

**BCS Higher Education Qualification**

**Professional Graduate Diploma**

**April 2022**

**EXAMINERS' REPORT**

**Software Engineering 2**

**General comments**

The pass rate this time was higher than it has been in recent previous sittings. Candidates appeared to be aware of the Software Engineering terms addressed by the questions, however, many candidates were unable to discuss them at the level expected for this syllabus.

**Questions Report:**

Qu.	Comment
A1	This question was relatively well answered with many candidates being able to define the concepts of reuse and its application in Part a) and b). However, most of the weaker responses were in Part c) where a general lack of knowledge of Component Based Software Development concepts and practice was most evident.
A2	Candidates showed some knowledge of maintenance as identified in the software development life cycle and were able to distinguish between the different type of maintenance in Part a). However, in Part b) a substantial number of candidates demonstrated limited appreciation of the software maintenance process itself, and poor knowledge of "impact analysis" and its application.
A3	This question was poorly answered, with candidates seeming to take a general knowledge, "role playing" stance in their responses. Thus, in part a) the technical concept of estimation and measurement were often ignored, and a layman's view of "productivity" given. This approach continued in Part b) where many candidates seemed to ignore the practice of team selection and team building, to focus more on project selection, project life cycle, and project environment. Candidate responses to such questions should be based on their technical understanding of concepts as taught and learned, rather than what common sense knowledge can be applied, or remembered.
B4	In Part a) most candidates provided a sufficient explanation of Software Process Improvement (SPI) and a reasonable explanation of models for process improvement and assessment e.g., CMMI, SPICE. However, they did not sufficiently discuss the second part of this question concerning the recommendation. In Part b), a substantial number of candidates did not answer this question in full i.e. did not discuss BOTH aspects of the question: the current state of practice of SPI in industry AND whether SPI standards are easily applicable to small firms.

B5	In general, in Part a) most candidates sufficiently explained Open-Source Software but NOT Open-Source Software Development (OSSD). Only a few candidates were able to explain how OSSD adheres to the principles of software engineering. Part b) proved to be problematic for many candidates who provided only 'definitions' of reliability, efficiency and functionality and did not comment on reliability, efficiency and functionality of open-source software. Some candidates confused efficiency of software with efficiency of software development.
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