

**CAMBRIDGE TECHNICALS LEVEL 3 (2016)** 

Examiners' report

05838-05842, 05877

Unit 1 January 2022 series

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#### Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper and the mark scheme can be downloaded from OCR.

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# Unit 1 series overview

Candidates who did well on this paper generally did the following:	Candidates who did less well on this paper generally did the following:
<ul> <li>Were able to interpret the context of the question well</li> <li>Understood the key question words in giving a response</li> <li>Had a good technical knowledge</li> <li>Used appropriate technical vocabulary.</li> </ul>	<ul> <li>Did not use technical terminology</li> <li>Did not understand the key question words in relation to how to answer</li> <li>Used responses from previous question papers.</li> </ul>

# Section A overview

There seemed to be some correlation between marks on the MCQ and marks overall as some candidates scoring 5 or 6 on the MCQ were showing similar gaps in knowledge in Part B. Candidates achieving 11 or more marks lost the marks on Questions 1, 2, 7 and 12. Many candidates achieved single digit scores here.

Quest	ion	1			
1	Which of the following is a characteristic of an embedded computer system?				
	Α	Able to carry out a wide range of tasks			
	В	Can be upgraded by a user			
	С	Contains a complex user interface			
	D	Low power consumption			
				[1]	
A good respons		portion of candidates were able to identify (D) Low power consum	ption as the correct		
Quest	ion	2			
2	Which hardware is needed to connect a tablet computer to the internet?				
	Α	NIC			
	В	Router			
	С	Server			
	D	Wireless Access Point (WAP)			
				[1]	
A good	prop	portion of candidates chose (D) Wireless Access Point (WAP).			

3	Wh	nich of the following is a development tool?	
	Α	CAD/CAM	
	В	Compiler	
	С	Project Management	
	D	Spreadsheet	
			[1]
Project	Mar	portion recognised that (B) Compiler was the correct development or (A) CAD/CAM which are both business software, (D) Spreadsheet (productivity software).	` '
Quest	tion	4	
4	Wh	nich of the following is a benefit of off-the-shelf software?	
	Α	Available immediately	
	В	Free	
	С	Has lots of extra features	
	D	Requires an annual fee	
			[1]
A very l	high	number of candidates chose (A) Available immediately.	

5	Which communication method allows real-time internet chat conversations?			
	Α	Email		
	В	Instant messaging		
	С	Short Messaging Service		
	D	Voice over Internet Protocol		
				[1]
		portion of candidates selected the correct response (B) Instant maging Service, or (D) Voice over Internet Protocol.	nessaging. Others cho	ose (C)
Quest	ion	6		
6	FT	P stands for:		
	Α	Fast Transfer Protocol		
	В	File Transfer Protocol		
	С	File Translation Protocol		
	D	Final Transistor Position		
				[1]
A large Transfe		ber of candidates correctly identified (B) File Transfer Protocol.	A few others chose (A	A) Fast

7	Wh	nich of the following is <b>not</b> a form of virtualisation?		
	Α	Client		
	В	Cloud		
	С	Hypervisor		
	D	Storage		
			[1]	
		le number of candidates identified (C) Hypervisor as the correct fied were quite mixed with (A) Client and (B) Cloud	response. Other responses	
Quest	tion	8		
8	8 Which connectivity method would be the most suitable to create a secure link between two banks?			
	Α	ADSL		
	В	Ethernet		
	С	ISDN		
	D	Leased Line		
			[1]	
A good	pro	portion of candidates correctly chose (D) Leased Line. Others me	ostly selected (A) ADSL.	

9	Wł	nich communication method would be most affected by a noisy en	vironment?	
	Α	Email		
	В	Group discussion		
	С	Letter		
	D	Social networking		
				[1]
		ly good proportion of candidates were able to correctly identify  O) Social networking.	(B) Group discussion	. Others
Quest	ion	10		
10	lde	entify the personal attribute required to be a network manager.		
	Α	Body language		
	В	Can do attitude		
	С	Eye contact		
	D	Planning and organisation skills		
				[1]
_		portion of candidates correctly identified (D) Planning and organ		
		es chose (A) Can do attitude, which shows someone is ready for ent job roles.	or work and would feld	สเษ เบ

11	Wh	ich of the following demonstrates that an employee is ready to	vork?	
	Α	Bias		
	В	Personal grooming		
	С	Problem-solving skills		
	D	Respect		
				[1]
	-	ortion of candidates selected (B) Personal grooming. Others Respect, which are both personal attributes.	chose (C) Problem-so	olving
Questio	n 1	12		
12	Wh	nich of the following is <b>not</b> a purpose of a professional body?		
	Α	Gain industry certification		
	В	Organise industrial action		
	С	Provide forums for discussion		
	D	Regulation of standard operating procedures		
				[1]
		ates correctly identified (B) Organise industrial action. Quite ms for discussion, which suggested they had not seen the ne		• •

13		ich operational issue would be implemented if a flood affected a buttems?	isiness's computer
	Α	Acceptable use policy	
	В	Change management	
	С	Disaster planning and recovery	
	D	Health and Safety	
			[1]
	-	ortion of candidates correctly selected (C) Disaster planning and Health and Safety.	recovery. A few others
Questi	on	14	
14		ich of the following is <b>not</b> a feature of providing remote access for ployees?	a business's
	Α	Allows high level of security	
	В	Easily scalable	
	С	Only accessible through one type of device	
	D	User friendly	
			[1]
		ber of candidates selected (C) Only accessible through one type Easily scalable.	of device. Others mostly

15		ich digital security method can be linked to user groups when prote tem?	ecting a computer	
	Α	Anti-spyware		
	В	Biometrics		
	С	Encryption		
	D	Username and password		
				[1]

A reasonable number of candidates selected (D) Username and password. A fair proportion of other candidates chose (C) Encryption.

#### Section B overview

The context was clearly relevant to candidates and used by the majority in answering the level of response Question 18 with examples taken from their experience of online teaching and the pandemic.

A reasonable proportion of candidates provided responses for all the questions in section B. Good examination technique suggests that the candidate constructs their responses in the format indicated in the question to gain full marks, e.g. identify and describe. It was noted that there was evidence of some knowledge gaps from the candidates' responses to the more technical questions in Section B, particularly in Question 17 and Question 19.

Some candidates appeared to have learnt the responses from past examination papers. This helped them to some extent in answering several questions on this paper, in particular Question 16a and Question 22.

It is good practice to provide past examination papers for candidates to improve their examination technique and prepare for the summative assessment. However, candidates do need to be able to adapt their responses to demonstrate their knowledge within the context of the live examination paper.

#### Question 16 (a)

Strange Karga Arts (SKA) is a large computer games development company, specialising in games for mobile platforms. The SKA main office is based in one building in Dundee. The mainframe computer is located on the second floor of this building.

The team members in the main office are responsible for monitoring the development of any new games as well as rendering and publishing the final games.

Developers, who create the games, are based all over the United Kingdom and work from home. The developers are monitored by the team members based in Dundee to ensure that the games are being developed to schedule.

(a) Identify and describe two input devices that the developers would use to create the digital

16 The developers work from home creating the digital artwork for the games.

artwork for the game.

	•			
2		 	 	
		 	 	[41

For this question, candidates seem ready to identify first and then give a description. A high proportion of candidates were able to identify two suitable input devices in the context given. Context of creating digital artwork was missed by some candidates.

# Question 16 (b)

(b)	Identify and explain <b>one</b> limitation that would need to be considered by the developers when purchasing a desktop computer to use to create the digital artwork.				
	PO3				
	[3]				
their limitation	number of candidates recognised this was a question about computer components and ns with regard to their suitability for creating digital work. A small number of candidates rage, RAM, processing power and graphics cards and explained why these would need to ed. The majority of other candidates identified portability for which no marks were given.				
50 0011010010	a. The majority of our or carranation fundament portability for which he maine were given.				
Question	17 (a)				
	ange Karga Arts (SKA) provide each of the developers with a hybrid device to connect to internet and communicate with the Dundee office.				
(a)	Explain what is meant by a hybrid device.				

A small number of candidates were able to explain what is meant by a hybrid device, and a smaller subset referenced router, switch, or hub as good examples in the context.

.....[3]

# Question 17 (b)

	(b) Explain one disadvantage to the developer of using the hybrid device.	
		[2]
	ates who were able to explain a hybrid device would often score here with a art of the device failed then the whole device would need replacing.	reference to the fac
Quest	ion 18	
18*	The SKA team members based in Dundee monitor the work of the developers are based all over the United Kingdom.	. The developers
	Discuss the advantages and disadvantages of using video conferencing by the members to monitor and interact with the developers.	e SKA team
	·	[10]

Good responses included detailed explanations on either side of the argument with subject specific terminology. Others produced descriptions relating more to advantages or disadvantages. A few candidates identified only generic points in relation to video conferencing. Most candidates attempted this question.

#### Question 19 (a)

19	The	main office in Dundee has a LAN network.
	(a)	Identify and explain <b>two</b> advantages to SKA of using a LAN network in its main office.
		1
		0
		2
		[6]
previo duced	us q cost	ortion of candidates realised that this was not about an Ethernet or wireless LAN network uestion papers and identified how SKA would benefit from the use of shared resources, is due to shared peripherals and the increased security of centralised data and backup. In about the advantages of a wired Ethernet LAN and the speed of such a network.
uesti	on '	19 (b)
(i	b) T	he LAN uses a client server topology.
		Describe <b>one</b> characteristic of a client server topology.

Candidates were asked to describe one characteristic of a client server topology. Some good responses revolved around a request and response method of communication between the client machine and the server. Other responses were sometimes too vague to be worthy of any marks.

# Question 19 (c)

(c)	When the developers have created the digital artwork for the games, the digital artwork files are stored on a database server.
	Explain why a database server is suitable for this task.
	[3]
artwork. A as the orga queries wh	on required candidates to explain why a <b>database</b> server was suitable for storing the digital few good responses were able to explain the particular properties of a database server, such inisation of the stored data into categories or groups and the ability to retrieve data using ich made it easier to find. Others produced responses that would equally well have applied to r for which they received no marks.
Kev poin	t call out
	mportant that candidates take into consideration the context of each question. Not doing so in the candidate being given zero marks.
It is very in	mportant that candidates take into consideration the context of each question. Not doing so in the candidate being given zero marks.
It is very in can result	mportant that candidates take into consideration the context of each question. Not doing so in the candidate being given zero marks.
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It is very in can result	mportant that candidates take into consideration the context of each question. Not doing so in the candidate being given zero marks.  19 (d)  The files containing games players' scores can be measured in nibbles.
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It is very in can result	mportant that candidates take into consideration the context of each question. Not doing so in the candidate being given zero marks.  19 (d)  The files containing games players' scores can be measured in nibbles.

A good proportion of candidates knew that a nibble was 4 bits or half a byte and that it was a unit of storage. Others confused bits with bytes or provided responses relating to binary for which no marks were given

development of the games.		
Identify and describe <b>two</b> advantages and <b>one</b> disadvantage of using an MIS. Use examples related to SKA to support your answers.		
Advantage 1		
Advantage 2		
Disadvantage		
[9]		

Strange Karga Arts (SKA) use a Management Information System (MIS) to track the

A few candidates were able to identify an advantage and disadvantage of a MIS. A popular response for disadvantage was cost, but usually without appropriate explanation. Some candidates simply reused the question phrasing to attempt a response to the question.

#### Question 21 (a)

21 SKA have advertised for a new animator to develop a game.

(a) Identify and describe three personal attributes that SKA should look for in a new

animator.
1
2
3
[9]

A good number of candidates were able to identify and describe 3 personal attributes and achieved between 6 and 9 marks. Others were only able to identify and describe 2 personal attributes. A small proportion of candidates identified ready to work qualities (as opposed to personal attributes) for which they received no marks.

#### Key point call out

It is important that candidates are familiar with technical terminology as defined in the unit specification. Answers pertaining to incorrect areas of the specification will not be given marks.

#### Question 21 (b)

(b)*	An animator has told SKA that another computer games development company has offered them a new job for higher pay.
	Explain the ethical issues that the offer from the computer games development company has caused for SKA and how these could be addressed.  [10]

Good responses included detailed explanations of the ethical issues relating to this particular context and the way that SKA could address these. Some good responses were able to clearly describe a range of ethical issues raised for SKA and possible solutions. Others provided descriptions relating an ethical issue. Other candidates were unable to identify an ethical issue.

#### Question 22

22	Identify <b>two</b> physical protection methods that SKA could implement in the Dundee office to protect their new computer games.
	1
	2
	[2]

A large number of candidates provided good responses correctly identifying two suitable physical protection methods from the specification. A few identified digital protection methods such as usernames and passwords.

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