



5220-530 MAY 2018 Level 3 Advanced Technical Certificate in Digital Technologies

Level 3 Digital Technologies - Theory exam (1)

If provided, stick your candi barcode label here.	date 09:30 – 12	21 May 2018 2:00
Candidate name (first, last)		
First		
Last		
Candidate enrolment number	Date of birth (DDMMYYYY)	Gender (M/F)
Assessment date (DDMMYYYY)	Centre number	Candidate signature and declaration*
If any additional answer sheets a		

- Please ensure that you **staple** additional answer sheets to the **back** of this answer booklet, clearly labelling them 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.
- 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 assessment and that I will not divulge to any person any information about the questions.

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.
- Write all your working out and answers in this booklet.

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1 a)	State two indicators of progress used in project management.	(2 marks)
b)	For each of the two indicators stated in Question 1a), explain how they are used as indicators of progress.	(4 marks)
2 a)	State two access control methods.	(2 marks)
b)	For each of the two access control methods stated in Question 2a), explain how they are used to control system access.	(4 marks)

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- Explain how a system can be protected against ${\bf each}$ of the following types of 3 malicious code.
 - Viruses. •
 - Logic Bombs. Worms. •
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(6 marks)

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4	a)	State two types of storage media that can be used in a computer system.	(2 marks)	
	b)	For each of the two types of storage stated in Question 4a), explain one of its security vulnerabilities.	(4 marks)	
5	a)	State two types of physical network topologies.	(2 marks)	
	b)	For each of the two topologies stated in Question 5a), explain how data is transmitted.	(4 marks)	

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6	Exp •	lain the use of each of the following network software. Proxy server. Web server.	
	•	Voice Over Internet Protocol (VOIP).	(6 marks)
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7	a)	State two layers of the TCP/IP model.	(2 marks)
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	b)	Explain the network function for each of the layers stated in Question 7a).	(4 marks)
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8	a)	State two programming language techniques.	(2 marks)	
	b)	For each of the techniques stated in Question 8a), explain how programmes are constructed.	(4 marks)	
9	a)	State two types of testing techniques.	(2 marks)	
	b)	Explain a principle for each of the testing techniques stated in Question 9a).	(4 marks)	

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		21 May 201
10 a)	State two data structures used in programming.	(2 marks
b)	Explain how each of the data structures stated in Question 10a) is used in programming.	(4 marks
11 Exp	lain the difference between State and Stateless in website programming.	(2 mark:

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12	You have been asked to give a presentation to your company's directors about a
	proposed software development where an application will be used to gather and
	share personal information.
	Discuss what you would include in the presentation.

(9 marks)

13 A school trust runs a Primary School, High School and a Sixth Form in **three** different locations. IT wants to provide a 'kiosk' where students in all their schools can log onto a PC and leave their opinions about their student experience. Discuss the steps the school can take to complete the development process.

(9 marks)