

Guidance on the use of past paper questions for Advanced Higher Computing Science

The Curriculum for Excellence Advanced Higher Courses draw on the strengths of popular areas of study from existing Advanced Higher with the introduction of some new content. The purpose of this support document is to help centres and departments to identify suitable past paper questions/items that could be used, or possibly amended, to support learners in their preparation for sitting question papers (exams) as part of the Advanced Higher Course assessment. The advice in this document reflects questions selected from **2010 to 2014** [past papers](#).

When utilising any past paper questions, you need to take into account the following:

- ◆ You must select questions that provide the learners with the same level of challenge as those in the Advanced Higher Specimen Question Paper.
- ◆ You may be able to use questions as published or with amendments as suggested in the columns below.
- ◆ You must use questions that adhere to the Advanced Higher General Marking Principles and reflect the form of Detailed Marking Instructions as published in the Advanced Higher Specimen Question Paper.

If any change to a question/items is necessary, you must ensure that:

- ◆ The style and structure matches the Specimen Question Paper for Advanced Higher.
- ◆ Marking of the learner's response to the question adheres to the General Marking Principles in the Advanced Higher Specimen Question Paper.
- ◆ Marking Instructions are amended to reflect the style of the Advanced Higher Detailed Marking Instructions.

The details below should be read in conjunction with the relevant:

Mandatory documentation:

- ◆ Course Specification
- ◆ Unit Specifications
- ◆ Course Assessment Specification

Advice and guidance:

- ◆ Course and Unit Support Notes

Assessment:

- ◆ Question Paper Component:
 - general assessment information
 - general marking principles and detailed marking instructions

Related Information as provided in the relevant N5-Advanced Higher Course Comparison Document.

Key for the section below:

- C — amend context as required
- S — amend source as required
- St — amend question style
- Str — amend structure of the question

Not all topic/areas of study will appear every year due to the sampling techniques used in producing question papers.

<p>Information from the Course Assessment Specification</p> <p>The question paper will consist of structured and extended response questions, and will give learners an opportunity to demonstrate application of knowledge and understanding to answer appropriately challenging context-based questions by drawing on and applying knowledge from the table provided in the 'Further mandatory information on Course coverage' section of the Course Assessment Specification.</p> <p>Questions related to programming will (mainly) be presented using SQA standardised reference language (as outlined in <i>Course Assessment Specification</i>). Candidates may also be asked to write code in response to a question (but the programming language would not be specified).</p>	<p>The columns below identify additional support questions from Advanced Higher Past Papers 2010 to 2014.</p>		
<p>Advanced Higher</p>			
<p>Use question as published</p>	<p>Amend question context/source</p>	<p>Amend question style/structure</p>	
<p>Computing Software and Information System Design and Development</p>			
<p>Project planning and management</p>	<p>2014 Q1(b) – (d) 2014 Q1(f) and (h) 2013 Q1(b) and (e) 2013 Q2(c) 2012 Q1(a) and (c) 2011 Q1(a), (b) and (d) 2010 Q1(b) and (e)</p>		
<p>Design notation and development methodologies</p>	<p>2014 Q2(b), (c) and (f) 2013 Q3(d) 2012 Q2(b) 2011 Q2(c) 2010 Q5(c)</p>		
<p>Programming paradigms</p>	<p>2014 Q5(a) and (b) 2013 Q4(a) and (b) 2012 Q4(a) and (d) 2011 Q5(a) – (c) 2010 Q4(a) – (b)</p>		

Data type and structures	2014 Q2(a) 2014 Q4(a) – (d) 2013 Q2(b) 2013 Q3(a) – (c) 2012 Q2(a) 2012 Q4(b) and (c) 2010 Q2(a) – (d) 2010 Q5(a)		
Standard algorithms	2014 Q1(g) 2014 Q3(b) and (c) 2013 Q6(a) – (c) 2012 Q3(d) 2012 Q5(b) 2011 Q4 2010 Q3(a) – (c)	2014 Q3(d) Delete last sentence and replace with ‘Describe the bubble sort algorithm, referring to usage of memory and number of comparisons in your answer’. 2012 Q3(c) Change first sentence of stem to ‘it has been decided to use a binary search to find a Username when a user logs on’. 2012 Q5(a) and (c) Replace <i>simple</i> sort with <i>insertion</i> sort. 2011 Q3(a) and (b) Replace <i>simple</i> sort with <i>insertion</i> sort. 2010 Q5 (b) Replace <i>simple</i> sort with <i>insertion</i> sort.	

Information Systems
Software and Information System Design and Development

<p>Project planning and management</p>	<p>2014 Q1(a) – (b) 2014 Q2(a) part (i) 2014 Q3(d) 2014 Q8(c) part (ii)</p> <p>2013 Q1(a) and (e) 2013 Q2(a) and (e) 2013 Q5(d)</p> <p>2012 Q1 (a) and (b) 2012 Q2(f) 2012 Q5(b) 2012 Q9(d) 2012 Q10(d) part (i) 2012 Q13(e)</p> <p>2011 Q1(a) 2011 Q2(a)</p> <p>2010 Q1(a) 2010 Q6(a) part (ii) 2010 Q7(c) part (ii) 2010 Q9(e) 2010 Q14(d)</p>	<p>2014 Q2(b) Change <i>system specification to requirements specification</i> and <i>systems testing to final testing</i>.</p> <p>2014 Q2(e) Change <i>ease of use to usability</i>.</p> <p>2014 Q8(e) Replace <i>systems testing</i> with <i>final testing</i>.</p> <p>2013 Q1(b) Replace <i>systems specification</i> with <i>requirement specifications</i>.</p> <p>2013 Q8(b) Replace <i>systematic testing</i> with <i>final testing</i>.</p> <p>2012 Q2(a) Replace <i>system specification</i> with <i>requirements specification</i>.</p> <p>2012 Q2(e) Replace <i>systematic testing</i> with <i>integrative testing</i>.</p> <p>2011 Q1(b) Replace <i>system specification</i> with <i>requirements specification</i>.</p> <p>2011 Q1(f) Replace <i>ease of use</i> with <i>usability</i>.</p> <p>2010 Q6(d) Change stem to 'Usability testing is</p>	
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		<p>carried out. Describe two issues ... as a result of this usability testing’.</p> <p>2010 Q9(c) Keep stem and replace question with ‘Explain how feedback from this testing could be used to evaluate the effectiveness of the interface’.</p>	
Design notation and development methodologies		<p>2012 Q8(c) and (e) Replace <i>paper prototype</i> and <i>storyboard</i> with <i>wire framing</i>.</p> <p>2010 Q7(d) and Q14(c) Replace <i>structured English</i> with <i>pseudocode</i>.</p>	
Computational constructs: databases, SQL	<p>2014 Q11 (b) 2014 Q13(c) 2014 Q13(a) – (d)</p> <p>2013 Q13(e) 2013 Q14(c) and (e) 2013 Q16(c)</p> <p>2012 Q13(d) 2012 Q15(b) 2012 Q16(a)-(c) and (e) 2012 Q17(a) and 9b0</p> <p>2011 Q12(d) 2011 Q13 (a) and (b) 2011 Q14 (a) – (e)</p> <p>2010 Q10(c) 2010 Q13(c) and (e) 2010 Q14(b) 2010 Q15(a) – (d)</p>		

		<p>with 'Describe the implications of an intelligent avatar in terms of usability'.</p> <p>2011 Q7(a) Replace <i>social</i> with <i>environmental</i>.</p> <p>2011 Q8(b) Keep stem but change question to: 'Describe how the power of an intelligent system could be applied in this situation'.</p> <p>2010 Q11(b) Keep stem and change question to 'Explain how tracking information is used to provide these personalised suggestions'.</p>	
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Resources

<p>SQA past papers www.sqa.org.uk/pastpapers/findpastpaper.htm</p>	<p>Additional assessment support material is available here:</p> <p>Education Scotland www.educationscotland.gov.uk/</p> <p>Glow www.educationscotland.gov.uk/usingglowandict/</p> <p>Glow Log-in https://secure.glowscotland.org.uk/login/login.htm</p>
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