



5220-536 MARCH 2019

Level 3 Advanced Technical Extended Diploma in Digital Technologies (720)

Level 3 Digital Technologies (System Infrastructure) – Theory exam (2)

If provided, stick your candidate barcode label here.

Thursday 7 March 2019
09:30 – 12:00

Candidate name (first, last)

First

[illegible]

Last

[illegible]

Candidate enrolment number

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Date of birth (DDMMYYYY)

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Gender (M/F)

5


Assessment date (DDMMYYYY)

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Centre number

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Candidate signature and declaration*

- If additional answer sheets are used, enter the additional number of pages in this box. 
- Before taking the examination, **all candidates** must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
- Please ensure that you staple additional answer sheets to the **back** of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue** pen. **Do not** use a pencil or gel pen, unless otherwise instructed.
- If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. Do not write on the source documents.

***I declare that I had no prior knowledge of the questions in this examination and that I will not divulge to any person any information about the questions.**

You should have the following for this examination

- a pen with blue or black ink

General instructions

- The marks for questions are shown in brackets.
- Answer **all** questions.
- Answer the questions in the spaces provided. Answers written in margins or on blank pages will **not** be marked.
- Cross through any work you do not want to be marked.

- 1 State **four** factors that can be taken into account when preparing the scope for the development of a system.

(4 marks)

- 2 Explain the purpose of the following stages of a 'system life cycle' when replacing an existing system.

- Feasibility.
- Implementation.

(4 marks)

3 Describe how the following methodologies are implemented as part of the analysis and design of a system.

- Spiral.
- Rapid application development (RAD).

(4 marks)

4 State **two** metrics that can be used when establishing a baseline for Cloud services.

(2 marks)

(6 marks)

(4 marks)

(2 marks)

(6 marks)

- [illegible]

(2 marks)

- Worms.
- DoS attack.
- Zombie.

[illegible]

- (2 marks)

- 12 Explain how the following methods are used to provide technical support within an organisation.
- Vendor support.
 - In-house technician.

(4 marks)

- 13 Explain how the following 'Command Line Interface (CLI)' utilities are used to troubleshoot network issues.
- Ping.
 - Trace route (tracert).

(4 marks)

- 14 List **four** roles associated with infrastructure management within an organisation. (4 marks)

- 15 Explain the use of the following centralised computing facilities within a large organisation.

- Mainframe computers.
- Distributed systems.

(4 marks)

16 Explain the role of the following employees within an organisation.

- Database administrator.
- Network manager.

(4 marks)

- 17 A chain of book stores is looking to consolidate their stock ordering systems on to a centralised Cloud based system. At present they do not have a centralised ordering system, currently each store prepares and submits their orders directly to the publishers.

Discuss the available technologies and any considerations that must be taken into account when moving to the Cloud based system.

(9 marks)

18

Following a ransomware attack on your organisations network, the senior partner has asked you to prepare a report. The report must discuss common security threats and the measures that can be adopted to mitigate against them.

Discuss the considerations that must be taken into account when mitigating against potential threats.

(9 marks)

[illegible]