

BCS Higher Education Qualification

Professional Graduate Diploma

Spring 2020

EXAMINERS' REPORT

Programming Paradigms

General comments

Due to the current global situation, very few candidates were able to attend the exams, however, the standard of those who did attend is satisfactory overall.

There is a concern that candidates are not engaging with part of the syllabus that appear in Section B: specifically, Logic Programming, Functional Programming. Distributed and Concurrent systems. Therefore, students are limiting themselves to knowledge of Imperative Programming and not embracing the learning opportunity in the module to cover other styles of programming.

Question number: 1

Syllabus area: Nature of Programming Languages, 1.4 and 1.5 and Programming Environments 2.4 and 2.5.

Total marks allocated: 25

Examiners' Guidance Notes

There was good knowledge about the principles of Event-Driven Programming. Some answers would have been improved if there were examples used to illustrate the issues.

The second part of the question asked about Debugging and Testing an event-driven program. There was reasonable mention of testing, but it could have been improved by talking about how it could be used to test an event-driven program. The discussion of debugging was sometimes general and lacked details about how it could be used to set breakpoints and step through execution, looking to identify the cause of problems.

Question number: 2

Syllabus area: Programming Environments, 2.6

Total marks allocated: 25

Examiners' Guidance Notes

This question asked about Configuration Management. A number of answers could provide a general statement about the need for Configuration Management. However, it was often confused with Maintenance and helping people starting to work with a piece of software. Better answers understood the issues of different configurations of software, e.g. for different users, and issues of version and release management.

Question number: 3

Syllabus area: Object Orientation, 3.1

Total marks allocated: 25

Examiners' Guidance Notes

<p>This question asked about the use of Object-Oriented programming to help build a modular program. The first part asked about the concepts of Encapsulation, Inheritance and Polymorphism – there was generally a good understanding of the issues. For Encapsulation, some answers talked more about the related, but different, concept of Information Hiding.</p>

<p>The second part of the question was about applying the ideas from the first part to building a queue data structure. This part was answered well, although the possible use of Polymorphism was not covered well.</p>

Question number: 4

Syllabus area: Related Issues, 6.2

Total marks allocated: 25

Examiners' Guidance Notes

<p>This question covered concurrent systems. No candidates attempted the question.</p>

Question number: 5

Syllabus area: Functional Programming, 4.1 and 4.2

Total marks allocated: 25

Examiners' Guidance Notes

<p>This question covered Functional Programming. No candidates attempted the question.</p>
