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Examiners' report

COMPUTER SCIENCE

H446

For first teaching in 2015

H446/01 Autumn 2021 series

Version 1

ocr.org.uk/computerscience

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 November 2021 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 responses.

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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Paper 1 series overview

H446/01 is one of two examination components for the GCE Computer Science. It is a non-calculator examination paper with a focus on Computer Systems and contains much of the foundation knowledge required for the other two units.

To do well on this paper, candidates need to be able to demonstrate and apply knowledge across all of the topics in different contexts. Definitions were, at times, not clearly expressed and this was evident in the web technology questions. To gain credit in the extended answer questions, it is important that candidates apply their answer to the context of the question. Many candidates lost marks through not contextualising their responses and not answering the whole question across all three extended answer questions.

The examination paper differentiated the candidates effectively and the scripts included a full range of marks.

Candidates who did well on this paper generally did the following:	***Candidates who did less well on this paper generally did the following:***
• Applied their knowledge well to the context of the questions. • Provided a conclusion and expansion for the level of response questions, answering all parts of the question. • Showed a good understanding of normalising floating point binary. • Were able to use terminology correctly.	• Displayed some knowledge of computing fundamentals but were unable to apply their knowledge to the context of the question. • Gave limited responses to the level of response questions often only answering part of the question. • Were able to do simple binary translation but showed a lack of understanding of floating point.

Comments on responses by question type

Level of response questions

In the level of response questions, it is important to apply knowledge and answer the question in full. Many candidates were able to show some factual recall on the topic but were unable to justify their points adequately and in the case of the addressing modes question were not able to give reasons for requiring multiple addressing modes.

Common misconceptions

	**Misconception**	Candidates were asked to describe how a website is indexed by a search engine and many candidates confused this with the process of a user typing in a URL and it being retrieved by the browser.
	**Misconception**	Some candidates confused pipelining with the use of threading and multiple cores.

Key teaching and learning points – comments on improving performance

It is important for candidates to have lots of opportunity to write algorithms in pseudocode and more than one programming language. It allows them to show clearly that they understand the underlying concepts of data structures and encapsulation which is not always easy to evidence in some languages.

Candidates should be given lots of opportunity to practise the level of response questions as these are high mark questions and can make a big difference to overall marks.

Guidance on using this paper as a mock

There is a good range of topics, but candidates should be encouraged to read the questions carefully and trace through their algorithms to ensure they work as they intended.

Because there was an error in Question 7(c) part (ii), we will publish a post-exam corrected paper on Interchange. You should use this version for all mocks.

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.

Supporting you through 2021-2022

Our priority is supporting you and your students this autumn and to support you as you prepare for summer 2022 exams. We'll update our website information regularly with resources, guidance and key information.

Take a look at our support for:

- Teachers
- Students
- Exams officers

Keep up-to-date

We are sending a weekly roundup to tell you about important updates. You can also sign up for your subject specific updates. If you haven't already, sign up here.

OCR Professional Development

Attend one of our popular CPD courses to hear directly from a senior assessor or drop in to a Q&A session. All our courses for the academic year 2021-2022 are being delivered live via an online platform, so you can attend from any location.

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ExamBuilder is the question builder platform for a range of our GCSE, A Level, Cambridge Nationals, Cambridge Technicals and Functional Skills qualifications. See the full list of available qualifications in the sign up form.

ExamBuilder is **free for all OCR centres** with an Interchange account and gives you unlimited users per centre. We need an Interchange username to validate the identity of your centre's first user account for ExamBuilder.

If you do not have an Interchange account please contact your centre administrator (usually the Exams Officer) to request a username, or nominate an existing Interchange user in your department.

Supporting you

Active Results

Review students' exam performance with our free online results analysis tool.

For the Autumn 2021 series, results analysis is available for GCSE English Language, GCSE Mathematics and Cambridge Nationals (moderated units) only.

It allows you to:

- review and run analysis reports on exam performance
- analyse results at question and/or topic level
- compare your centre with OCR national averages
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