

## A - Common foundation modules

| <b>1 Introduction to modern Agile and DevOps</b>                               |   | <b>7%</b> |
|--|---|-----------|
|  | • Introduction to modern digital transformation   |           |
|  | • Introduction Agile and DevOps transformation  |           |
|  | • Lean, process optimisation and value stream management                                  |           |
|  | • Growth Mindset  |           |
|  | • Leading Agile and DevOps transformation - Diffused Leadership/Servant Leadership models |           |
|  | • Reflections and Evaluations   |           |
| <b>2 Designing and implementing a Well-Engineered Agile and DevOps Process</b> |   | <b>8%</b> |
|  | • Principles of Agile and DevOps  |           |
|  | • Automation - Continuous Improvement, Continuous Flow                                    |           |
|  | • Leading Agile/DevOps teams  |           |
|  | • Organisational Design   |           |
|  | •   |           |
|  | • Six Agile/DevOps digital transformation case studies – Four successful and two failures |           |
|  | • Reflections and Evaluations   |           |

## Core modules

### Technical pathways (35%)

| <b>2 Enabling tools and technologies</b> |  | <b>5%</b>  |
|--|--|------------|
|  | Terraform, Ansible, Parker                             |            |
|  | Git, Github, Gitlab-Cl, Azure DevOps, Jira, Confluence |            |
|  | Python, shell scripting, Basic Linux administration    |            |
|  | Continuous Integration/Continuous Delivery             |            |
|  | End-to-end continuous delivery automation              |            |
|  | Site Reliability Engineering (SRE)                     |            |
|  | Observability (Prometheus, Grafana)                    |            |
|  | Introduction to containerisation and virtualisation    |            |
|  | Docker, Kubernetes, Serverless, Microservices          |            |
|  | Reflections and Evaluations                            |            |
| <b>3A</b>                                | <b>Introduction to public clouds</b>                   | <b>10%</b> |
|  | Identity and Access Management                         |            |
|  | Networks, including global infrastructure              |            |
|  | Data and storage services                              |            |
|  | Compute services                                       |            |
|  | Security, governance, compliance services              |            |

### Agile pathways (35%)

| <b>2B Enabling tools and technologies</b> |   | <b>5%</b>  |
|---|---|------------|
|   | Introduction to delivery toolchain Git, Github, Gitlab-Cl, Azure DevOps, Jira, Confluence |            |
|   | Introduction to Continuous Integration/Continuous Delivery (CI/CD) process.               |            |
|   | Introduction to Software Development Life Cycle (SDLC)                                    |            |
| <b>3B Advanced Agile methodology</b>      |   |            |
|   | Introduction to role and responsibilities of Professional Coaching Vs Agile Coaching      |            |
|   | Introduction to the role and responsibilities of a scrum master                           |            |
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| <b>4B</b>                                 |   | <b>15%</b> |
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|   | Applications and services integrations  |            |   |  |
| <b>4A Solution Design and Implementation</b><br>(Candidates are required to complete 15 exercises from the list below, the <b>first five are mandatory.</b> ) |   | <b>30%</b> | <b>4B Solution Design and Implementation</b><br>(Candidates are required to complete 15 exercises from the list below, the <b>first five are mandatory.</b> )   |  |
| 4.1   | As you go through this learning journey, develop your own personal Objective and Key Results (OKR). It is expected that you will complete these exercises over the course of three sprints. Have an OKR for each sprint and plan your work along agile principles.  |            | As you go through this learning journey, develop your own personal Objective and Key Results (OKR). It is expected that you will complete these exercises over the course of three sprints. Have an OKR for each sprint and plan your work along agile principles.  |  |
| 4.2   | Using Agile and DevOps change management principles, design an Agile and DevOps transformation roadmap for a fictitious traditional organisation undergoing digital transformation. (1000 words)  |            | Using Agile and DevOps change management principles, design an Agile and DevOps transformation roadmap for a fictitious traditional organisation undergoing digital transformation. (1000 words)  |  |
| 4.3   | To what extent is the agile approach a better way for organisations to survive and thrive in a VUCA world? (1000 words)   |            | To what extent is the agile approach a better way for organisations to survive and thrive in a VUCA world? (1000 words)   |  |
| 4.4   | Develop personal professional accelerator repository consisting of well curated and implementable Infrastructure-as-Code (IAC) artefacts. Also include a glossary 100 relevant words with full formed meaning or definitions.   |            | Develop personal professional accelerator repository consisting of well curated and implementable SCRUM artefacts. Also include a glossary 100 relevant words, expressions, quotes or concepts with full formed meaning or definitions.   |  |
| 4.5   | Design and implementing a well-engineered Agile and DevOps automated pipeline for provisioning infrastructure in the cloud.   |            | Design and implement a continuous improvement process considering the outcomes of the scrum ceremonies and the input from stakeholders and end customers.   |  |
| 4.6   | You are the Solution Architect for an organisation and your CTO asks you to develop a business case for the adoption and migration of their platform to the cloud. The company runs several servers that are currently underutilised in terms of their processing capacity but can experience bursts of high loads unpredictably. They also generate a lot of data that needs long terms storage for compliance reason. How would you present your case to your CTO? (1000 words) |            | You are the new scrum master of a team. In your review of the team's performance over the course of the previous 10 sprints you observe that the team has been failing to achieve its stated sprint goals. You also notice that this team depends on other teams for keys elements of their deliverable and that many key members have recently left the team. What steps could you put in place to improve team performance, alleviate the dependencies, improve team morale and create a more stable team? (1000 words) |  |
| 4.7   | Discuss how a value stream mapping (VSM) exercise could help eliminate waste and streamline a business process. (1000 words)  |            | Discuss how a value stream mapping (VSM) exercise could help eliminate waste and streamline a business process. (1000 words)  |  |
| 4.8   | By using enterprise grade Identity Provider and Management products, describe why it is generally recommended from a security perspective to implement Single-Sign-On (SSO). Also describe how you could integrate an Identity Provider on premise to the IAM system on a cloud provide to enable enterprise wide SSO. (1000 words)   |            | You are working as an Agile Coach in a very highly technical organisation developing a new product involving many specialised technical teams. You are asked to facilitate the meetings between these teams. You are informed that in the past it has been generally a fraught process for these teams to reach a consensus. Describe how you would go about this and the stance you would adopt to enable the teams to arrive at a consensus. (1000 words)   |  |
| 4.9   | Develop a Site Reliability Engineering and a continuous improvement plan for a production deployment.   |            | You are the scrum master of a team. Describe the set of metrics you would collect and how you would use these to implement a continuous improvement process. (1000 words)   |  |
| 4.10  | Using real technology examples, describe how a well-engineered micro-services architecture  |            | Why is the traditional command-and-control style of leadership not a recommended behaviour stance in an   |  |

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|      | could enable a business to achieve higher levels of agility and minimise the risk of change. (1000 words).   |  | organisation undergoing agile transformation? (1000 words)   |  |
| 4.11 | You are leading an organisation and have identified that your existing ways of working is hampering your ability to respond to the fast pace of market change and to the activities your competitors. What steps would you take to improve your business agility and how would these translate to organisational and technical change implementations? (1000 words).   |  | You are leading an organisation and have identified that your existing ways of working is hampering your ability to respond to the fast pace of market change and to the activities of your competitors. What steps would you take to improve your business agility and how would these translate to organisational and technical change implementations? (1000 words).  |  |
| 4.12 | Referring to one of the successfully implemented Agile/DevOps transformations, discussed why you think it was successful and what lessons learnt would you implement in your next project. (1000 words)  |  | Referring to one of the successfully implemented Agile Transformations case studies, discussed why you think it was successful and what lessons learnt would you implement in your next project. (1000 words)  |  |
| 4.13 | Referring to one of the failed Agile/DevOps transformations, discussed why you think it failed and what lessons learnt would you implement in your next project to ensure you have a better outcome. (1000 words)  |  | Referring to one of the failed Agile Transformations case studies, discussed why you think it failed and what lessons learnt would you implement in your next project to ensure you have a better outcome. (1000 words)  |  |
| 4.14 | What do you understand by the expression Test-Driven-Development (TDD)? Discuss the various sets of automated tests you could incorporate in your delivery pipeline and how these would increase the quality and reliability of the product. (1000 words).   |  | You are responsible for setting up several agile teams aligned along different value streams for a major financial organisations with a large portfolio of legacy products undergoing digital transformation. The organisation is looking to modernise its offering by integrating the legacy systems with new products lines which your teams are going to develop. Develop ten (10) criteria that would guide your selection decision of members of the teams and explain why each is important. What team topology, processes and ceremonies would you put in place to minimise friction between the teams and ensure a successful outcome. |  |
| 4.15 | DevSecOps is the practice of integrating security early in the delivery pipeline. Discuss why this is important and how you would integrate security scanning and testing tools in your delivery pipeline. (1000 words)  |  | The mental and psychological wellbeing of your team is as important as the business outcome they deliver. Describe the steps you would put in place to create a psychological safe environment and to foster a spirit of blameless post-mortems (1000 words)   |  |
| 4.16 | Collaboration within and across teams is a core tenets successfully Agile and DevOps implementation. You work in an organisation transitioning to agile and DevOps way of working. Discuss measures you would implement to enable collaboration within and across teams. (1000 words)  |  | You have recently joined a new team and noticed that there is no well-articulated unifying team goal and vision around which the team could cohere. Describe how you would go about creating a team goal and what steps and ceremonies you would use to bring about greater team cohesion. (1000 words)  |  |
| 4.17 | You are the lead DevOps engineer for a new startup that will be launching its first product in a fast-changing and extremely competitive market space. If the launch is successful there is likely to be a huge and unpredictable demand of the product, potentially overwhelming the system. How would you go about designing a cost-effective and resilient infrastructure that can respond elastically to demands in any market situation, while minimising the risk of |  | You have been hired by an organisation that is keen to undergo an agile transformation to modernise its ways of working and product offerings. The organisation has a large product portfolio (many of which are critical to the running of the business) consisting of third-party vendor offerings and in-house developed applications. These systems are supported by various teams, members of whom have developed deep product knowledge and take great pride in their expertise and product knowledge. The teams are generally stable,   |  |

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|------|---|--|--|---|--|
|      | adverse market response to the product launch. (1000 words).  |  |  | with key members having served decades in the organisation. The organisation is generally risk-averse and is keen to minimise the impact of changes. How would you go about implementing an agile transformation programme in such a way as to minimise the risk of change while also producing demonstrably impactful outcomes? (2000 words) |  |
| 4.18 | Develop a CI/CD pipeline that deploys a simple sample microservices application in the cloud using the most cost-effective cloud technologies.                      |  |  |   |  |
| 4.19 | Develop a CI/CD pipeline that leverages the concept of immutable architectures, creates a golden virtual machine image and deploys it in a highly available manner. |  |  |   |  |
| 4.20 | Final personal assessment report  |  |  | Final personal assessment   |  |

### C Professional certification modules

| <b>Technical Specialty modules</b>          | <b>40%</b> |
|---|------------|
| AWS Certified Solutions Architect Associate |            |
| Azure Certified Administrator               |            |
| GCP Associate Cloud Engineer                |            |
| Cloud Security Certifications (CCSK, CCSP)  |            |
| Kubernetes Administration Certification     |            |
| Terraform Certification                     |            |
| Linux Certifications                        |            |

| <b>Agile Specialty modules</b> | <b>40%</b> |
|--------------------------------|------------|
| Agile coaching and Mentoring   |            |
| Scrum Master                   |            |
| SAFe                           |            |
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