

Level 3 Cambridge Technical in IT 05877

Unit CC: Cloud technology

Time: 1 hour 30 minutes

This test is a computer based test and will be completed using Surpass on OCR Secure Assess portal.

This SAM illustrates the styles and types of questions that make up this test, along with its associated mark scheme.

A practice test will be available on the OCR Secure Assess portal.

There will not be a paper test available for this qualification.

First name										
Last name										
Centre number										
Candidate number										

INFORMATION FOR CANDIDATES

- The total mark for this paper is **70**.
- The marks for each question are shown in brackets [].

Answer **all** questions.

1. In which of the following scenarios would a hybrid cloud be the **best** option for an organisation to support more flexibility and wider data deployment?

Select the correct answer.

- a financial organisation that must keep all data under its control
- a security organisation that performs a large amount of penetration testing
- a retail organisation that needs to maintain all processing in its own data centre
- a large software development firm that creates applications for customers to host on the cloud

[1]

2. Google Apps for Work is a set of online applications allowing users to create and share documents and spreadsheets.

This is an example of _____.

Select the correct answer to complete the sentence.

- PaaS
- SaaS
- IaaS
- CaaS

[1]

3. Read the following statement and select if it is **true** or **false**.

A limitation of owning servers is that additional IT staff are required to maintain each individual server.

- true
- false

[1]

4. Which of the following can be deployed by a cloud provider to reduce storage costs?

Select the correct answer.

- data encryption
- NTFS file system
- data deduplication
- multifactor authentication

[1]

5. Which **three** of the following statements **most appropriately** describe the considerations for adopting cloud services?

- if the organisation needs to purchase tablets to access the cloud services
- if performance metrics of the cloud service can be monitored by the business
- if the cloud vendor can provide a discount for users in the developing markets
- if the cloud service can scale to meet the organisation's future expansion plans
- if the cloud vendor has a track record in providing the service with a guaranteed uptime
- if the cloud service is using a particular vendor's hardware for the underlying infrastructure

[1]

6. Read the following statement and select if it is **true** or **false**.

Synchronisation of updates is better than replicating data across locations because it gives better assurance that data is always up to date everywhere.

- true
- false

[1]

7. Jennifer was able to connect to the company's web-based customer relationship manager (CRM) before she boarded a train. When she was on the train, she could not access the CRM. What are the possible reasons why this may have occurred?

1. Her account credentials are incorrect.
2. Her account credentials have expired.
3. She is using the wrong URL to access the CRM.
4. The internet connection drops before authentication is completed.

Select the correct answer that shows **all** the reasons that apply.

- 1, 2 and 3
- 1, 3 and 4
- 2, 3 and 4
- 1, 2, 3 and 4

[1]

8. You requested a list of countries where data is likely to be processed from a potential cloud provider.

You were given the list of countries shown below. Which of these countries presents a problem under the Data Protection Act?

Select the correct answer.

- Italy
- India
- Ireland
- Iceland

[1]

9. Read the following statement and select if it is **true** or **false**.

A limitation of cloud computing is that it is difficult to provide users and partners with access to data in the cloud.

- true
- false

[1]

10. Your company develops many of its own applications and also uses several industry-standard applications. All employees have internet access at their desks.

The company has decided to implement word processing in the cloud.

Which service **best** fits the company's needs?

Select the correct answer.

- QoS
- SaaS
- IaaS
- PaaS

[1]

11. Krystal is an IT Manager. She needs to explain how the company has moved towards cloud computing. Which of the following statements should Krystal include in her presentation?










1. The company has moved its email to a third party web application.
2. The employees can access the hosted finance application via a web browser.
3. The company has gained additional processing power needed for their developers.
4. The company has consolidated the 10 web servers to one physical server located in the data centre.

Select the correct answer that shows **all** of the statements that apply.

- 1, 2 and 3
- 1, 2 and 4
- 2, 3 and 4
- 1, 2, 3 and 4

[1]

12. You are using Microsoft Azure to create a virtual server for testing purposes. You are comparing two potential hardware configurations to use, as shown in the screenshot below.

A2 Standard		D2 Standard	
2	Cores	2	Cores
3.5	GB	7	GB
	4 Data disks		4 Data disks
	4x500 Max IOPS		4x500 Max IOPS
	Load balancing		100 GB Local SSD
	Auto scale		Load balancing
			Auto scale

What element would enable faster access to data located on the server?

Select the correct answer.

- SSD
- CPU cores
- memory
- number of disks

[1]

13. Which of the following user populations have greatest benefit from cloud computing?

Select the correct answer.

- user populations that are of a fixed size
- user populations that steadily increase in size
- user populations that vary and are unpredictable
- user populations that vary in size on a seasonal basis

[1]

14. Which of the following is a main concern for business and IT leaders when adopting computing services?

Select the correct answer.

- current cost structure of IT
- quality of web-based user interfaces
- technical maintenance of current IT assets
- systems protected in a secure and stable facility

[1]

15. Which of the following is the business benefit of a private PaaS?

Select the correct answer.

- simplifies interfaces for specific user groups
- reduces cost and reliance on internal technical skills
- improves the reuse of internal databases in an organisation
- improves the speed of the internal development and deployment processes

[1]

16 Read the following statement and select if it is **true** or **false**.

Cloud computing is priced according to recurring subscription or has usage-based charges, rather than having upfront costs.

- true
- false

[1]

17. Read the following statements about moving to cloud services.

- A. accessible via a tablet
- B. control the location of data
- C. usage and typical workload
- D. auditing access and changes made
- E. the associated cost and infrastructure needs
- F. high degree of confidentiality and operational assurance

Each statement A-F could apply to a military facility, a new start-up organisation or both.

In the grid below, write the letter of each statement in the appropriate box or boxes.

Military Facility	Start-up Organisation

[1]

18. Which of the following types of application are suitable for a cloud computing pilot?

Select the correct answer.

- legacy applications
- marginal applications
- financial applications
- mission-critical applications

[1]

19. A cloud service that has a combination of servers, networking components, hosting, provisioning and basic services is known as _____.

Select the correct answer to complete the sentence.

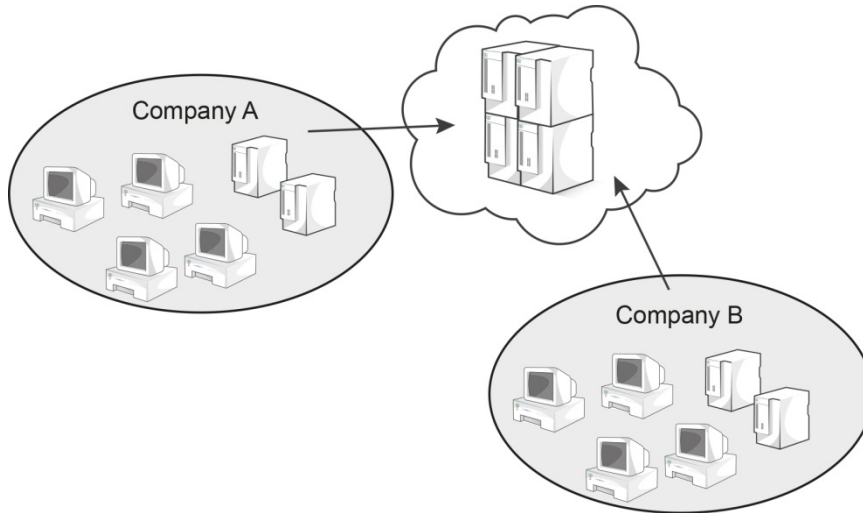
- PaaS
- CaaS
- SaaS
- IaaS

[1]

20. Which cloud model is shown in the diagram below?

Select the correct answer.

- public
- hybrid
- private
- community



[1]

21. Click on a user/group and then link it by clicking on the appropriate responsibility.

To remove a link, select the linking line.

User/Group	Responsibility
Cloud vendor	Ensures that user identity lists are up to date and users have been assigned access to required services.
Organisation user	Stores company data on authorised devices.
Organisation IT administrator	Deploys and tests applications on self-provisioned servers
Organisation developer	Guarantees service availability to the agreed level.

[1]

22. Select the statements that are more applicable to cloud computing than IT outsourcing.

Select **all** the statements that apply.

- reduced costs
- increased flexibility
- shorter time to market
- involvement of external staff

[1]

23. Cloud computing _____ capital expenditure to operational expenditure.

Select the correct answer to complete the sentence.

- shifts
- reduces
- equates
- increases

[1]

24. Read the following statements about elements that can typically be found in service level agreements (SLAs).

- A. data location
- B. data ownership
- C. costs for services
- D. change control process
- E. service monitoring and reporting

Each statement A-E could apply to a standard SLA, a cloud SLA or both.

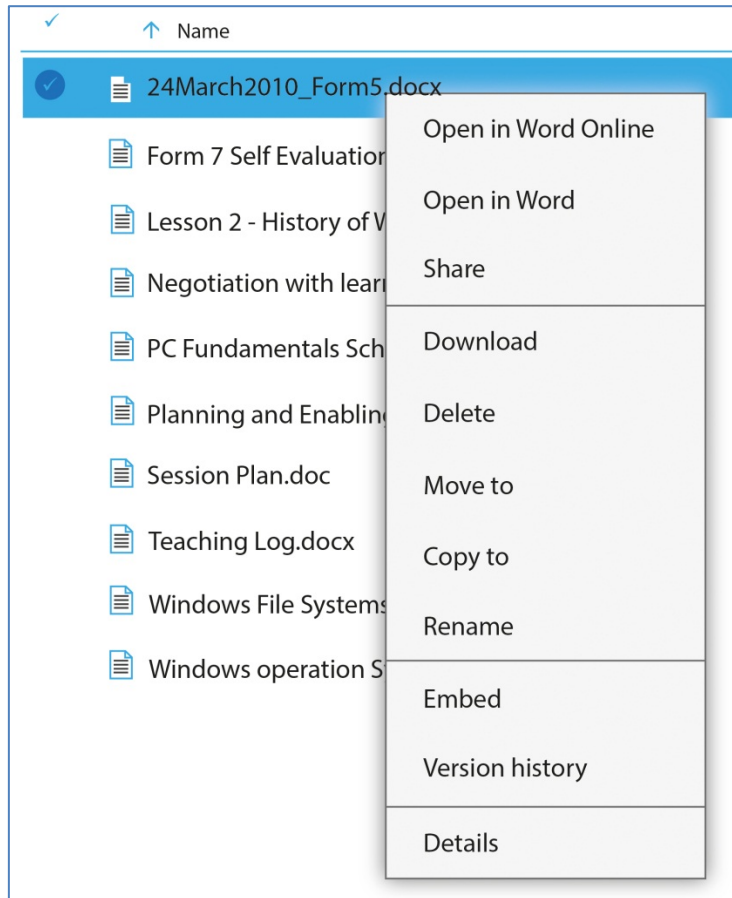
In the grid below, write the letter of each statement in the appropriate box or boxes.

Standard SLA	Cloud SLA

[1]

25. Freda uses a personal OneDrive account for her files. She accidentally deletes a portion of a file and saves the changes. She needs to get the unmodified version of the file back.

Freda accesses her OneDrive account via a web browser and navigates to the modified file. She right clicks on the file and is presented with a menu as shown in the diagram below.



Which option would allow her to roll back to a previous version?

Select the correct answer.

- share
- embed
- download
- version history

[1]

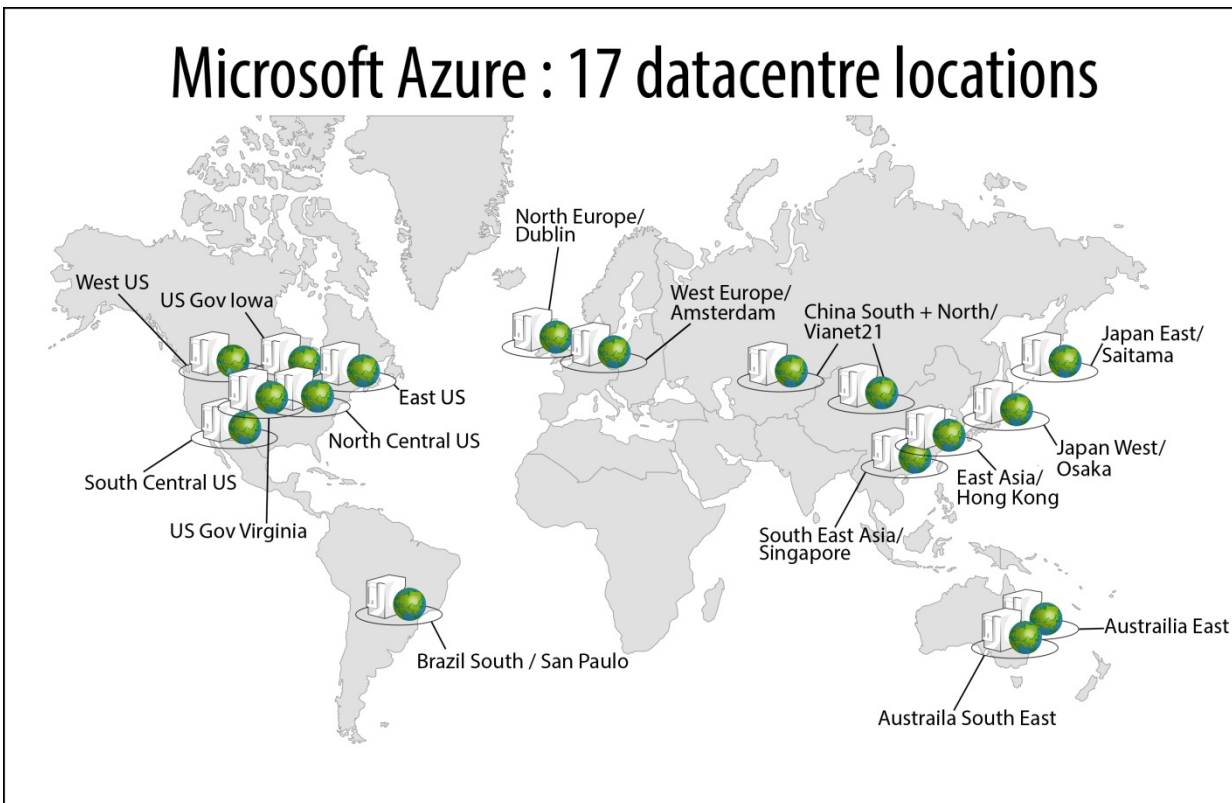
26. Select the statements that define the characteristics of a private cloud.

Select **all** the statements that apply.

- Services are managed by a third-party provider.
- Services are restricted to members by the organisation.
- Infrastructure is managed by the organisation's IT team.
- Services are accessed by members outside of the organisation.

[1]

27. Look at the diagram below.



When enhancing business values, which characteristics of cloud computing are being illustrated?

Select the correct answer.

- operating cost is predictable
- capital expenditure is minimised
- ability to monitor access and data usage
- redundancy links that will guarantee increased availability

[1]

28. Which **three** of the following could be provided by a SaaS?

- email
- virtual machines
- machine learning services
- spam/anti-malware filtering services
- desktop publishing (DTP) application

[1]

29. In the context of cloud computing, which of the following is an important new skill for an IT manager to develop?

Select the correct answer.

- provisioning services
- incident management
- security and risk management
- technology upgrade monitoring

[1]

30. A company is investigating whether or not a cloud solution will help facilitate communication among workers who are collaborating on a project. It has a head office and 30 remote workers who currently use email to communicate on project issues.

Which question would you ask to assess whether the existing infrastructure is suitable for a cloud solution?

Select the correct answer.

- Does the office have fibre optic cable?
- Do all workers have reliable internet access?
- Does the company have a registered domain name?
- Which protocol is currently used to connect to the file server?

[1]

31. Your company has made the decision to migrate all of its data to the Microsoft Azure platform. You need to ensure that large amounts of the organisations data are transferred onto the Azure platform as soon as possible.

What should you do?

Select the correct answer.

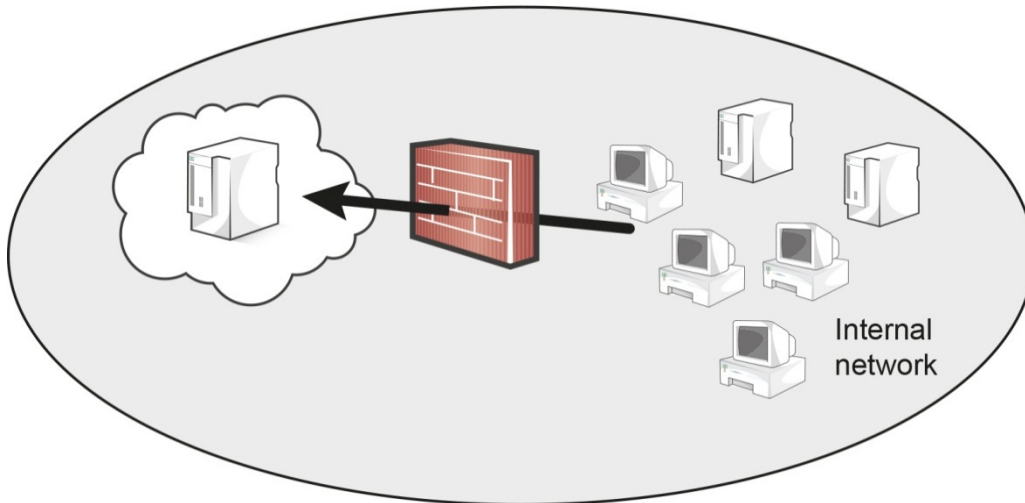
- utilise a third party to carry out this service for you
- use the Azure Cloud Portal site to upload your data
- upload data to the Azure platform as and when users ask for it
- use the Azure Import/Export Service and send your hard drives to the closest Microsoft Datacentre

[1]

32. Which cloud model is shown in the diagram below?

Select the correct answer.

- public
- hybrid
- private
- community



[1]

33. Click on one of the cloud service models and then link it with the appropriate entity/service.

To remove a link, select the linking line.

Cloud Service Model	Entity/Service
IaaS	web hosting
PaaS	virtual machines
SaaS	voice over IP (VoIP)
CaaS	productivity applications

[1]

34. Sami is a cloud readiness manager. He evaluates whether or not organisations are ready to take up cloud services.

Which of the following organisations would **most** benefit from moving to a cloud service?

1. An insurance company that has a mature, low cost and efficient IT infrastructure.
2. A retail organisation that has a history of peaks and troughs throughout the year with its online shopping application.
3. A financial services organisation that is having a number of security issues with its customers' internet platform.
4. A family run organisation that is using a limited number of productivity applications and prides itself on its excellent customer service.

Select the correct answer that shows **all** of the organisations that would benefit from making this move.

- 2 and 3
- 1, 2 and 3
- 2, 3 and 4
- 1, 2, 3 and 4

[1]

35. Which of the following does IT outsourcing and cloud computing typically have in common?

Select the correct answer.

- pay as you go agreements
- short-term financial commitment
- potential lock-in to a particular vendor
- tailor-made applications based on client needs

[1]

36. Read the following statements about cloud models.

- A. considered to be more secure
- B. can scale to meet users' needs
- C. typically used by multiple organisations
- D. typically used by a specific organisation
- E. does not require internal IT infrastructure
- F. requires specialist in-house skills to build and maintain

Each statement A-F could apply to a private cloud, public cloud or both.

In the grid below, write the letter of each statement in the appropriate box or boxes.

Private Cloud	Public Cloud

[1]

37. Select the statements that are important design decisions when deploying SaaS.

Select **all** the statements that apply.

- how many users will access the application simultaneously
- how the application will be integrated with other applications
- how existing company data is integrated in, or migrated to the application
- where, or by whom, digital identities will be issued for logging on to the application

[1]

38. Which of the following is a risk when an IT department restricts itself to being solely an infrastructure provider?

Select the correct answer.

- Business software users will bypass the IT department.
- Service providers will bypass the IT department.
- Cloud providers will take over the role of the IT department.
- System downtime will not be planned by the IT department.

[1]

39. Which applications are the most suitable for a cloud computing pilot?

Select the correct answer.

- applications with high risk and little business value
- applications that are easy to migrate and have some business value
- legacy applications that are coupled to specific hardware and systems software
- applications that are currently expensive to maintain because of interconnections

[1]

40. Your business uses SaaS for providing productivity applications to your users.

Read the following statements about responsibilities.

- A. maintains the user accounts list
- B. assigns software licenses to the users
- C. ensures that service outages are minimised
- D. ensures that the service is protected against cyber-attacks
- E. ensures that the tenants' data is backed up in case of unforeseen disasters
- F. provides appropriate training to users on how to make good use of the cloud service

Each statement A-F could apply to your business, the cloud vendor or both.

In the grid below, write the letter of each statement in the appropriate box or boxes.

Business	Cloud Vendor

[1]

41. Handa is the chief technology officer (CTO) at Auricon Enterprise and needs to explain to her financial director the characteristics of cloud computing that enhance business value. Which of the following should she include in her presentation?

1. Cloud computing delivers IT capacity on demand.
2. Cloud computing delivers IT capabilities that scale with demand.
3. Cloud computing negates the need for a procurement department.
4. Cloud computing delivers a wide range of services that are easily accessible to users.

Select the correct answer that shows **all** of the statements that apply.

- 1 and 2
- 1, 2 and 4
- 2, 3 and 4
- 1, 2, 3 and 4

[1]

42 Read the following statement and select if it is **true** or **false**.

You can access PaaS via web services such as Force.com

- true
- false

[1]

43. A cloud provider supplies storage, processing, memory, and network bandwidth to multiple tenants, using physical and virtual resources.

Which cloud characteristic does this describe?

Select the correct answer.

- rapid elasticity
- resource pooling
- measured service
- on-demand self-service

[1]

44. You are going to deliver a presentation online to an international audience. You need to make your slides and research available to the audience.

You access your cloud storage via a web browser and create a folder with all the necessary files.

You need to set the permission levels to allow the audience to access the folder.

What permission level do you use?

Select the correct answer.

- private
- public hyperlink
- shared – edit hyperlink
- shared – view hyperlink

[1]

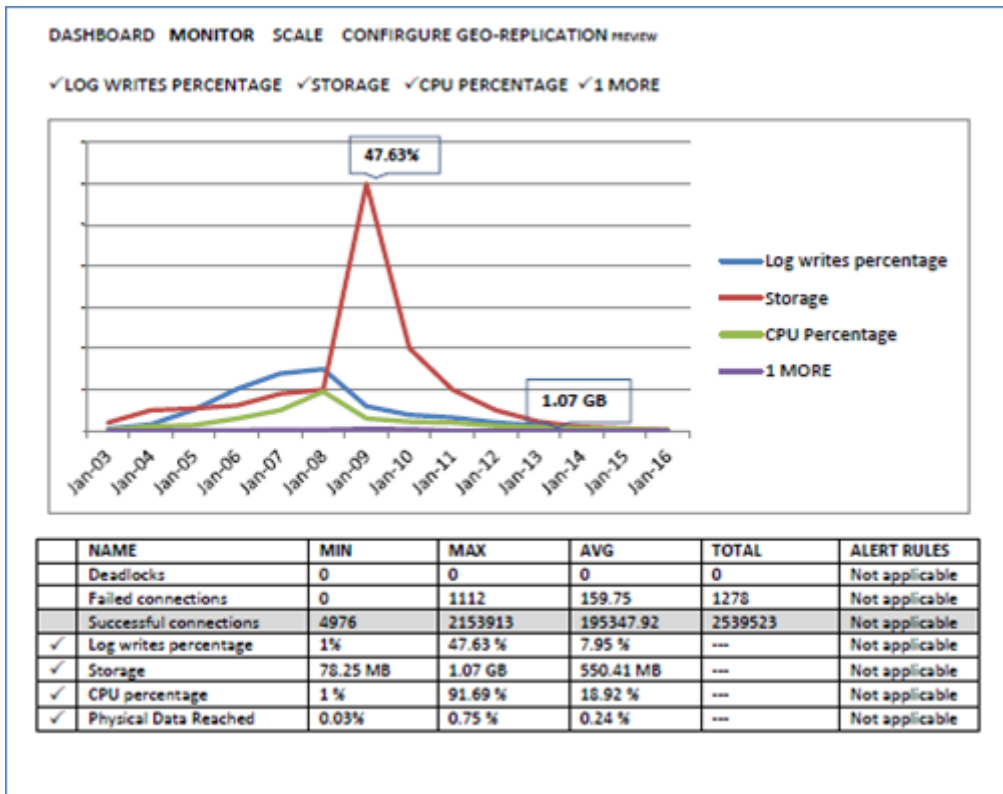
45 Read the following statement and select if it is **true** or **false**.

A company is adopting a public SaaS cloud-based computing system to migrate a mission critical application. The ability to perform fine grained customisations to the software will most likely be lost.

- true
- false

[1]

46. At a cloud service evaluation meeting, the IT manager presents the screenshot below.



What role is the IT department fulfilling by providing this information?

Select the correct answer.

- advising on the application lifecycle
- helping to understand performance metrics
- advising on what hardware the cloud service needs to use
- helping to understand the software used by the cloud vendor

[1]

47. You are considering a proposal from a cloud vendor who has explained that they have data centres in the UK and the USA. Which action should you take?

Select the correct answer.

- Reject the proposal. You are not allowed to store data in the USA.
- Ask the cloud vendor whether it uses enterprise grade encryption to protect its servers.
- Verify that the transference of data to the USA complies with the latest guidance from the ICO.
- Accept the proposal. The USA has a proven track record of cloud management so it should be OK.

[1]

48. Click on one of the skills and then link it with the appropriate statement.

To remove a link, select the linking line.

Skill	Statement
Security and compliance skills	Negotiate contracts with the cloud service provider
Business and financial skills	Ensure that customer data is protected at all times
Technical skills	Forecast the annual budget required to utilise the cloud service
Vendor management skills	Set up the organisation's cloud-based servers

[1]

49. Why are traditional chargeback systems within an organisation not compatible with cloud computing?

Select the correct answer.

- Licensing models can become outdated quickly.
- Cloud computing can be more expensive than in-house capacity.
- Resources that are used can fluctuate throughout the budget cycle.
- Cloud computing is low cost and does not accommodate chargeback fees.

[1]

50. Read the following business considerations when using cloud services.

- A. Remote users can work from anywhere.
- B. Users can be added and removed quickly.
- C. Servers and storage can be added quickly.
- D. Employees can work from their own devices.
- E. Servers and storage can be released quickly.
- F. Users require a good internet connection to access services.

Each statement A-F could apply to scalability, ease of access or both.

In the grid below, write the letter of each statement in the appropriate box or boxes.

Scalability	Ease of Access

[1]

51. Amazon Elastic Cloud Compute (EC2) is a facility for quickly provisioning virtual servers. This is an example of _____.

Select the correct answer to complete the sentence.

- SaaS
- IaaS
- PaaS
- QoS

[1]

52. Which one of the following must be true for an organisation to have a successful cloud implementation?

Select the correct answer.

- The organisation must have an in-house IT department.
- The organisation must have used virtualisation technology in the past.
- The organisation must have an unlimited budget for allocation of cloud resources.
- The organisation must perform and successfully complete a cloud readiness assessment.

[1]

53. Which **three** statements **best** describe how cloud computing improves business flexibility?

- faster deployment of applications
- data is stored on third party servers
- rapidly growing and shrinking capacity
- easier access by users outside of the organisation
- users could store company data on their personal devices
- the business could be locked into a particular cloud vendor

[1]

54 Read the following statement and select if it is **true** or **false**.

By using an IaaS cloud service you do not need highly skilled IT staff to manage it.

- true
- false

[1]

55. Your company employs the use of Box.com to store and share files internally and with customers. You are going on a business trip to America. You wish to access your files while you are travelling.

What is the **best** way to make sure that files you are accessing are the most up-to-date?

Select the correct answer.

- download and store the files on a USB stick
- email the files to your web-based email account
- install the mobile app for Box.com on your company phone
- convert the documents to .pdf and save them on your laptop

[1]

56. How does cloud computing influence platform service operations?

Select the correct answer.

- The security level will increase.
- Cloud computing is more cost effective.
- The provisioning of servers and services can be much slower.
- The provisioning of servers and services is quicker or ceases to be an issue.

[1]

57. The IT department has a role to play in the selection of cloud computing providers. Select the statements that describe the IT department's role.

Select **all** the statements that apply.

- helps understand provider quality
- helps understand performance parameters
- helps understand and explain the application lifecycle
- defines the hardware required to implement the cloud service

[1]

58. How can an internal IT department successfully react to cloud computing?

Select the correct answer.

- by outsourcing all IT services
- by solely focusing on security issues
- by becoming an internal cloud provider
- by becoming an external cloud provider

[1]

59. An organisation provides a cloud-based travel and expenses application accessible via the web or a mobile application. Office-based users accessing the application via the web, complain about the time it takes to load. Remote users using the mobile application, have no such issues.

What is the **first** thing that should be checked to find the cause of the performance degradation?

Select the correct answer.

- the type of computer being used
- the available bandwidth at the office
- the version of the browser being used
- the number of files that users have open on their desktop

[1]

60. Which of the following SLA elements should be of high concern to an organisation considering putting mission-critical data or services in the cloud?

Select the correct answer.

- dispute resolution
- costs for services
- services provided and excluded
- availability and performance requirements

[1]

61. Which of the following is the function of orchestration services?

Select the correct answer.

- enables and disables load balancers
- configures application clusters with Web services
- assembles functional requirements for application development
- manages the starting and stopping of application server clusters

[1]

62. A cloud deployment has been created specifically for financial services companies to use.

Which of the following cloud models best describes this type of cloud environment?

Select the correct answer.

- public
- hybrid
- private
- community

[1]

63. Which **two** statements provide business reasons for IT outsourcing and cloud computing?

- improves cost structure
- decreases of security issues
- improves customer satisfaction
- increases control over IT systems
- transference of IT maintenance duties
- hardware and software assets are typically customisable

[1]

64. An organisation is in a transitional phase of moving its services and applications to the cloud. During this phase, it will be employing an IaaS cloud-service model.

It will need to decide who will be responsible for updating the organisation's virtual servers.

Select the correct answer.

- the cloud vendor
- the organisation's developers
- the organisation's IT administrator
- it happens automatically – no intervention required

[1]

65. Which of the following actions should a company take if the cloud service provider fails to uphold its contractual obligations?

Select the correct answer.

- Consult the company's exit plan.
- Move critical data to the company's internal servers.
- Evaluate options for an alternative cloud service provider.
- Move the company data to the backup cloud service provider that was previously selected.

[1]

66. Company A pays Company B to host its cloud. Which of the following would influence the monthly service fee, so that Company A pays more per month as it grows?

Select the correct answer.

- the connectivity speed
- the uptime requirements
- the amount of data stored
- the confidentiality of the data

[1]

67. Why does service fulfilment become more complicated for the provider within a cloud environment?

Select the correct answer.

- the IT team needs to be expanded
- all processes must become automated
- services must be adapted with the user experience in mind
- users need to be educated on the benefits before changes to the service are made

[1]

68. An organisation has deployed a database to a cloud-hosted platform that will be used to capture customer data.

It needs to migrate its in-house company database to the cloud-hosted database.

The in-house company database was created in a legacy application that uses a bespoke data format. What expertise is required?

Select the correct answer.

- data integration skills
- vendor management skills
- business and financial skills
- security and compliance skills

[1]

69. Why is it important to consider the cloud platform when developing applications?

Select the correct answer.

- the role of the IT department will change
- it can speed up the development process
- the development process needs to change
- cloud providers will carry out application development

[1]

70. Read the following statement and select if it is **true** or **false**.

You can only use Linux-based virtual servers in the cloud.

- true
- false

[1]

[Paper Total 70]

END OF QUESTION PAPER

Sample Assessment Material

LEVEL 3 CAMBRIDGE TECHNICAL IN IT
Unit CC Cloud technology

MARK SCHEME

Duration: 1 hour 30 minutes

MAXIMUM MARK 70

SPECIMEN

Version: 2.0 Date: September 2016

This document consists of 5 pages

Question	Answer	Marks
1	D	1
2	B	1
3	False	1
4	C	1
5	B, D, E	1
6	True	1
7	D	1
8	B	1
9	False	1
10	B	1
11	B	1
12	A	1
13	C	1
14	D	1
15	D	1
16	A	1
17	Military Facility: B, C, D, E, F Start-up organisation: A, C, E	1
18	B	1
19	D	1
20	A	1
21	Cloud vendor - Guarantees service availability to the agreed level Organisation user - Stores company data on authorised devices Organisation IT administrator - Ensures that user identity lists are up to date and users have been assigned accessed to required services Organisation developer - Deploys and tests applications on self-provisioned servers	1
22	B, C	1
23	A	1
24	Standard SLA: C, D, E Cloud SLA: A, B, C, D, E	1
25	D	1
26	B, C	1
27	C	1

Question	Answer	Marks
28	A, D, E	1
29	A	1
30	B	1
31	D	1
32	C	1
33	IaaS - virtual machines PaaS - web hosting SaaS - productivity applications CaaS - voice over IP (VoIP)	1
34	A	1
35	C	1
36	Private Cloud: A, B, D, F Public Cloud: B, C, E	1
37	B, C, D	1
38	A	1
39	B	1
40	Business: A, B, F Cloud Vendor: C, D, E	1
41	B	1
42	True	1
43	B	1
44	D	1
45	True	1
46	B	1
47	C	1
48	Security and compliance skills - Ensure that customer data is protected at all times Business and financial skills - Forecast the annual budget required to utilise the cloud service Technical skills - Set up the organisation's cloud-based servers Vendor management skills - Negotiate contracts with the cloud service provider	1
49	C	1
50	Scalability: B, C, E Ease of access: A, D, F	1
51	B	1
52	D	1

Question		Answer	Marks
53		A, C, D	1
54		True	1
55		C	1
56		D	1
57		A, B, C	1
58		C	1
59		B	1
60		D	1
61		D	1
62		D	1
63		A, E	1
64		C	1
65		A	1
66		C	1
67		C	1
68		A	1
69		B	1
70		False	1