BCS Higher Education Qualification

Professional Graduate Diploma

April 2025

EXAMINERS' REPORT

Web Engineering

Questions Report:

A1	
	This question was attempted by almost all students and the marks were comfortably within range with a wide distribution. The question was based on the web security courses that most employers insist on all employees taking, often every year. Since most employees and indeed most managers have no idea of the risks associated with indiscriminate web browsing it is essential for the web team to help explain the risks and how to mitigate against them. They also need to understand this to ensure that their own web sites defences are effective and do not mislead their own users into dangerous territory. All candidates understood the difference between http: and https:. The descriptions of both could have been clearer and many did not understand that https: ensures safe delivery of content from the authenticated server, It provides no assurance over the content as it is perfectly possible to deliver harmful content securely, particularly when foreign governments are involved. All candidates were able to identify reasons for using https:. The major reason for failing to gain marks was giving nonrepudiation as a reason, as this is not the case. The advice to users and the reasoning behind it was generally well made. A good point often made was checking the validity of the certificate authority, as this could well indicate a dubious link.
A2	
	This question was also attempted by most candidates with a wide range of marks awarded, and the overall mark was marginally on the high side. Most candidates correctly identified the acronyms except CGI where a number mistook it for being the graphics method often used to generate visual content for games and films. In this context it should be Common Gateway Interface. Marks were lost for incomplete descriptions and failing to give examples of use. All candidates understood the difference between single-factor and two-factor authentication, but the quality of the descriptions varied widely. All the common methods of implementing two-factor authorisation were discussed by various candidates, The main reason for losing marks was treating the sending of OTPs by text and email as different implementations. Since the functional use of both is the same only one was accepted.

A3	
	This was far less popular but again returned an acceptable average mark with a reasonable distribution. ISO/IEC 25010 was reasonably well understood, but some candidates had difficulty in identifying which were the highest-level categories and giving suitable examples. Candidates were able to assess the benefits of ISO/IEC25010 in developing web applications but were a lot less sure of its limitations.
B4	
	Two candidates achieved full marks on this question, and the average score was 17.69—substantially higher than that of Question B5. The responses indicate a strong understanding of XML and DTD schema, suggesting that students were generally well-prepared and confident in this area of the syllabus.
B5	
	Some candidates appeared confused by the phrasing of the question and were uncertain about what was specifically being asked. The lack of a clear and direct connection to web development may have contributed to this confusion. As a result, many students demonstrated limited understanding and were unable to respond effectively. Nevertheless, a minority of candidates were able to interpret the question accurately and provided strong, well-reasoned answers.