
<tr><td></td><td>(c)</td><td></td><td>Benefit:
• reduce load time for the webpage
• better compatibility with browser

Drawback:
• sound quality is reduced
• compression technique will lose original data</td><td>2</td><td>Award 1 mark for any one benefit.
Award 1 mark for any one drawback.

Drawback:
• Lossy compression/Original data cannot be retrieved
• Reduced High-Frequency Detail: You may notice a slight "muffled" quality, loss of "air" in vocals, or less crisp cymbal crashes and high hats</td></tr>
</table>

[END OF MARKING INSTRUCTIONS]