K1: awareness of the legal requirements relating to the use of data as set out in the GDPR 2016/679 and the Data Protection Act 2018

* means having knowledge of the regulations and rules regarding the collection, storage, and use of personal data. This includes understanding the rights of individuals under the GDPR, the responsibilities of data controllers and processors, and the procedures for handling data breaches.

K2: awareness of the legal requirements related to the provision of application support services including the Malicious Communications Act 1988, the Copyright, Designs and Patents Act 1988, the Computer Misuse Act 1990, the Copyright (Computer Programs) Regulations 1992 and the Privacy and Electronic Communications (EC Directive) (Amendment) Regulations 2011 Knowledge

* means having knowledge of the laws and regulations that govern the use of technology and applications. This includes understanding the legal requirements for protecting intellectual property rights, preventing cybercrime, and ensuring the privacy of electronic communications.

K3: organisational data and information security standards, policies and procedures relevant to data management activities

* mean understanding the security standards and procedures that are in place within the organization to protect data and information. This includes understanding the policies for data access, backup, retention, and disposal, as well as the procedures for handling data breaches

K4: the differences between structured and unstructured data

* mean understanding the characteristics and properties of different types of data. Structured data is organized and easy to analyse, while unstructured data is not organized and requires more processing to be analysed.

K5: principal approaches to defining customer requirements for data analysis

* mean understanding the methods for eliciting and analysing customer requirements for data analysis projects. This includes understanding the different types of requirements, such as functional and non-functional requirements, and the techniques for documenting and validating requirements.

K6: approaches to combining data from different sources

* Methods and techniques used to integrate data from disparate sources into a single, cohesive dataset. This may involve the use of tools such as data warehousing, data integration software, and APIs.

K7: approaches to data tools and methods for data analysis

* Various tools and techniques used to analyse data, including statistical analysis, data visualization, machine learning, and other data mining techniques.

K8: how to use data ethically and the implications of data use for wider society

* This involves ensuring that data is used in a responsible and respectful manner. This includes protecting individuals' privacy, ensuring data accuracy, and avoiding bias and discrimination.

K9: the principles and processes of the systems lifecycle, for example ITIL (IT Information Library)

* Refer to the stages involved in the development and maintenance of information technology systems, including planning, design, development, testing, deployment, and ongoing maintenance.

K10: change and release management processes that support effective planning and implementation of system and application changes

* Planning and implementation of system and application changes to minimize the risk of disruption to the organization.

K11: project management principles and processes, including the principle of Agile

* Refer to the methodologies and frameworks used to manage and execute projects effectively and efficiently.

K12: remote working and collaborative platforms and tools, that are used by organisations for internal and external communications and digital working practices including approaches to usability and accessibility

* Refer to the software and applications used by organizations to facilitate communication and collaboration between team members who are not physically co-located.

K13: defect management processes

* Refer to the methodologies used to identify, track, and resolve software defects or bugs.

K14: the distinction between the root cause of a defect and its effects

* This involves identifying the underlying cause of a defect rather than just addressing its symptoms.

K15: principles of testing methodologies (manual and automated) including the importance of clear supporting documentation

* Refer to the various methods used to test software, including manual testing, automated testing, and the use of test cases and documentation.

K16: the role of software testing within the context of project and product risk reduction in the systems development life cycle, including regression testing

* This involves ensuring that software is tested thoroughly to minimize the risk of defects and errors that could impact the end user.

K17: security vulnerabilities and approaches to security testing including penetration testing Knowledge

* Refer to the techniques used to identify and address potential security risks and vulnerabilities in software applications.

K18: the process of transition from software development and testing into production and live support

* This involves ensuring that software is deployed and supported effectively and efficiently.

K19: roles within a multidisciplinary team and the interfaces with other areas of an organisation

* refer to the specific responsibilities and tasks assigned to individuals who are working together with other professionals from different fields and areas of expertise towards a common goal or project. This type of team is made up of members who have different backgrounds and skills, and who work together collaboratively to achieve shared objectives.

K20: awareness of how their role fits into their stakeholders’ wider technology environment

* refers to an individual's understanding of how their specific role within an organization is interconnected with the broader technology environment in which the organization operates. This includes an awareness of the various stakeholders involved in the technology environment, including customers, suppliers, partners, and competitors, as well as the different technologies and platforms that are used to support business operations.

S1: Use data systems securely to meet requirements and in line with organizational procedures and legislation, including principles of Privacy by Design:

* This means that individuals should utilize data systems in a safe and secure way while following organizational procedures and legal requirements. Additionally, it requires taking into account the principles of Privacy by Design, which emphasizes data protection and privacy measures from the outset of the design process.

S2: Implement the stages of the application lifecycle, ensuring that principles of usability and accessibility are embedded in the approach at every stage:

* This involves following the steps in the application lifecycle while considering the principles of usability and accessibility. This means that the user experience and the ease of access to the application should be considered at each stage of the development process.

S3: Assess the impact of user experience and domain context on data analysis activity:

* This statement requires an individual to consider the effect of both the user experience and the domain context on data analysis activities. This includes how users interact with the data and the context in which the data is used.

S4: Communicate verbally and non-verbally to a range of internal and external stakeholders, using a range of technical and non-technical language to provide an effective interface between internal or external users and suppliers:

* This statement involves using various communication techniques, including verbal and non-verbal communication, to connect with different internal and external stakeholders. This includes using both technical and non-technical language to provide an effective interface between users and suppliers.

S5: Take a ‘customer-focused’ approach to service delivery, underpinned by active listening:

* This statement requires individuals to prioritize the needs and wants of the customer and deliver services accordingly. This approach is supported by active listening to better understand the customer's requirements and expectations.

S6: Adapt to changing contexts within the scope of a project and continually review project output to ensure alignment with customer and organizational needs, for example, with a DevOps environment:

* This involves adjusting to changing contexts within a project's scope and regularly reviewing the project output to ensure it aligns with customer and organizational needs. This is particularly important when working in a DevOps environment, where continuous integration and delivery are key.

S7: Collate and interpret data and convert it into usable formats such as infographics, reports, tables, dashboards, or graphs:

* This statement involves gathering and analysing data and converting it into usable formats such as infographics, reports, tables, dashboards, or graphs. These formats make it easier to understand and use the data.

S8: Selecting and applying appropriate data tools to deliver application support outcomes:

* Choosing the right tools to manage and support software applications. This involves using tools to monitor, troubleshoot, and resolve issues related to the application, ensuring that the application meets user requirements, and making recommendations for improving the application.

S9: Using manual or automated test tools:

* Refers to the process of testing software applications using tools and techniques that either require human input or are automated. This can include testing for bugs, security vulnerabilities, and performance issues to ensure that the application meets the requirements of its users.

S10: adapt and apply testing activities according to industry standard development methodologies (sequential and iterative) including maintenance of clear supporting documentation:

* Means understanding the software development process and adjusting testing activities to fit that process. This includes creating and maintaining clear documentation, such as test plans and test cases, to ensure that the application meets the needs of the user.

S11: apply specific industry standards where appropriate (for example GDPR, health informatics and safety critical) related to software testing:

* Means adhering to regulations or guidelines set by relevant industries to ensure that software testing meets the appropriate standards. Examples of industry standards include GDPR for data privacy, health informatics for healthcare applications, and safety-critical standards for applications that have significant safety implications.

S12: Using formal and informal techniques that demonstrate software and systems are fit for purpose:

* Means using a range of techniques to test software applications to ensure that they meet user requirements. These can include formal techniques, such as code reviews, and informal techniques, such as exploratory testing.

S13: Use relevant training methods to support internal and external stakeholders with core software applications and hardware ensuring that principles of usability and accessibility are embedded in the approach:

* Means providing training to both internal staff and external users to ensure that they can use software applications and hardware effectively. This includes ensuring that principles of usability and accessibility are incorporated into the training approach.

S14: communicate applications support information by ensuring continuity of user understanding through use of training notes, user guides and other collateral sources

* Means providing users with accurate and up-to-date information about the software application and how to use it effectively. This involves creating training notes, user guides, and other collateral sources to support users in their use of the application.

B1: works independently and takes responsibility. For example, has a disciplined and responsible approach to risk, and stays motivated and committed when facing challenges

* Working independently and taking responsibility means being self-motivated, disciplined, and able to take ownership of tasks and projects. This includes having a responsible approach to risk and being committed and persistent when facing challenges.

B2: logical approach – uses valid reasoning and follows guidelines set out by the organisation:

* applying valid reasoning and following guidelines set out by the organization. This includes analysing information, identifying patterns and trends, and making decisions based on facts and evidence.

B3: ethical and security mindset - follows the guidelines on secure working and the ethical codes of conduct for the sector/organisation:

* means following guidelines on secure working and adhering to ethical codes of conduct for the sector or organization. This includes ensuring that confidential information is handled appropriately, and that all actions are conducted in an ethical manner.

B4: collaborative- works with a wide range of people in different roles, internally and externally, with a positive attitude to inclusion & diversity:

* Means working effectively with a wide range of people in different roles, both internally and externally, and having a positive attitude towards inclusion and diversity. This includes building relationships, communicating effectively, and valuing different perspectives and ideas.

B5: shows initiative for solving problems within their own remit, being resourceful when faced with a problem to solve:

* means being resourceful and proactive in finding solutions within one's own remit. This includes being able to identify problems, proposing solutions, and taking action to resolve issues.

B6: innovative - shows curiosity to explore new opportunities, and techniques; the tenacity to improve methods and maximise performance of the solution; and creativity in their approach to solutions:

* means showing curiosity to explore new opportunities and techniques, and having the tenacity to improve methods and maximize the performance of the solution. This includes thinking creatively and outside the box to develop innovative solutions.

B7: committed to continued professional development of self and others:

* actively seeking out opportunities for personal and professional growth, and supporting the growth and development of others. This includes staying up-to-date with industry trends and best practices, and sharing knowledge and skills with colleagues and peers.