

## BCS Level 4 Apprenticeship in Software Development Methodologies Answer Key and Rationale QAN - 603/0543/5

Question	Answer	Explanation / Rationale	Syllabus Sections
1	D	These activities take place as part of the feasibility study itself and business case development, which takes place during the feasibility study stage of the SDLC.	1.3
2	B	As defined in the syllabus, the SDLC provides a set of steps that can be used to develop software.	1.1
3	A	Demonstrates understanding of how the SDLC is implemented as required by section 1.2 of the syllabus.	1.2
4	A	The waterfall method is sequential not iterative. Iterative development contrasts with a traditional waterfall method in which each stage of the software development life cycle is "gated." For waterfall development, coding does not begin until design of the entire software application is complete and has gone through a stage gate review. Likewise, testing does not begin until coding is complete and has passed necessary phase gate reviews.	2.1
5	A	With the agile method, each feature is taken from start to finish within an iteration, with the software being released for deployment at the end of each iteration, or if appropriate even during an iteration.	2.2
6	A	A domain expert is a person with special knowledge or skills in a particular area of endeavour. They have a deep understanding of the business' products or programs.	3.1
7	B	Because this is problem correction, the requirements are clear. Design will be crucial to ensure the security weakness is designed out. Testing is required to ensure that appropriate security tests are carried out.	3.2
8	A	The design phase considers and develops a blueprint for the software solution that will be implemented in live operation. The design may need to go through several iterations to ensure the system specification describes a final product that will successfully meet your business needs.	1.3
9	A	Traceability and cross-referencing are used to determine requirements.	1.4

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10	A	The design phase is where you will look at many potential solutions and determine the most effective way to construct the solution and the structure of components you will build.	1.4
11	B	Agile does not need formally documented requirements, but requirements are worked through with the customer through the iterations of the development. The other options relate more to sequential / waterfall method.	2.3
12	B	The product owner has the responsibility of prioritising and managing the backlog especially in smaller teams / businesses. Therefore, B is the correct answer. Managing any part of the project is not correct, as the project manager would take on this role.	3.3
13	D	The scrum master is there to help the team perform at their highest level, removing impediments and shielding the team from interruptions. The scrum master does not take on the role of a lead developer. They may have a technical role but being the lead developer is not the responsibility of the scrum master.	3.1
14	D	Software maintenance in software engineering is the modification of a software product after deployment to correct faults, to improve performance or other attributes, and make changes and modifications as required.	1.2
15	D	A software development lifecycle is essentially a series of steps, or stages that provide a model for the development and lifecycle management of an application or piece of software, that is not dependent on the development methodology used.	1.1
16	D	The V-model is an SDLC model where execution of processes happens in a sequential manner in V-shape. It is also known as 'verification and validation' model.	2.1
17	B	Lean programming is a concept that emphasises optimising efficiency and minimising waste.	2.3
18	B	Although the details are sparse, they include reasons for the change and they provide useful information for stakeholders. Some but not all describe the general	1.4

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		source of the change and there is no information on the details of the change itself.	
<b>19</b>	<b>D</b>	Structures may vary depending mainly on organisational considerations. Structures may also vary depending on the methodology, but the options focusing on method are not correct – B is too prescriptive and C is too flexible.	3.2
<b>20</b>	<b>C</b>	Because this software development is governed by a project this typical project problem is the responsibility of the project manager to address and resolve. The resolution may of course involve the other parties.	3.3