GCSE MARKING SCHEME

SUMMER 2024

COMPUTER SCIENCE - UNIT 2
3500U20-1

About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

WJEC GCSE COMPUTER SCIENCE

UNIT 2 - COMPUTATIONAL THINKING AND PROGRAMMING

SUMMER 2024 MARK SCHEME

Guidance for examiners

Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision made.

For band marked questions mark schemes are in two parts.

Part 1 is advice on the indicative content that suggests the range of computer science concepts, theory, issues and arguments which may be included in the learner's answers. These can be used to assess the quality of the learner's response.

Part 2 is an assessment grid advising bands and associated marks that should be given to responses which demonstrate the qualities needed in AO1, AO2 and AO3. Where a response is not credit worthy or not attempted it is indicated on the grid as mark band zero.

Q	Answer	Mark	AO1	AO2	AO3	Total
1.	**Award 1 mark for each correct tag and 1 mark for each correct parameter.**	8	2b			8
(a)	<blockquote> We choose to go to the moon - JFK <blockquote> Creates a block of quoted text (1) Containing the words “We choose to to go the moon – JFK" (1) Note: ignore transcription errors in the quote.					
(b)	 Send us an email Creates an anchor triggering an email(1) Emails to support@wjec.co.uk(1) Displays “Send us an email” as a hot clickable text.(1)					
(c)	Welcome Creates a heading(1) with the content “Welcome”(1)					
(d)	<hr> Draws a horizontal rule (1) Accept: Draws a bar/line across the page.					

Q	Answer	Mark	AO1	AO2	AO3	Total
2.	**<html>** **<head>** **<title>** **New! Mesh Wi-Fi** **</title>** **</head>** **<body>** ** ** ** Mesh Wi-Fi** ** ** **<img src="meshw.jpg">** ** ** ** ** ** ** ** - Slow connection? ** ** - Poor ping time? ** ** - Dead zones between rooms? ** ** ** ** ** ** ** **You need a new <b>Mesh Wi-Fi<b> router!** ** ** ** ** **Visit www.routers.wjec.co.uk to find out more.** ** ** **</body>** **</html>**	1(html) 1(head) 1(title) 1(body) 1(center) 1 (h1) 1(img) 1(ul and li x3) 1 (a href) 1 (http://)		2b		10

<table>
<tr><th>Q</th><th>Answer</th><th>Mark</th><th>AO1</th><th>AO2</th><th>AO3</th><th>Total</th></tr>
<tr><td>3.</td><td>Award one mark for each correct answer:</td><td>4</td><td>4</td><td></td><td></td><td>13</td></tr>
<tr><td>a)</td><td>i. Subtract
ii. Branch
iii. End/Stop/Halt
iv. Data definition /Declare a data definition/variable memory area/ Memory Address.</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>(b)</td><td>Award one mark for each correct answer:

I. Input <code>INP</code>
II. Output <code>OUT</code>
III. Store <code>STA</code>
IV. Load <code>LDA</code></td><td>4</td><td>4</td><td></td><td></td><td></td></tr>
<tr><td>(c)</td><td><table><tr><td>Output 1</td><td>1</td></tr><tr><td>Output 2</td><td>2</td></tr><tr><td>Output 3</td><td>3</td></tr><tr><td>Output 4</td><td>5</td></tr><tr><td>Output 5</td><td>6</td></tr></table></td><td>5</td><td></td><td>5</td><td></td><td></td></tr>
</table>

Q	Answer	Mark	AO1	AO2	AO3	Total
4.	**Indicative content:** 1. declare total is integer 2. declare loops is integer 3. declare currentNo is integer 4. Output "Input how many stops:" 5. input loops 6. For i = 1 to loops 7. Output "Input distance:" 8. input currentNo 9. total = total + currentNo 10. Next i 11. Output "The total distance is:" & total Alternative acceptable "python style" answers. **Award 1 Mark** for each of: • Output Text (String literal similar to example) • Input number of loops (into a variable) • Input each number (into a variable) • Uses a loop (any form) • Correctly adds the total (total+= or ANY other) • Outputs a variable	6			6	6

Q	Answer	Mark	AO1	AO2	AO3	Total
5.	**Award 1 mark** per point below:				3b	5
(a)	New world class called **Advert** in Greenfoot environment with correct image. (accept grid of more than 9*9)	1				
(b)	Class called Sun exists (on right) and has image of Sun (given or built in).	1				
(c)	World is populated with **two** Suns on open.	1				
(d)	Suns move randomly when on/added to world.	1				
(e)	Greenfoot world saved correctly as `finalAdvert` (ignore capital letters)	1				
6 (a)	private property private static int `totalCount`; accept: `totalCount`	1		2b		5
(b)	class which inherits from World Slopes (only)	1				
(c)	class which inherits from Actor any 1 from: Skier Tree Snowman	1				
(d)	method with property: `bumpCount` (with or without class type before or formatting)	1				
(e)	superclass: World OR Actor	1				

Q	Answer	Mark	AO1	AO2	AO3	Total
7.	**Award 1 mark** per **bulleted** point below: World is pre-populated on load with:				3b	13
(a)	• one skier only • two or more snowmen • two or more trees	1 1 1				
(b)	• snowmen **and** trees move "randomly" around world.	1				
(c)	• skier moves around world according to arrow keys. • skier moves with appropriate relative speed to other objects	1 1				
(d)	• skier is removed from world on collision with snowman.	1				
(e)	• sound plays when objects collide	1				
(f)	• counter added to world. • counter increments by 1 when snowmen and tree collide.	1 1				
(g)	• counter decrements by 10 when snowman and skier collide.	1				
(h)	• implementation via parameter passing as opposed to wholly new method. • Greenfoot world saved correctly as FinalWJECSki7 (ignore typos/capitalization)	1 1				