

A LEVEL

Examiners' report

COMPUTER SCIENCE

H446

For first teaching in 2015

H446/02 Autumn 2020 series

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.



Reports for the Autumn 2020 series will provide a broad commentary about candidate performance, with the aim for them to be useful future teaching tools. As an exception for this series they will not contain any questions from the question paper nor examples of candidate answers.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

A full copy of the question paper and the mark scheme can be downloaded from OCR.

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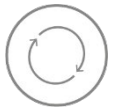
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Paper 2 series overview

The Algorithms and Programming paper requires candidates to be familiar with a wide range of standard algorithms that can be applied to data structures. This session's paper required detailed knowledge of the implementation of queues and linked lists.

	<p>AfL</p>	<p>Candidates who prepare for assessment by implementing data structures and their associated algorithms gain the practical experience that is vital to developing a deeper understanding of coding and problem solving. It is recommended that candidates are given the opportunity to extend their programming skills through the implementation of data structures on the specification.</p>
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<p><i>Candidates who did well on this paper generally did the following:</i></p>	<p><i>Candidates who did less well on this paper generally did the following:</i></p>
<ul style="list-style-type: none"> • Showed detailed knowledge of the implementation of data structures such as queues through prior experience of coding such data structure. • Wrote clear pseudocode algorithms that were well-structured. • Produced coherent, detailed and analytical answers for the level of response questions. • Exhibited knowledge of the Object-Oriented Programming paradigm including the use of constructors and the use of get/set methods. 	<ul style="list-style-type: none"> • Showed limited ability to formulate algorithms using pseudocode. • Demonstrated little if any understanding of Object Oriented Programming. • Displayed some knowledge showing factual recall but struggled to apply the knowledge to solve problems and hence did not show deeper understanding.

Common misconceptions

Many candidates had some knowledge of the Big O notation for algorithmic complexity, but a surprising number erroneously thought that sorting could be completed in linear time or better. For standard sorting and searching algorithms candidates should know the best/average/worse case times.

Guidance on using this paper as a mock

If the paper is used as a mock, it would be a worthwhile exercise to follow up with a review and subsequent implementation of coding based questions. Candidates who code solutions to the algorithms in the questions will gain a greater depth of understanding and appreciation of the subject material.

Supporting you

Review of results

If any of your students' results are not as expected, you may wish to consider one of our review of results services. For full information about the options available visit the [OCR website](#). If university places are at stake you may wish to consider priority service 2 reviews of marking which have an earlier deadline to ensure your reviews are processed in time for university applications.

Supporting you through 2020-2021

Our priority is supporting you and your students this autumn and to support you as you prepare for summer 2021 exams. We'll update our [website information](#) regularly with resources, guidance and key information.

Take a look at our support for:

- [Teachers](#)
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