Network Systems and Architecture (for the Level 4 Network Engineer Apprenticeship)

9628-404 Network Systems and Architecture

Sample question paper answer sheet

Pass mark 21/30 (70%)

Question	ANSWER KEY	Test specification reference
1	a	1.1 Evaluate hardware required for optimum server configuration in a given context • CPU • Memory • Native storage • Storage connection methods • I/O busses and adapters • I/O devices
2	d	1.1 Evaluate hardware required for optimum server configuration in a given context • CPU • Memory • Native storage • Storage connection methods • I/O busses and adapters • I/O devices
3	d	1.2a Explain how to configure a server to perform a specified role • Preparation for installation
4	b	1.2b Explain how to configure a server to perform a specified role • Types of installation
5	c	1.2c Explain how to configure a server to perform a specified role • Network connectivity
6	d	1.2d Explain how to configure a server to perform a specified role • Testing network connectivity
7	b	1.3a Describe the concept of virtualisation • Purpose of virtualisation • Types of hypervisor
8	a	1.3b Describe the concept of virtualisation • Role of the hypervisor

9	d	1.3c Describe the concept of virtualisation • Types of machine partitioning software • Benefits of partitioned machines • Drawbacks of partitioned machines
10	b	1.3c Describe the concept of virtualisation • Types of machine partitioning software • Benefits of partitioned machines • Drawbacks of partitioned machines
11	c	1.4 Explain the elements that require configuration for a server to support virtualisation • HyperVisor • Storage • Data migration • Network configuration • Quota configuration
12	b	2.1a Explain the function of the services provided by servers • Provision of shared network services
13	a	2.1b Explain the role of the server providing business continuity solutions • High availability • Disaster recovery • Workload distribution
14	c	2.2 Describe how to configure a range of network services • Network administration • Directory services • File sharing • Mail services • Web server • Management/monitoring
15	b	2.2 Describe how to configure a range of network services • Network administration • Directory services • File sharing • Mail services • Web server • Management/monitoring
16	b	2.3 Explain the role of middleware and application services in a networking context • Queuing requests • Transaction processing • Load balancing

17	d	2.4a Describe the purpose and benefits of server workload balancing, illustrated with examples • The purpose and benefits of distributed workload balancing
18	d	2.4b Describe the drawbacks of server workload balancing, illustrated with examples • Drawbacks of workload balancing
19	c	2.4c • Examples of workload balancing in action
20	a	3.1 Describe a range of different storage solutions used in networks for online and offline storage. Examples should be used to illustrate concepts. • Storage area networks (SANs) • Network attached storage (NAS) • Cloud based storage solutions (public, private, hybrid) • Archival storage (localised, remote)
21	d	3.1 Describe a range of different storage solutions used in networks for online and offline storage. Examples should be used to illustrate concepts. • Storage area networks (SANs) • Network attached storage (NAS) • Cloud based storage solutions (public, private, hybrid) • Archival storage (localised, remote)
22	b	3.2 Explain the use of key storage protocols for remote data storage Storage area network • Fibre channel SAN • Fibre channel over Ethernet • ISCSI SAN Network attached storage • Network file system (NFS) • Server message block (SMB/CIFS).
23	d	3.3 Describe how to configure network storage devices and profile sharing services • Configuring network storage • Configuring network file sharing service
24	c	4.1a Describe typical causes of system (or service) failure illustrated with some examples of each • Hardware failure • Software failure
25	b	4.1b Describe typical causes of system (or service) failure illustrated with some examples of each • Network failure • Administrative/user error

26	d	4.1c Describe typical causes of system (or service) failure illustrated with some examples of each • Site disaster (localised) • Geographic disaster
27	a	4.2 Describe the possible consequences of system or service failure and their impact upon business operations • Loss or degradation of service • Loss or reduction in productivity • Loss of revenue • Impact to reputation • Environmental impact • Injury/loss of life
28	b	4.3a Describe a range of preventative measures to cope with system failure • Risk analysis/risk registers • Administrative procedures
29	c	4.3b Describe a range of preventative measures to cope with system failure • Infrastructure maintenance • Redundancy/workload distribution
30	a	4.3c Describe a range of reactive measures to cope with system failure • High availability/disaster recovery • Business continuity